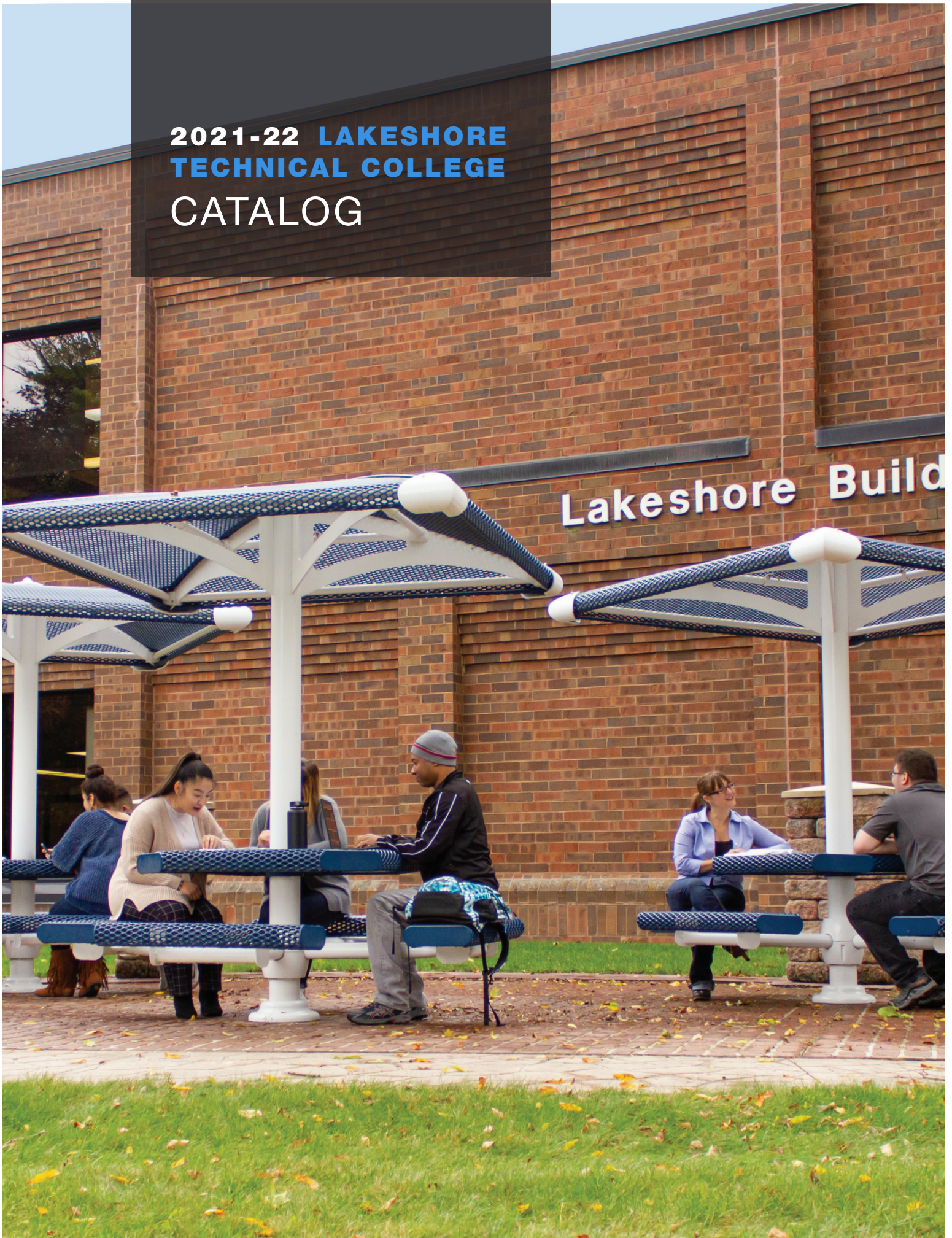


**2021-22 LAKESHORE
TECHNICAL COLLEGE**
CATALOG

Lakeshore Build



Welcome to LTC! We are excited you are a part of our community and look forward to great things this year.

We are focused on helping you succeed at each step along the way. The entire LTC team is your support network and is committed to preparing you for success in your personal and professional life. Please keep in mind there are numerous academic, career, and personal resources available to you any time you need them.

We know you will leave LTC ready to take on the world. Our high-tech learning environment and our experienced instructors will help you build a pathway to wherever you want to go in life. History is full of people who started at a college just like LTC and went on to do great things: Steve Jobs (founder of Apple and Pixar), George Lucas (creator of Star Wars), Ross Perot (billionaire business executive who received over 19,000,000 votes in the 1992 presidential election), Eileen Collins (first female pilot and first female commander of a U.S. space shuttle mission), Craig Venter (helped sequence the second human genome), Fred Haise (lunar module pilot of Apollo 13), Aaron Rodgers (quarterback for the Green Bay Packers), Ileana Ros-Lehtinen (first Hispanic woman elected to Congress), and countless others. The LTC team is excited to see where you go when you leave here.

Best wishes for a successful year and be sure to take advantage of everything

LTC has to offer. We are with you all the way!
The LTC Team

LAKESHORE TECHNICAL COLLEGE DOES NOT DISCRIMINATE AGAINST PROTECTED CLASSES, INCLUDING BUT NOT LIMITED TO RACE, COLOR, NATIONAL ORIGIN, RELIGION, SEX, OR GENDER – INCLUDING SEXUAL ORIENTATION, GENDER IDENTITY, GENDER EXPRESSION, DISABILITY OR AGE IN EMPLOYMENT, ADMISSIONS, OR ITS PROGRAMS OR ACTIVITIES. TO HANDLE INQUIRIES REGARDING LAKESHORE'S NONDISCRIMINATION POLICIES, CONTACT MGR-ACCESS, EQUITY, & INCLUSION (STUDENTS) 920.693.1120, NICOLE.YANG@GOTOLTC.EDU / EXECUTIVE DIRECTOR OF HUMAN RESOURCES (STAFF/OTHERS) 920.693.1139, MARISSA.HOLST@GOTOLTC.EDU. 1290 NORTH AVENUE, CLEVELAND, WI 53015. TTY 711 GOTOLTC.EDU/EQUAL-OPPORTUNITY-STATEMENT

DISCLAIMER

Lakeshore Technical College reserves the right to modify, amend or delete all policies, procedures, or any other information presented in this catalog. The college also reserves the right to modify the schedules, fees and/or regulations affecting student programs and activities. Please review the information in this catalog carefully. You are responsible to acquire an active knowledge of the college's policies and procedures. Students who violate these procedures will be subject to disciplinary action.

STUDENT HANDBOOK

The most up-to-date student handbook is available online at: gotoltc.edu/Student-Handbook.

Mission

Transform individuals and strengthen our communities through innovative, accessible learning.

Vision

The community's driver for individual, social, cultural, and economic vitality.

**WHEREVER AND
WHENEVER NEEDED**

**Accreditation and Affiliation**

Lakeshore Technical College is accredited by The Higher Learning Commission, 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604-1411; hlcommission.org; 312.263.0456.

EQUAL OPPORTUNITY EMPLOYER/EDUCATOR

Lakeshore Technical College does not discriminate in employment, admissions, or its programs or activities on the basis of race, color, national origin, religion, sex, and gender (including sexual orientation and gender identity), disability, or age, or membership to any other legally protected class. The Human Resources Department/Affirmative Action Officer has been designated to handle inquiries regarding the College's nondiscrimination policies.

STUDENT RESOURCES

ACCESS, DIVERSITY, EQUITY, AND INCLUSION

Diversity & Multicultural Services nurtures a welcoming environment where all students are empowered to pursue their academic and professional goals. We provide proactive support to students, foster an appreciative awareness of diversity, and promote access, equity, and inclusion in the LTC community.

We serve as a resource and support students including:

- Assistance with navigating admissions, financial aid, registration, and other college processes.
- Academic and cultural support.
- Programming that supports success
- Special events and workshops that are focused on diversity, equity, and inclusion.

LTC assures compliance with all federal and state laws through administration and enforcement of LTC District Board Policies and Procedures, including those related to equal opportunity, equal educational opportunity, and affirmative action.

For more information regarding diversity, equity, and inclusion at LTC, please visit us at

<https://gotoltc.edu/current-students/student-support-services/diversity> or contact us directly at 920.693.1120.

ACCOMMODATION SERVICES

The mission of Accommodation Services is to be an active partner with students, faculty, and staff in creating an accessible learning environment where students with disabilities have an equal opportunity to participate in all aspects of LTC programs, services, and activities. The Americans with Disabilities Act (ADA) of 1990 (42 U.S.C & 12101. et seq), the ADA Amendments Act of 2008, and Section 504 of the Rehabilitation Act of 1973 (29 U.S.C & 794), prohibits discrimination against persons because of their disability. Accommodations are outcome neutral and are not intended to provide any advantage or guarantee of success in a course or program.

A student requesting accommodations is required to:

- Submit an Accommodation Request Form to Accommodation Services.
 - This document is located on the Accommodation Services website. <https://gotoltc.edu/current-students/student-support-services/ada>.

Submit documentation of the stated disability identifying the disability for which accommodation is requested and substantiating that the need for accommodation is related to the disability. In general, documentation should not be more than five (5) years old.

MENTAL HEALTH COUNSELING

Counseling services are available day and evening to assist students with personal concerns and mental and emotional wellness.

Personal, individual, and short-term counseling is available to assist students in dealing with concerns which may interfere with class success or personal growth. Students may also be referred to agencies in the community for appropriate comprehensive counseling.

For more information and/or to set up an appointment with the counselor, please see the Current Student Resource page.

ORIENTATION & STUDENT SUCCESS TUTORIAL

Orientation for new students may include a college orientation, program-specific orientation and the online Student Success Tutorial.

Orientation activities are held prior to the start of the fall and spring semesters and include the opportunity to:

- Learn about services to help you succeed
- Get updates on Title IX and college policies
- Hear about paying for college and payment options
- Pick up just-in-time reminders for the start of school
- Individual programs may require an additional orientation session. Each respective division will coordinate and communicate dates, times, and details.

All new students will also complete the online Student Success Tutorial, which is a self-guided course that provides more in-depth information to prepare students to be successful. The activities in the tutorial are common tasks you will be asked to complete as part of being a new student at Lakeshore Technical College. The activities will help you:

- Explore a variety of Blackboard features that may be used in a course.
- Utilize LTC technologies.
- Explain campus-wide policies.
- Discover tips and tricks to being a successful student at LTC.
- Identify the different options to pay for college.
- Explore various student support resources available to students at LTC.

PROGRAM COUNSELING

Program Counselors are here to help students plan their educational path and achieve their career goals. Program Counselors help students with course selection and registration, academic success, and transition to the workforce or continuing education. You can schedule an appointment for this service by calling 920.693.1109 or by using the scheduling feature in Navigate.

TESTING SERVICES

Testing Services administers a variety of tests including Accuplacer for Apprentices; GED/HSED; keyboarding; Credit for Prior Learning test-out exams for LTC classes; HESI nursing entrance exams; and proctored instructional testing for LTC classes.

Testing Procedures:

- Appointments are required and must be scheduled prior to 4:00 PM the day before.
- MUST have photo ID with full name and picture.
- Testing must be completed by closing time. Please plan your time accordingly.
- The number of testing stations is limited at each site.
- Cell phones and electronic devices (including smart watches) are not allowed. Lockers available in all locations.
- Scratch paper and pencils are provided. Calculators will be provided if approved. Personal calculators are not allowed. All must be returned to the proctor when finished.
- Beverages and snacks are not allowed.
- Testers may not leave for breaks after the test has started.
- Only testers are allowed in the testing areas.
- If testing on a computer, no other applications or websites are to be open.
- Testing rooms are under camera surveillance and recording.
- Violations will be reported to your instructor or the Testing Services Manager.

For more information, visit <https://gotoltc.edu/testing> or contact Testing Services at 920.693.1184 or testing@gotoltc.edu.

ACADEMICS

ACADEMIC FORGIVENESS

Academic Forgiveness allows returning students a one-time opportunity to request omission of courses from a prior enrollment period from their grade point average. Course grades will remain on the student transcript but not calculated into the student's GPA. Courses that have already been applied toward a previous degree are not eligible to be forgiven.

Financial Aid funding and Satisfactory Academic Progress do not fall under the Academic Forgiveness policy; enrollment/grade history will continue to be a factor when determining financial aid eligibility.

Students must meet with their Program Counselor to discuss application prior to submission. The counselor will assist the student to determine whether a course repeat, or forgiveness is the appropriate option for them.

Students may qualify for academic forgiveness under the following conditions:

- Student is moving from one LTC program to another LTC program.
- Student is returning to LTC after a two-year period of time away from the college.
- Student had difficulties other than what qualifies for a late drop. (Issues other than verified medical emergencies, etc.)

Students may apply after the first successful semester returning to LTC. Successful is defined as completing Satisfactory Academic Progress (SAP) standards.

Grades below C are eligible to be omitted from GPA calculation. The student will specify course(s) to omit through the Academic Forgiveness Request form.

All course decisions approved for academic forgiveness are final and cannot be reversed. If a student changes their program, credit forgiveness is not reversible, and they will need to retake the course if it is required for the new program. Courses that are approved for academic forgiveness will not be eligible to be used as a prerequisite or co-requisite for another course.

Appeal Process: Students that are denied forgiveness for a course or courses may appeal that decision to the Vice President of Student Success

ATTENDANCE

It is important that all students enrolled at LTC attend classes regularly to receive the maximum benefit from the educational opportunities provided. Students are expected to abide by the attendance policy established by the instructor as published in the course syllabus.

Students that do not attend class sessions in accordance with the class attendance policy and/or whose irregular attendance is negatively affecting achievement will be referred through LTC's referral process to develop an appropriate plan for student success.

It is the student's responsibility to drop a course if they no longer plan to attend. The refund amount will be based on the Refund Policy outlined in this handbook. Students may drop classes via their MyLTC account, in person at the Registration desk or in writing via their official LTC email account to lrc.records@gotoltc.edu. Students are unable to drop classes by telephone.

Students are required to participate in the first class session (or class activity if in an online class). Failure to do so could result in the student being dropped from the course according to the campus no-show policy.

If withdrawn from a class, the student may be eligible to re-enroll in the class if capacity permits.

CALENDAR

Two 15-week semesters, and one 8-week summer session are offered. Selected programs are offered at other dates. A fall (December) and spring (May) graduation are held on campus.

CLASS ADDITIONS, TRANSFERS, & WITHDRAWALS/DROPS

Students may add, transfer, or drop classes without penalty up until the official start of the term via the registration/drop process either in person or via MyLTC.

Adding Classes:

Once a class has started, division approval is required to register. Approval will be provided via a course add/drop form which may be obtained from Student Services. The student must register for the class through Student Services.

Dropping Classes:

Student may drop a course at any time in the term either via MyLTC, in person, or in writing via their official LTC email account, and may be eligible for a refund according to the WTCS Refund Policy. Students are unable to drop courses by telephone. Students who withdraw from a class at the time when more than 60 percent of the class hours had elapsed will receive a grade of WF. Prior to that time, the student will receive a grade of W.

Note: It is advised that students contact their program counselor prior to dropping to discuss potential impact on financial aid, refunds, and other educational impacts.

Students are responsible for officially dropping classes or withdrawing from campus for the term. Stopping attendance in class does not constitute dropping a class or withdrawing from a term. LTC will only drop students from courses if the student initiates a drop as described above or as the result of a policy violation (including violation of the campus first-day no-show policy). Class fee refunds are issued in accordance with guidelines established by the Wisconsin Technical College System. The amount of the refund received is based on a number of factors, including when the drop occurred and how much class meeting time has elapsed.

Any student not participating on the first day of class (no-show) may be dropped from the class. An attempt will be made to contact the student before dropping them from the class. No shows will be processed as first day drops and any refunds processed according to WTCS guidelines.

COURSE DELIVERY METHODS

Flexible Learning Options improve accessibility and affordability to many of the same courses offered in a traditional on-campus classroom.

- Accessibility-options to fit your schedule, location, and pace needs.
- Affordability-reduce cost of travel, daycare, and the time away from work.
- Same courses-the course outcomes do not change, only the delivery.

Traditional, Video Conference, Online, Blended, Hybrid, CBE, and iFlex

These courses are designed to offer you greater convenience and learning options.

- **Traditional and Technology**-Facilitated courses are delivered in a face-to-face setting. The course may use technology to facilitate instruction.
- **Video Conference courses** are delivered via network or web conferencing.
- **Online course** content is delivered 100% through the internet and accessed by students using a web browser in an asynchronous and possibly synchronous format. Courses may require proctored (supervised/onsite) testing. Students are required to complete work by specific deadlines throughout the course. What you will need for online courses:
 - Access to a computer with internet service.
 - Strong motivation to achieve your goal.
 - About 3 hours per credit each week for class work (may vary depending on class, content, skill level, etc.).
 - Good time management skills.
 - Computer skills in email, internet, and basic computer operations.
- **Blended courses** use online learning activities to aid in learning the course material and reduce face-to-face instructional time. Less than 50% of the course instruction is delivered via online using the internet combined with face-to-face instruction. For example, a course that normally meets twice a week as a traditional course may only meet once a week or every other week in a blended course. The course schedules show the times the course will meet in a face-to-face format. You will need access to a computer with internet service.
- **Hybrid courses** combine online and face-to-face instruction. At least 50% but less than 100% of course instruction is delivered via online using the internet (accessed by the student using a web browser), combined with face-to-face instruction. A one-time face-to-face course orientation or off-line supervised tests/exams at specified sites may be conducted in conjunction with these courses.
- **Competence-Based Education (CBE)** is an outcomes-based approach to earning a college credential which organizes academic content around competencies and measures academic progress as the attainment or mastery of competencies. CBE is an academic model in which the time it takes to demonstrate competencies varies and the expectations about learning are held constant. Learners demonstrate mastery through multiple forms of assessment, often at a personalized pace.
- **iFlex** is a course integrating two delivery modes allowing students flexibility of attending online and/or face-to-face. Face-to-face instruction would meet weekly not to exceed 50% (hybrid delivery mode) of total course hours of a traditional delivery format. Students would have required identical online components (assessments and lecture materials are the same, whether sitting in the classroom or learning online), with lecture content recorded and available online. Students have the ability to migrate between the two delivery modes.

CREDIT FOR PRIOR LEARNING

LTC recognizes its responsibility to provide advanced placement status to those students with valid and credible learning experiences that have occurred outside of our college classrooms. Credit for prior learning, sometimes called Advanced Standing, may be granted for the following situations:

Transfer Credits:

- 1) Postsecondary credits earned at other WTCS colleges
- 2) Postsecondary credits earned at other non-WTCS college
- 3) Credits earned by high school students
- 4) Credits earned by completing a registered apprenticeship

Other Non-College Education & Training*:

- 1) Subject area competency demonstrated by passing a district or national examination.
- 2) Previous work experience, military training, education or training, or other prior learning demonstrated as comparable in content and rigor to a specific technical college course or courses.

*Students desiring to earn credit for their prior learning from non-college education and training (work/life experience) may be assessed for their prior learning through a prior learning assessment. A prior learning assessment can be a test, portfolio, skills demonstration, or combination of methods. Testing out of course must be completed within the first two weeks of the course. Not all courses have prior learning assessments, please contact your program counselor at 920.693.1109 for more information.

General Guidelines for Credit for Prior Learning:

Credit for prior learning must be applied toward a specific program at the College. Non-program students are not eligible for advanced standing.

- The student must have earned a grade of 2.0 or better (on a 4.0 scale) in the course being considered.
- The course being transferred must be generally equivalent in content and meets or exceeds the credit value of the LTC course.
- Transfer credit may be awarded for up to 75% of the degree, diploma, or certificate requirements. Students must complete a minimum of 25% of the technical/occupational courses required to complete the degree or diploma at LTC.
- The college reserves the right to place time limits on prior learning for which credit may be granted based on technological changes specific to that field.
- Original transcripts from awarding institutions are required when transferring in college credits.
- If the student chooses to be assessed for their prior learning in a currently enrolled class, it must be completed within the first two weeks of the term and any refund due to the student will follow WTCS refund policy for that particular class.
- Credits earned through prior learning assessments are not eligible for financial aid.
- The student does not have to be enrolled in the course to complete a prior learning assessment.
- If the student has been enrolled in the course for longer than two weeks or has been enrolled in the same course at any point in the past, the student may not petition for Credit for Prior Learning.
- Exams are \$50.00 and Portfolio and Skill Demonstration is \$90.
- CPL for previous work experience will include a \$90 fee.

GRADING

Grading communicates the student's level of competence and/or proficiency at the end of each class. The LTC grades are A, B, C, D, F, P, N, LF, WF, W, TR, WE, IC, R, and AU. The definition and grade point value of each is as follows:

<p>Grade A</p> <ul style="list-style-type: none"> • Superior • Superiorly met for CBE courses • Awarded 4 grade points per credit • Included in GPA 	<p>Grade B</p> <ul style="list-style-type: none"> • Above Average • Met for CBE courses • Awarded 3 grade points per credit • Included in GPA
<p>Grade C</p> <ul style="list-style-type: none"> • Average • Awarded 2 grade points per credit • Included in GPA 	<p>Grade D</p> <ul style="list-style-type: none"> • Below Average • Awarded 1 grade point per credit • Included in GPA
<p>Grade F</p> <ul style="list-style-type: none"> • Failure • Not met for CBE courses • Awarded 0 grade points per credit • Included in GPA 	<p>Grade P</p> <ul style="list-style-type: none"> • Pass • Awarded 0 grade points per credit • Not included in GPA • Student achieved the competencies for the class at the required proficiency level.
<p>Grade N</p> <ul style="list-style-type: none"> • Non-graded • Awarded 0 grade points per credit • Not included in GPA • The class is not a graded/credit class. 	<p>Grade LF</p> <ul style="list-style-type: none"> • Lapsed F • Awarded 0 grade points per credit • Included in GPA • An IC grade that has not been changed to another grade • six weeks after the end of that term.
<p>Grade WF</p> <ul style="list-style-type: none"> • Withdrawal F • Awarded 0 grade points per credit • Included in GPA • Student withdrew from the class at the time when more than 60 percent of the class hours had elapsed. 	<p>Grade W</p> <ul style="list-style-type: none"> • Withdrawal • Awarded 0 grade points per credit • Not included in GPA • Student withdrew from the class after the class had started but before 60 percent of the class hours had elapsed.
<p>Grade TR</p> <ul style="list-style-type: none"> • Transfer • Awarded 0 grade points per credit • Not included in GPA • Student achieved the competencies by some other approach than completion of the specific class at LTC and has received advanced standing. 	<p>Grade WE</p> <ul style="list-style-type: none"> • Withdrawal for extenuating circumstances • Awarded 0 grade points per credit • Not included in GPA • Student withdrew from the class after it had started due to extenuating circumstances.

Grades with a * denote grades that have been forgiven via the Academic Forgiveness policy.

A complete grading policy may be obtained in Student Services.

Courses forgiven under the academic forgiveness policy will be noted on the student transcript with an * not included in GPA.

IC (INCOMPLETES)

Students may be eligible to receive an “IC” grade in a class where they have completed 75% of the work for the course and at the discretion of the instructor. The student will then have additional time (up to six weeks), as agreed upon with the instructor, to complete all remaining requirements for a valid grade found on the grading scale. The “IC” grade changes to an “LF” grade six weeks after the last day of the term if there is no other grade is given or extension granted. Grades of “IC” are considered as attempted but not completed when calculating percentage of completion for financial aid when determining Satisfactory Academic Progress. The “IC” grade is not calculated into the non-financial aid GPA until the grade has been changed.

R (RETAKE CLASS)

If a student retakes a course, the most recent grade is retained and the previous course grade is changed to a grade of “R”. The most recent grade is used to calculate the grade point average. All courses attempted will be shown on the permanent record, but the final cumulative grade point average reflects only the most recent grade.

AU (AUDITING A CLASS)

Students may enroll in a class without desiring a grade. This is called “auditing.” An auditing student must register and pay the same fees as students enrolled for credit. The usual withdrawal/refund policy will apply.

No credit is given for a class which is audited. Therefore, the audited class does not count towards credit load or for financial aid. When auditing a class, students may not change enrollment status at a later date to receive credit for that class. Students may, however, retake the class as a regular student and receive credit upon successful completion of the class.

To audit a class, the student must obtain written approval from the instructor of the class before the end of the second week of that class. A Course Audit/Drop/Transfer form with the instructor’s signature indicating the audit status must be returned to Student Records for processing.

A student may audit a course as part of an overall educational plan of self-improvement. A student may not audit a course for the sole purpose of assisting another student academically with the course.

LTC reserves the right to restrict the auditing of certain classes.

STUDENT GRADE AND OTHER ACADEMIC CONCERN APPEAL PROCESS

Students attending LTC may appeal a final grade, assignment grade, or other academic concern through the following process.

All appeals must be initiated in writing no later than twenty-one (21) business days following the submission of the grade. The steps below will be followed.

Step 1

The student is encouraged to communicate with the instructor who assigned the grade to resolve the dispute. The faculty will respond within ten (10) business days.

Step 2

If not resolved, or if the student prefers, the student will contact the Division Dean or Associate Dean. The Division Dean or Associate Dean will conduct a review of the information presented by the student and instructor and respond with a decision within ten (10) business days.

Step 3

The student may appeal the Dean's decision to the Registrar/Student Conduct Officer by submitting a written document describing their specific concerns. Registrar/Student Conduct Officer reviews appeal to determine if it merits further consideration. If the matter does not warrant further consideration, the matter will be considered closed. If further review is warranted, additional information will be collected and provided, at the Registrar/Student Conduct Officer's discretion, to either an Internal Investigation Committee or the Vice President of Instruction.

Step 4a

Internal Investigation Committee will consist of Vice President of Student Success, a student, a faculty member not associated with case, and Dean not associated with that division. Registrar/Student Conduct Officer will serve as an ex-officio member. Students and staff involved will be notified within fifteen (15) business days. The decision of the Internal Investigation Committee will be considered final for the LTC process.

Step 4b

The student may appeal the committee's decision, in writing, to the Vice President of Instruction within ten (10) business days of the receipt of the committee's decision. The Vice President of Instruction will meet with the student involved within ten (10) business days. The decision of the Vice President of Instruction will be considered final for the LTC process.

The College's final decision may be appealed to the WTCS.

GRADUATION REQUIREMENTS

Students are required to submit an Application for Graduation to Student Records prior to the last term's program registration. The LTC District Board will confer an associate degree and technical diploma to students that meet the following graduation requirements:

- Complete program of study with at least a program grade point average (GPA) of 2.0.
- Complete technical/occupational studies courses with a grade of C or higher, P, or TR. Students and staff are to refer to program handbooks, course prerequisites or program curriculum for variations.
- Complete at least 25 percent of the technical/occupational studies courses at LTC.

To calculate your GPA, divide the total grade points received for one term by the number of credits completed. Example: You completed 12 credits this term and you were awarded 4 credits of "A," 4 credits of "B," and 4 credits of "C." Your total grade points are $(4 \times 4) + (4 \times 3) + (4 \times 2) = 36$ total grade points. Your GPA for the semester is $36 \text{ graded points} \div 12 \text{ credits} = 3.000 \text{ grade points per credit} / \text{GPA} = 3.000$.

HONORS RECOGNITION

LTC has academic honors recognition for continuing and graduating students.

Honors Graduate

To receive Graduate Honors at the time of graduation, a student needs to:

- Earn a program grade point average (GPA) of 3.500 to 3.999
- Complete at least 25 percent of earned graded credits at LTC

Honors designations will appear on the student's transcript once he/she has graduated from a selected program.

Presidential Honors Graduate

To receive Presidential Honors at the time of graduation, a student needs to:

- Earn a program grade point average (GPA) of 4.000
- Complete at least 25 percent of earned graded credits at LTC

Honors designations will appear on the student's transcript once he/she has graduated from that program.

Honors cords will be worn by all graduates who earn honors, and an honors medallion will be awarded for those who achieve presidential honors for their program credential earned for that graduation ceremony.

Awards Celebration

See [STUDENT LIFE](#) (Student Leadership Board) section in this handbook.

Dean's List

Students that have six or more term credits and at least a term GPA of 3.500 will qualify for the Dean's list. Student names will be sent to the area newspapers for publication at the end of the fall and spring terms.

Phi Theta Kappa Honor Society

Phi Theta Kappa is an international honor society for two-year institutions. PTK recognizes and encourages academic achievement and provides opportunities for individual growth and development through participation in honors, leadership, service, and fellowship activities. Students are invited to join when they have completed 12 or more credits of associate degree or six credits of technical diploma coursework with an overall 3.50 cumulative GPA (counted from the past 5 years). The one-time, lifetime membership fee is \$75. Members are invited to an induction ceremony, receive a special seal on their diploma/transcripts and wear an honorary gold stole at graduation.

Military Honor Cords

In recognition of military service to the United States of America, students who are honorably discharged or currently serving in the U.S. military (active duty, National Guard, or Reserves), or will be commissioned upon graduation, are given the opportunity to wear a red, white, and blue honor cord. Contact Student Records at student.records@gotoltc.edu if you are a current or former service member who chooses to be recognized at the ceremony.

INSTRUCTOR ABSENCE/CLASS CANCELLATION

Instructor absences and subsequent class cancellations will be announced via a text, email, and/or phone call. Student should check their LTC email and Blackboard as coursework may still be required. Communication will be updated as often as necessary throughout the day. School closings are also posted on the campus website at www.gotoltc.edu.

PREREQUISITES

Prerequisites for courses are designated in the course descriptions found on the program sheet and the “Find a Class” link on the college website. Registration in a class requiring a prerequisite is permitted by satisfying the prerequisite requirements or with permission of the instructor. Information is available in the Student Services office. Courses may have a specified minimum achievement level required in the prerequisite courses.

SHARED PROGRAMS

Shared programs exist between LTC and other Wisconsin Technical Colleges. Students are subject to the same grade and grade point average requirements for class progression. All grades earned in program courses offered by LTC or shared program district are calculated into the program GPA.

Financial Aid is available to those who qualify and will be issued by the degree-granting college. Courses required within the shared program are included in financial aid credit load.

TRANSFER OF CREDITS TO LAKESHORE TECHNICAL COLLEGE

Students may transfer credits taken at other postsecondary institutions to Lakeshore Technical College. Credits will only be accepted under the following conditions:

- An official transcript must be requested by the student to be sent from the campus where the student took the class(es).
- If the official transcript is not mailed directly from the sending campus, it must be delivered in an unopened, sealed envelope.
- The sending campus must have been regionally accredited at the time that the class or classes were taken.
- The student must have earned a grade of C or higher for credits to transfer.
- The student may be required to provide additional information such as course descriptions or course syllabi in order to complete the transfer process.

TRANSFER OF CREDITS TO OTHER POSTSECONDARY INSTITUTIONS

Lakeshore Technical College credit transfer to a large number of other college and universities in Wisconsin and across the country. To transfer credits to another institution, the student must request an official transcript online via MyLTC or LTC website. Student records, including transcripts are confidential documents and will be only sent out upon your online request. Official transcripts will not be sent if there is a past-due balance on their student account.

Credit transferability is determined by the receiving institution. LTC’s Registrar will assist students with transferability concerns.

PAYING FOR COLLEGE

ACCIDENT INSURANCE (Student mandatory)

All students enrolled in program courses will automatically be enrolled in the mandatory student accident insurance program. This provides \$50,000 of coverage at 100% if a student is injured in an accident while in the classroom, lab, clinical or intern site. The student is also covered while participating in any college or club sponsored event, and while driving to and from class or clinical/intern site. Students enrolled in distance learning, on-line, basic skills, or adult and continuing education courses would not be covered. The cost for this insurance is \$4 per student/per term and will be added to the student's account. Students requesting to waive this coverage must contact the Financial Services office. To view your personal coverage information, edit your primary address, or generate an ID card, visit [Gallagher Student Health and Special Risk](#).

FEES

The fee structure is established and approved through the Wisconsin Technical College System Administration and Board. Payment of fees is required to complete the admission and pre-registration process. Please refer to the online fee schedule for current pricing.

- Program Fee—a program fee will be charged for all credit classes. Vocational apprenticeship classes will be charged for each credit equivalent. The program fee is to cover registration, class, and lab fees.
- Supplemental Fee—a supplemental fee is charged to part- and full-time students taking credit classes. These monies help support graduation, Student Employment Service, Health Service, Student Leadership Board, clubs, student leadership and development activities, and student cultural and social events. GOAL and 38.14 contracts are exempt from paying the supplemental fee.
- Material Fee – A material fee is charged for various materials used in a given course.
- Fee for Test outs—a student may attempt to test-out of certain classes by taking an examination. The cost is \$50 per test out. College Level Examination Program (CLEP) total cost is \$114.
- Accuplacer Fee—Apprentice students required to take Accuplacer will be charged \$25.
- Background Information Disclosure—this is a fee required of students involved in identified programs. In state \$20, out of state varies by state.
- LTC College Transcript Requests—Official transcripts: \$10 per transcript; request through MyLTC. Unofficial transcripts: no fee. Students may print via MyLTC.
- GED/HSED Transcript Requests—GED/HSED Transcripts and Credentials must be requested from the State of Wisconsin Department of Public Instruction (official bearer of the record) by calling 800.768.8886 or <https://dpi.wi.gov/ged/transcripts>.
- Accuplacer Test Result Transcript Requests (for use at other colleges): A \$10 fee is charged for transcripts in writing: in person, by mail, by email or by fax. Contact Testing Services at 920.693.1184 or testing@gotoltc.edu. Transcripts are mailed within 48 hours. Accuplacer test results are not available to be printed from MyLTC.
- Accident insurance is \$4 per student/per term and will be added to the student's account.
- Diploma reprint fee is \$10.
- International fee is \$100.

FINANCIAL AID

Financial Aid services are in the Student Services area. Financial Aid staff are available to help you apply for financial aid and complete other financial aid requirements. LTC offers Title IV federal and state financial aid which includes grants, loans, and work-study jobs to students who qualify. Students wishing to receive financial aid must complete a Free Application for Federal Student Aid (FAFSA) each academic year at and complete additional LTC Financial Aid forms and provide documentation, as necessary. "The definition of an academic year for purposes of distributing financial aid funds is 30 weeks of instruction and 24 semester credit hours. The academic year consists of a fall term and a spring term. An 8-week summer term is also available."

Book Charges

Book charges to purchase required books and supplies are available to students with pending financial aid in excess of tuition and fees for the semester. Book charges are only valid at the LTC Bookstore. Students are not required to purchase books and supplies at the LTC Bookstore and are not required to exercise the option to utilize the book charge process. Book charges are typically capped at \$900 with special considerations occurring through the LTC Financial Aid Office. Book charges are available 3 weeks prior to the start of the term through the tenth week of the term.

Disbursement

Funds are paid three weeks into the academic semester for fall and spring (and after July 1 for summer semester), and weekly thereafter. You must have begun participation in at least one of your scheduled classes for financial aid to be paid. When financial aid is paid, it is applied to your student account to pay for any existing charges. Any excess is released as a refund via a paper check or direct deposit as directed by the student.

Eligibility

Generally, a student must meet the following eligibility criteria to receive financial aid: be admitted to an eligible degree-seeking program at LTC; be a citizen, permanent resident of the United States, or other eligible non-citizen as detailed at www.fafsa.gov; have a FAFSA with a successful citizenship match (by the Social Security Administration for U.S. citizens or the United States Citizenship and Immigration Services in the Department of Homeland Security for eligible non-citizens); maintain Satisfactory Academic Progress (SAP) according to the SAP policy; be in compliance with Selective Service Registration; have a high school diploma, HSED, or GED; be enrolled at least halftime for federal and state funded financial aid programs (those less than halftime may only be eligible for the Federal Pell grant); resolve any drug conviction issues; fill out all required documents to complete a financial aid file; only take coursework necessary for the program being pursued; participate in coursework; and complete any necessary applicable loan requirements.

Enrollment Level for Financial Aid

Students taking 12 or more credits are considered full-time; 9-11 credits are considered three-quarter time; 6-8 credits are considered halftime; and 1-5 credits are considered less than halftime. Students may need to complete 16 to 18 credits each semester to graduate on time.

Types of Financial Aid

Need-based awards offered include: Federal Pell Grant; Federal Supplemental Education Opportunity Grant (SEOG); Direct Subsidized Student Loan; Federal Work-Study; Wisconsin Grant; Talent Incentive Program Grant (TIP); Minority Retention Grant; Fund for Wisconsin Scholars; Bureau of Indian Affairs Grant; Wisconsin Indian Assistance Grant.

Non-need-based awards offered include: Direct Unsubsidized Student Loan; Additional Unsubsidized Student Loan; Parent Plus Loan; Nursing Loans; Wisconsin Technical Excellence Scholarship; Wisconsin Covenant Grant; Wisconsin Foundation Grant; and Wisconsin Academic Excellence Scholarship.

Satisfactory Academic Progress (SAP)

The U.S. Department of Education requires financial aid recipients to maintain satisfactory academic progress (SAP). SAP measures both qualitative (grade point average process) and quantitative (pace and number of credits earned). All attempted undergraduate credits, including repeated courses, withdrawals, incompletes, and remedial courses will be calculated in your SAP, regardless if you have received financial aid for them.

- **Satisfactory Academic Progress** will be calculated at the end of each academic semester. Students are expected to receive a cumulative grade point average (GPA) of at least 2.0 and complete at least 66.67% of their cumulative credits attempted to remain in good standing.
- **Pace measure** is based on the cumulative number of program credits attempted, not to exceed 150 percent of credits required in the student's program. Students in excess of 150 percent may appeal and develop a maximum timeframe plan to continue financial aid eligibility.
- **Qualitative measure** is based on a student's cumulative grade point average (GPA). Students must maintain a cumulative GPA of 2.0 to remain in good standing.
- **Quantitative measure** is based on the cumulative satisfactory completion of cumulative attempted credits. Students must maintain a cumulative satisfactory percentage of completion of 66.67% or higher to remain in good standing.
- **Financial Aid Warning** is when a student fails to meet either the qualitative or quantitative measure, or both. The student is still eligible to receive financial aid while on warning.
- **Financial Aid Suspension** is when a student fails to meet either the qualitative or quantitative measure after the warning period. The student is no longer eligible to receive financial aid.
- **Appealing Financial Aid Suspension** is when the student appeals to have financial aid reinstated due to extenuating circumstances. Extenuating circumstances must be outside of the student's control, have documentation, and be explained in the Financial Aid Appeal Form.
- **Financial Aid Probation** is when the student has an approved appeal. This allows the student to receive another semester of financial aid.
- **Financial Aid Academic Plan** is when the student has an approved academic plan. This allows the student to continue to receive financial aid as long as the academic plan requirements are followed. Students must meet cumulative satisfactory academic progress by term (versus cumulative) to remain in good standing.

A full description of the SAP policy can be found at www.gotoltc.edu under Financial Aid > Eligibility > Satisfactory Academic Progress.

PAY YOUR TUITION

LTC payment methods include cash, check/money order, credit card (Visa or MasterCard), a completed Financial Aid Award, a third-party authorization, or by the LTC payment plan. Refer to MyLTC for detailed payment plan options and dates.

Students anticipating expenses to be paid by an agency such as the Workforce Innovation and Opportunity Act (WIOA), Trade Adjustment Act (TAA), Veterans Benefits, or Department of Vocational Rehabilitation must provide an authorization form detailing the course(s) and fees approved for payment.

Students who have not been awarded financial aid from LTC's Financial Aid Office and elect to sign a payment plan agreement must follow the payment plan guidelines and pay a nonrefundable participation fee at the time of signing up for the payment plan unless the student chooses the auto-withdrawal option for payment.

Any unpaid balance is the responsibility of the student. It is the student's responsibility to ensure that all applicable financial aid, third-party payments, and other outside payments are applied to their account as expected. Balances not paid by the due date are subject to:

- A late payment fee of \$100 for failure to pay by the due date. \$100 maximum per semester.
- Referral to an outside collection agency and collection costs, and to the Tax Refund Intercept Program or State Debt Collection.
- The withholding of transcripts, grades, diploma, etc.
- Not being able to register until balances are paid.

Up-to-date billing information is found within MyLTC.

Agency Assistance

Students who receive financial assistance through agencies such as the Bay Area Workforce Development, Division of Vocational Rehabilitation, etc., should contact the Student Billing staff in Student Services if they have questions. An authorization from the agency is needed to charge tuition, books, fees, and supplies at the college. Some agency regulations require strict and regular attendance. Students are responsible for any balances unpaid by the agency.

Payment Options:

- LTC accepts a variety of payment methods:
 - Cash, check, credit cards, money order, and electronic funds transfer
 - Scholarships
 - Financial Aid
 - Employer/Agency funding. Authorization must be on file at time of registration, or an Agency Payment Agreement form must be completed. Forms are available in Student Services or at the LTC Cleveland campus.
 - Payment Plan
 - Employee Reimbursement Payment Agreement (Requires a payment of \$50 per class, LTC Employee Reimbursement form and student's employers Human Resource policy. Contact Student Billing for more information.)
- Registration on or after the stated tuition due date for a semester will require immediate payment of tuition and fees.

Past Due Fees:

- Past due fees owed to LTC results in a hold placed on your record prohibiting further services. The hold remains in effect until the financial obligation has been satisfied.
 - Students with outstanding balances will not be allowed to register.
 - LTC reserves the right to require upfront payment from a student for future registrations.
 - Transcripts, diplomas, and certificates will not be released.
 - Past due balances may result in a referral to an outside collection agency and collection costs, and to the Tax Refund Intercept Program or State Debt Collection.
 - If a returning student has gone to collection agency more than 2 times and have cleared their balance, they will have a cash only hold. This will allow student to register if payment is made in full at time of registration or financial aid is put in place as anticipated on their account.
- To view your account summary, visit MyLTC and click on "Student Center" and "Finances".
- Send communications to:
 - Lakeshore Technical College
Attn: Student Billing
1290 North Avenue
Cleveland, WI 53015

REFUNDS

Class Refund

When a student drops a class, the amount of refund received is calculated in accordance with the WTCS refund schedule based on a number of factors, including when the withdrawal occurred and how much of the class meeting time has lapsed.

- If students withdraw on or before the first day of class, they are entitled to a fee refund equal to 100 percent of the fees.
- If students withdraw before or at the time 10 percent of the course's potential hours of instruction have been completed, they are entitled to a fee refund equal to 80 percent of the fees.
- If students withdraw after 10 percent but before more than 20 percent of the course's potential hours of instruction have been completed, they are entitled to a fee refund equal to 60 percent of the fees.
- If students withdraw after 20 percent of the course's potential hours of instruction have been completed, they are not entitled to a fee refund.
- No refunds will be considered for advanced standing and test-out fees.
- Students seeking advanced standing in classes they want to enroll in or are enrolled in need to complete testing out of the class within 14 days of the term start date in order to receive a full class refund.

If a student received financial aid to pay for the term, that money may be due back to financial aid.

Refund Appeals

All refund appeals must be initiated by sending the completed LTC Request for Refund Appeal with proper documentation to the Registrar no later than 42 calendar days from the end of the term.

A refund request made after the 42-day grace period will not be accepted and you will be responsible for payment.

Refunds for extenuating circumstances (situations outside of your control) will be made at LTC's discretion.

Disputed Fee Assessment

Disputes regarding registration, withdrawals, and related fee assessments or refunds MUST be brought to the attention of Student Billing and/or the Registrar during the semester in which the registration and related fee assessment occurred. LTC's obligation to follow-up on such disputes does not extend beyond the term the disputed charges took place.

SCHOLARSHIPS

The LTC Foundation awards scholarships to assist students with the costs of tuition, fees, and books for both fall and spring semesters. Scholarship selection criteria differs depending on the opportunity, and can include, but are not limited to financial need, merit, program enrollment, and general student success. LTC Foundation scholarships are funded by charitable donations from local foundations, LTC staff, businesses, friends, and alumni who elect to invest in their community by supporting technical education, the college, and its students.

LTC Foundation scholarship information can be found in the Admissions Office or by calling 920.693.1162. Additional information and the online scholarship application link can be found on the LTC website at <https://gotoltc.edu/scholarships>.

VETERANS SERVICES

LTC is approved by the State Approving Agency (SAA) at the Wisconsin Department of Veterans Affairs (WDVA) for enrollment of those persons eligible to receive federal GI Bill® education benefits. The SAA approves specific programs offered at specific locations for veterans and other eligible persons to receive federal veteran's education benefits under Title 38 of the U.S. Code. Please note: Students must complete and submit necessary forms, including proof of eligibility for federal VA benefits and the LTC Veterans Education Benefits Request form, to initially receive state/federal benefits and avoid late fees. Veterans continuing to receive federal benefits must complete the LTC Veterans Education Benefits Request form each semester. For more information, contact your County Veteran's Service Officer or LTC Financial Aid/Veterans Office at LTCVETS@gotoltc.edu or 920.693.1118.

Effective January 2020, the Harry W. Colmery Veterans Educational Assistance Act of 2017 (also known as the "Forever GI Bill"), Section 107, requires Post-9/11 GI Bill® monthly housing payments to be calculated based on the location of attendance. Contact your School Certifying Official for specific details.

Veterans Standards of Progress Policy for Federal Benefits

To obtain federal veterans educational benefits, government regulations require you to maintain satisfactory academic progress in the program that you are enrolled. Academic suspension will be reported to the Veterans Administration, as officials at LTC are obligated to do so. Failure to meet satisfactory progress requirements will result in:

Semester GPA of 1.0 to 1.99 - Veterans academic probation during the next semester of enrollment. During the semester you are on veteran's academic probation you must achieve satisfactory progress with a 2.0 semester GPA or lose eligibility for benefits the following semester.

Semester GPA of .99 or lower - Veterans academic suspension. If you earn less than a 1.0 grade point average for any semester, you will lose your eligibility for veteran's benefits. If you become ineligible for veterans' benefits, you can re-establish eligibility by seeking services through your LTC Program Counselor in order to resolve academic or other problems and to establish a meaningful plan for successful completion of your education or training. A specific request for resumption of veteran's benefits following an interruption due to unsatisfactory progress or conduct must be filled out by you and your counselor and submitted to the veterans certifying official at LTC to determine whether further payments of veteran's educational assistance allowance should be authorized. This form will be mailed to you with notification of your unsatisfactory progress. You can re-establish eligibility in this manner only one time. If you are suspended a second time, you will need to take six credits and pass with a 2.0 semester GPA or greater in one semester. You will be able to resume your benefits the semester following this.

The law requires student payment for a course which is not used in computing graduation requirements unless extenuating circumstances are shown. If a student does not meet the required course grade, it can be retaken until required grade is obtained.

Program Number 10-101-1
Associate Degree in Applied Science • Four Terms
ABOUT THE PROGRAM

Every business and industry, from movie-making to alternative energy, requires people-oriented, analytical, and creative thinkers to address accounting needs. As an accountant, you will have direct input regarding a company's financial health and profitability. A degree in accounting can be the key to rewarding and challenging opportunities in any field of interest.

PROGRAM OUTCOMES

- Process financial transactions throughout the accounting cycle.
- Analyze financial and business information to support planning and decision making.
- Perform payroll preparation, reporting, and analysis tasks.
- Perform cost accounting preparation, reporting, and analysis tasks.
- Perform organizational and/or individual tax accounting preparation, reporting, and analysis tasks.
- Identify internal controls to reduce risk.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Applied Tax requires attending evening classes during the spring term at the LTC Cleveland campus. Alternate VITA site locations for out-of-district students may be possible with instructor approval.

RELATED PROGRAMS

- Accounting Assistant Technical Diploma Program
- Tax Preparer Certificate

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10101111	Accounting 1	4
10101122	Income Tax	3
10101128	Income Tax 2	2
10103121	Excel - Level 1	1
10801195	Written Communication	3
10804123	Math with Business Applications	3
		16
Term 2		
10101113	Accounting 2	4
10101129	Applied Tax	1
10101135	Payroll Accounting	3
10101180	Spreadsheet Data Management	2
10101182	Accounting Software Applications	2
10102160	Business Law 1	3
		15
Term 3		
10101115	Accounting 3	4
10101125	Accounting Cost 1	4
10801196	Oral/Interpersonal Communication	3
10809196	Introduction to Sociology	3
		14
Term 4		
10101118	Accounting 4	2
10101124	Auditing	2
10101126	Accounting Cost 2	2
10101199	Accounting Capstone	3
10809195	Economics	3
10809198	Introduction to Psychology	3
		15
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ACCOUNTING 1...provides the learner with the skills to understand and apply accounting principles and procedures useful in any business. Includes the accounting cycle for a service enterprise and a merchandising enterprise, chart of accounts, special journals, ledgers, accruals and deferrals, inventories, and internal controls.

ACCOUNTING 2...provides the learner with the skills to transition to more advanced accounting courses with emphasis given to notes and interest, forms of legal entities, stock transactions, depreciation methods, payroll, valuation, and financial analysis. PREREQUISITE: 10101111 Accounting 1

ACCOUNTING 3...introduces the learner to intermediate accounting concepts, principles, and applications. Includes financial statements, temporary investments, receivables, equities, current liabilities, present value, and fixed assets. PREREQUISITE: 10101113 Accounting 2

ACCOUNTING 4...expands the learner's ability to understand intermediate accounting concepts, principles, and applications, including contingencies, long-term investments, bonds, corporate taxes, leases, and stockholders' equity. PREREQUISITE: 10101115 Accounting 3

ACCOUNTING CAPSTONE...provides the learner with the opportunity to synthesize the theory and processes learned in the Accounting program via a capstone project. This course is an exercise in professional analysis and preparedness--reemphasizing the need for professional communication. PREREQUISITES: 10101115 Accounting 3, 10101125 Accounting Cost 1, and 10101135 Payroll Accounting

ACCOUNTING COST 1...provides the learner with the skills to understand cost behavior and analysis emphasizing manufacturing enterprises including cost reports, job-order costing, process costing, joint products costing, standard costing and variance analysis. PREREQUISITE: 10101111 Accounting 1

ACCOUNTING COST 2...expands the learner's ability to understand accounting for manufacturing enterprises. Includes break-even analysis, differential costs, capital expenditures and budgeting. PREREQUISITE: 10101125 Accounting Cost 1

ACCOUNTING SOFTWARE APPLICATIONS...prepares the learner to transfer manual accounting skills to computerized accounting software. It includes company setup, expenditure cycle transactions, revenue cycle transactions, general journal transactions, payroll, bank reconciliations, end-of-period procedures, and customization of financial statements. PREREQUISITE: 10101111 Accounting 1 or 10101150 Office Accounting

APPLIED TAX...provides the opportunity for the learner to expand tax preparation skills acquired in the Income Tax course and apply those skills to real-life situations in preparing taxes for the local community through the IRS Volunteer Income Tax Assistance(VITA) program. Learners will gain certification from the IRS through the course. PREREQUISITE: 10101122 Income Tax

AUDITING...introduces the learner to the fundamentals of auditing. This course involves the evaluation of internal controls including methods of examination and evaluation of accounting records. These evaluations are used to provide objective data to support opinions on the fairness and reliability of accounting records. COREQUISITE: 10101113 Accounting 2

BUSINESS LAW 1...provides the learner with the skills to summarize the American legal system; diagram the state/federal court systems; evaluate dispute resolution methods; sequence the civil litigation process; summarize the administrative agencies; differentiate civil and criminal law; apply theories of negligence, intentional tort, and product liability; summarize elements of a contract; assess the validity of a contract; assess third-party rights and available remedies; and summarize Article II of the UCC.

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

INCOME TAX...introduces the learner to federal income tax laws and their underlying principles. Includes filing status, gross income (inclusions and exclusions), deductions and exceptions, tax forms and schedules, the computation of taxes, depreciation and completion of tax forms both manually and computerized.

INCOME TAX 2...expands the learner's ability to comprehend the principles of income tax law and calculate federal income tax for business using tax and practical problems. COREQUISITE: 10101122 Income Tax

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

PAYROLL ACCOUNTING...introduces the learner to federal and state payroll laws, calculating for gross and net pay, preparing payroll deductions, maintaining payroll records, and processing payroll in both a manual and computerized setting and preparing quarter-end and year-end reports. COREQUISITE: 10101111 Accounting 1

SPREADSHEET DATA MANAGEMENT...provides the learner with intermediate skills to use spreadsheet software to solve accounting and business problems. It focuses on advanced functions and relates skill acquisition to accounting analysis and reporting needs. COREQUISITES: 10101111 Accounting 1 and PREREQUISITE: 10103121 Excel - Level 1 or equivalent

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

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ABOUT THE PROGRAM

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PROGRAM OUTCOMES

- Process financial transactions throughout the accounting cycle.
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- Perform payroll preparation, reporting, and analysis tasks.
- Perform cost accounting preparation, reporting, and analysis tasks.
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 - Complete the online Student Success Questionnaire.
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- *Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

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- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

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RELATED PROGRAMS

- Accounting Assistant Technical Diploma Program
- Tax Preparer Certificate

CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10101111	Accounting 1	4
10103121	Excel - Level 1	1
10804123	Math with Business Applications	3
		8
Term 2 (Spring 2022)		
10101113	Accounting 2	4
10101180	Spreadsheet Data Management	2
		6
Term 3 (Summer 2022)		
10101135	Payroll Accounting (online)	3
10101182	Accounting Software Applications	2
10801195	Written Communication	3
		8
Term 4 (Fall 2022)		
10101125	Accounting Cost 1	4
10101122	Income Tax	3
10101128	Income Tax 2	2
		9
Term 5 (Spring 2023)		
10101126	Accounting Cost 2	2
10101129	Applied Tax	1
10102160	Business Law 1 (online)	3
10809196	Introduction to Sociology	3
		9
Term 6 (Summer 2023)		
10801196	Oral/Interpersonal Communication	3
10809198	Introduction to Psychology	3
		6
Term 7 (Fall 2023)		
10101115	Accounting 3	4
10809195	Economics	3
		7
Term 8 (Spring 2024)		
10101118	Accounting 4	2
10101124	Auditing	2
10101199	Accounting Capstone	3
		7
		TOTAL 60

ACCOUNTING 1...provides the learner with the skills to understand and apply accounting principles and procedures useful in any business. Includes the accounting cycle for a service enterprise and a merchandising enterprise, chart of accounts, special journals, ledgers, accruals and deferrals, inventories, and internal controls.

ACCOUNTING 2...provides the learner with the skills to transition to more advanced accounting courses with emphasis given to notes and interest, forms of legal entities, stock transactions, depreciation methods, payroll, valuation, and financial analysis. PREREQUISITE: 10101111 Accounting 1

ACCOUNTING 3...introduces the learner to intermediate accounting concepts, principles, and applications. Includes financial statements, temporary investments, receivables, equities, current liabilities, present value, and fixed assets. PREREQUISITE: 10101113 Accounting 2

ACCOUNTING 4...expands the learner's ability to understand intermediate accounting concepts, principles, and applications, including contingencies, long-term investments, bonds, corporate taxes, leases, and stockholders' equity. PREREQUISITE: 10101115 Accounting 3

ACCOUNTING CAPSTONE...provides the learner with the opportunity to synthesize the theory and processes learned in the Accounting program via a capstone project. This course is an exercise in professional analysis and preparedness--reemphasizing the need for professional communication. PREREQUISITES: 101011115 Accounting 3, 10101125 Accounting Cost 1, and 10101135 Payroll Accounting

ACCOUNTING COST 1...provides the learner with the skills to understand cost behavior and analysis emphasizing manufacturing enterprises including cost reports, job-order costing, process costing, joint products costing, standard costing and variance analysis. PREREQUISITE: 10101111 Accounting I

ACCOUNTING COST 2...expands the learner's ability to understand accounting for manufacturing enterprises. Includes break-even analysis, differential costs, capital expenditures and budgeting. PREREQUISITE: 10101125 Accounting Cost 1

ACCOUNTING SOFTWARE APPLICATIONS...prepares the learner to transfer manual accounting skills to computerized accounting software. It includes company setup, expenditure cycle transactions, revenue cycle transactions, general journal transactions, payroll, bank reconciliations, end-of-period procedures, and customization of financial statements. PREREQUISITE: 10101111 Accounting 1 or 10101150 Office Accounting

APPLIED TAX...provides the opportunity for the learner to expand tax preparation skills acquired in the Income Tax course and apply those skills to real-life situations in preparing taxes for the local community through the IRS Volunteer Income Tax Assistance(VITA) program. Learners will gain certification from the IRS through the course. PREREQUISITE: 10101122 Income Tax

AUDITING...introduces the learner to the fundamentals of auditing. This course involves the evaluation of internal controls including methods of examination and evaluation of accounting records. These evaluations are used to provide objective data to support opinions on the fairness and reliability of accounting records. COREQUISITE: 10101113 Accounting 2

BUSINESS LAW 1...provides the learner with the skills to summarize the American legal system; diagram the state/federal court systems; evaluate dispute resolution methods; sequence the civil litigation process; summarize the administrative agencies; differentiate civil and criminal law; apply theories of negligence, intentional tort, and product liability; summarize elements of a contract; assess the validity of a contract; assess third-party rights and available remedies; and summarize Article II of the UCC.

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

INCOME TAX...introduces the learner to federal income tax laws and their underlying principles. Includes filing status, gross income (inclusions and exclusions), deductions and exceptions, tax forms and schedules, the computation of taxes, depreciation and completion of tax forms both manually and computerized.

INCOME TAX 2...expands the learner's ability to comprehend the principles of income tax law and calculate federal income tax for business using tax and practical problems. COREQUISITE: 10101122 Income Tax

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PAYROLL ACCOUNTING...introduces the learner to federal and state payroll laws, calculating for gross and net pay, preparing payroll deductions, maintaining payroll records, and processing payroll in both a manual and computerized setting and preparing quarter-end and year-end reports. COREQUISITE: 10101111 Accounting 1

SPREADSHEET DATA MANAGEMENT...provides the learner with intermediate skills to use spreadsheet software to solve accounting and business problems. It focuses on advanced functions and relates skill acquisition to accounting analysis and reporting needs. COREQUISITES: 10101111 Accounting 1 and PREREQUISITE: 10103121 Excel - Level 1 or equivalent

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-101-1
Associate Degree in Applied Science
ABOUT THE PROGRAM

Every business and industry, from movie-making to alternative energy, requires people-oriented, analytical, and creative thinkers to address accounting needs. As an accountant, you will have direct input regarding a company's financial health and profitability. A degree in accounting can be the key to rewarding and challenging opportunities in any field of interest.

PROGRAM OUTCOMES

- Process financial transactions throughout the accounting cycle.
- Analyze financial and business information to support planning and decision making.
- Perform payroll preparation, reporting, and analysis tasks.
- Perform cost accounting preparation, reporting, and analysis tasks.
- Perform organizational and/or individual tax accounting preparation, reporting, and analysis tasks.
- Identify internal controls to reduce risk.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
 - Complete the online Student Success Questionnaire.
 - Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.
- *Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Applied Tax requires attending evening classes during the spring term at the LTC Cleveland campus. Alternate VITA site locations for out-of-district students may be possible with instructor approval.

RELATED PROGRAMS

- Accounting Assistant Technical Diploma Program
- Tax Preparer Certificate

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10101111	Accounting 1	4
10103121	Excel - Level 1	1
10804123	Math with Business Applications	3
8		
Term 2 (Spring 2022)		
10101113	Accounting 2	4
10101180	Spreadsheet Data Management	2
10101182	Accounting Software Applications	2
8		
Term 3 (Summer 2022)		
10101135	Payroll Accounting	3
10801195	Written Communication	3
6		
Term 4 (Fall 2022)		
10101115	Accounting 3	4
10809195	Economics	3
7		
Term 5 (Spring 2023)		
10101118	Accounting 4	2
10101124	Auditing	2
10809196	Introduction to Sociology	3
7		
Term 6 (Summer 2023)		
10801196	Oral/Interpersonal Communication	3
10809198	Introduction to Psychology	3
6		
Term 7 (Fall 2023)		
10101125	Accounting Cost 1	4
10101122	Income Tax	3
10101128	Income Tax 2	2
9		
Term 8 (Spring 2024)		
10101126	Accounting Cost 2	2
10101129	Applied Tax	1
10101199	Accounting Capstone	3
10102160	Business Law 1	3
9		
		TOTAL 60

ACCOUNTING 1...provides the learner with the skills to understand and apply accounting principles and procedures useful in any business. Includes the accounting cycle for a service enterprise and a merchandising enterprise, chart of accounts, special journals, ledgers, accruals and deferrals, inventories, and internal controls.

ACCOUNTING 2...provides the learner with the skills to transition to more advanced accounting courses with emphasis given to notes and interest, forms of legal entities, stock transactions, depreciation methods, payroll, valuation, and financial analysis. PREREQUISITE: 10101111 Accounting 1

ACCOUNTING 3...introduces the learner to intermediate accounting concepts, principles, and applications. Includes financial statements, temporary investments, receivables, equities, current liabilities, present value, and fixed assets. PREREQUISITE: 10101113 Accounting 2

ACCOUNTING 4...expands the learner's ability to understand intermediate accounting concepts, principles, and applications, including contingencies, long-term investments, bonds, corporate taxes, leases, and stockholders' equity. PREREQUISITE: 10101115 Accounting 3

ACCOUNTING CAPSTONE...provides the learner with the opportunity to synthesize the theory and processes learned in the Accounting program via a capstone project. This course is an exercise in professional analysis and preparedness--reemphasizing the need for professional communication. PREREQUISITES: 101011115 Accounting 3, 10101125 Accounting Cost 1, and 10101135 Payroll Accounting

ACCOUNTING COST 1...provides the learner with the skills to understand cost behavior and analysis emphasizing manufacturing enterprises including cost reports, job-order costing, process costing, joint products costing, standard costing and variance analysis. PREREQUISITE: 10101111 Accounting 1

ACCOUNTING COST 2...expands the learner's ability to understand accounting for manufacturing enterprises. Includes break-even analysis, differential costs, capital expenditures and budgeting. PREREQUISITE: 10101125 Accounting Cost 1

ACCOUNTING SOFTWARE APPLICATIONS...prepares the learner to transfer manual accounting skills to computerized accounting software. It includes company setup, expenditure cycle transactions, revenue cycle transactions, general journal transactions, payroll, bank reconciliations, end-of-period procedures, and customization of financial statements. PREREQUISITE: 10101111 Accounting 1 or 10101150 Office Accounting

APPLIED TAX...provides the opportunity for the learner to expand tax preparation skills acquired in the Income Tax course and apply those skills to real-life situations in preparing taxes for the local community through the IRS Volunteer Income Tax Assistance(VITA) program. Learners will gain certification from the IRS through the course. PREREQUISITE: 10101122 Income Tax

AUDITING...introduces the learner to the fundamentals of auditing. This course involves the evaluation of internal controls including methods of examination and evaluation of accounting records. These evaluations are used to provide objective data to support opinions on the fairness and reliability of accounting records. COREQUISITE: 10101113 Accounting 2

BUSINESS LAW 1...provides the learner with the skills to summarize the American legal system; diagram the state/federal court systems; evaluate dispute resolution methods; sequence the civil litigation process; summarize the administrative agencies; differentiate civil and criminal law; apply theories of negligence, intentional tort, and product liability; summarize elements of a contract; assess the validity of a contract; assess third-party rights and available remedies; and summarize Article II of the UCC.

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems. growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

INCOME TAX...introduces the learner to federal income tax laws and their underlying principles. Includes filing status, gross income (inclusions and exclusions), deductions and exceptions, tax forms and schedules, the computation of taxes, depreciation and completion of tax forms both manually and computerized.

INCOME TAX 2...expands the learner's ability to comprehend the principles of income tax law and calculate federal income tax for business using tax and practical problems. COREQUISITE: 10101122 Income Tax

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PAYROLL ACCOUNTING...introduces the learner to federal and state payroll laws, calculating for gross and net pay, preparing payroll deductions, maintaining payroll records, and processing payroll in both a manual and computerized setting and preparing quarter-end and year-end reports. COREQUISITE: 10101111 Accounting 1

SPREADSHEET DATA MANAGEMENT...provides the learner with intermediate skills to use spreadsheet software to solve accounting and business problems. It focuses on advanced functions and relates skill acquisition to accounting analysis and reporting needs. COREQUISITES: 10101111 Accounting 1 and PREREQUISITE: 10103121 Excel - Level 1 or equivalent

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 31-101-1
Technical Diploma • Two Terms

ABOUT THE PROGRAM

The Accounting Assistant technical diploma will provide students with the skills and confidence necessary to perform entry-level bookkeeping and accounting work for local employers. Accounting Assistant majors may work in a small business and be responsible for various aspects of bookkeeping or work in a larger firm under the supervision of an accountant and specialize in a certain area.

PROGRAM OUTCOMES

- Process financial transactions throughout the accounting cycle.
- Analyze basic financial and business information to support planning and decision making.
- Perform payroll preparation, reporting, and analysis tasks.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

RELATED PROGRAMS

- Accounting Associate Degree
- Tax Preparer Certificate

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10101111	Accounting 1	4
10101122	Income Tax	3
10103121	Excel - Level 1	1
10801195	Written Communication	3
10804123	Math with Business Applications	3
		14
Term 2		
10101113	Accounting 2	4
10101135	Payroll Accounting	3
10101180	Spreadsheet Data Management	2
10101182	Accounting Software Applications	2
10102160	Business Law 1	3
		14

TOTAL 28

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ACCOUNTING 1...provides the learner with the skills to understand and apply accounting principles and procedures useful in any business. Includes the accounting cycle for a service enterprise and a merchandising enterprise, chart of accounts, special journals, ledgers, accruals and deferrals, inventories, and internal controls.

ACCOUNTING 2...provides the learner with the skills to transition to more advanced accounting courses with emphasis given to notes and interest, forms of legal entities, stock transactions, depreciation methods, payroll, valuation, and financial analysis. PREREQUISITE: 10101111 Accounting 1

ACCOUNTING SOFTWARE APPLICATIONS...prepares the learner to transfer manual accounting skills to computerized accounting software. It includes company setup, expenditure cycle transactions, revenue cycle transactions, general journal transactions, payroll, bank reconciliations, end-of-period procedures, and customization of financial statements. PREREQUISITE: 10101111 Accounting 1 or 10101150 Office Accounting

BUSINESS LAW 1...provides the learner with the skills to summarize the American legal system; diagram the state/federal court systems; evaluate dispute resolution methods; sequence the civil litigation process; summarize the administrative agencies; differentiate civil and criminal law; apply theories of negligence, intentional tort, and product liability; summarize elements of a contract; assess the validity of a contract; assess third-party rights and available remedies; and summarize Article II of the UCC.

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

INCOME TAX...introduces the learner to federal income tax laws and their underlying principles. Includes filing status, gross income (inclusions and exclusions), deductions and exceptions, tax forms and schedules, the computation of taxes, depreciation and completion of tax forms both manually and computerized.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

PAYROLL ACCOUNTING...introduces the learner to federal and state payroll laws, calculating for gross and net pay, preparing payroll deductions, maintaining payroll records, and processing payroll in both a manual and computerized setting and preparing quarter-end and year-end reports. COREQUISITE: 10101111 Accounting 1

SPREADSHEET DATA MANAGEMENT...provides the learner with intermediate skills to use spreadsheet software to solve accounting and business problems. It focuses on advanced functions and relates skill acquisition to accounting analysis and reporting needs. COREQUISITES: 10101111 Accounting 1 and PREREQUISITE: 10103121 Excel - Level 1 or equivalent

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Writing or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading & Study Skills or Reading placement assessment equivalent

Program Number 10-106-6 Associate Degree • Four Terms

ABOUT THE PROGRAM

Businesses depend on high-quality, accurate information. If you value organization, care about details, and understand the importance of clear communication and current technology skills, developing those talents as an administrative professional may be just what you need to succeed.

PROGRAM OUTCOMES

- Demonstrate effective workplace communications.
- Apply technology skills to business and administrative tasks.
- Perform routine administrative procedures.
- Manage administrative projects.
- Maintain internal and external relationships.
- Model professionalism in the workplace.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10103121	Excel - Level 1	1
10103161	PowerPoint - Level 1	1
10103191	Word - Level 1	1
10106101	Document Formatting	1
10106110	Records Management	2
10106107	Office Technology	2
10106132	Keyboard Speedbuilding	1
10801195	Written Communication	3
10804123	Math with Business Applications	3
		15
Term 2		
10103101	Access - Level 1	1
10103122	Excel - Level 2	1
10103192	Word - Level 2	1
10106130	Office Professionalism	3
10106138	Web Technologies	2
10106124	eCommunications	3
10116129	Professional Career Search Techniques	1
10801196	Oral/Interpersonal Communication OR 10809198 Speech	3
		15
Term 3		
10102110	Introduction to Business	3
10106137	Small Business Applications	2
10106167	Microsoft Office Integration	3
10106172	MS Project	2
10106174	Desktop Publishing	2
10809198	Introduction to Psychology	3
		15
Term 4		
10101150	Office Accounting	3
10106135	Event Planning & Coordination	2
10106160	Internship - Administrative Professional	1
10106169	Administrative Office Management	4
10106192	Training Techniques	2
10809195	Economics	3
		15
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

ACCESS - LEVEL 1...introduces students to the process of creating a database, building and populating a table, establishing table relationships, and creating queries, forms, and reports.

ADMINISTRATIVE OFFICE MANAGEMENT...prepares students to work with the advanced features of the Microsoft Office suite, as well as act as an employee in an office simulation environment. Students will build teams, study conflict resolution concepts, develop leadership skills, perform employee reviews, manage budgets, and explore lean culture concepts. Decision-making, professionalism, and work ethic are emphasized throughout the course. PREREQUISITE: 10106167 Microsoft Office Integration

DESKTOP PUBLISHING...prepares the learner with the basic skills to use page layout software to create professional publications. PREREQ: 10106138 Web Technologies

DOCUMENT FORMATTING...prepares the learner to keyboard and format business memorandums, letters and reports, and other business documents. Emphasis will be placed on proofreading and editing skills. COREQUISITES: 10103191 Word - Level 1 or equivalent

ECOMMUNICATIONS...prepares the learner to apply proofreading skills -- punctuation, grammar, spelling, word usage, capitalization, number usage--to edit or compose error-free business documents; transcribe and correctly format business documents from dictation, dictate podcasts and other items; exposure to speech recognition functions; take and key meeting minutes; and facilitation of meetings. PREREQUISITE: 10106101 Document Formatting and 10103191 Word - Level 1 or equivalent

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

EVENT PLANNING & COORDINATION...prepares the learner to manage preplanning activities for an event, coordinate equipment and facility setup, communicate with outside vendors/suppliers, and conduct follow-up activities. Each student will be required to participate in planning a real-life event and/or assisting an organization through a service learning experience. PREREQUISITE: 10106167 Microsoft Office Integration

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

EXCEL - LEVEL 2...will explore Excel tables and charts, working with multiple worksheets and workbooks at once, creating applications and rules, protecting worksheets and workbooks and learning about macros and comments. PREREQUISITE: 10103121 Excel - Level 1 or equivalent

INTERNSHIP--ADMINISTRATIVE PROFESSIONAL...enhances the student's ability to apply technical skills, to work productively, to communicate effectively, and to demonstrate appropriate ethics and behavior in a professional workplace environment. PREREQUISITE: Verification of eligibility by the Internship Coordinator

INTRODUCTION TO BUSINESS...provides an introduction to the world of business from both the organizational and managerial viewpoint. It examines areas of business including the business environment, business formation, planning, operations, accounting, marketing, human resource management, and building effective teams.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

KEYBOARD SPEEDBUILDING...prepares the learner with the skills to keyboard text with speed and accuracy using the "touch" method.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agromony Basic program admissions requirements met

MICROSOFT OFFICE INTEGRATION...will teach students the intermediate topics of Microsoft Office. Students will be presented with material covering the intermediate level of Microsoft Word, Microsoft Excel, Microsoft Access, and Microsoft PowerPoint. Emphasis will be on final projects using all of the software packages, especially Microsoft Access. PREREQUISITES: 10103192 Word Level 2, 10103122 Excel Level 2, 10103161 PowerPoint Level 1, and 10103101 Access Level 1 or equivalents

MS PROJECT...will teach students how to use the software MS Project as a tool to assist in project management. Creating tasks and a work breakdown structure, scheduling, assigning resources, tracking cost and schedule, leveling of resources, and communicating project details will be covered. In addition, standard project management phases will be covered. PREREQUISITE: 10103122 Excel - Level 2 and 10103101 Access - Level 1 or equivalent

OFFICE ACCOUNTING...introduces learner to the principle of business and personal accounting, including journalizing, posting, year-end adjustments, report preparation and interpretation, payroll, and bank reconciliations. COREQUISITE: Excel-Level 1 or equivalent or CONDITION: 191452 Entrepreneurship & Business certificate enrollment reqs met

OFFICE PROFESSIONALISM...prepares the learner to identify positive attitudes and personality development; develop self-awareness of elements affecting personal and work relationships. Prepares the learner to apply communication and conflict resolution skills; demonstrate effective/efficient work habits and self-management skills; apply business protocol in a culturally diverse international market. Areas of study will also include telephone and customer service techniques, ethics, etiquette and ergonomics.

OFFICE TECHNOLOGY...provides the learner with introductory knowledge and skills relating to technology in an office environment including digital file management, understanding how computers and the internet work, and basic office equipment. Emphasis on hands-on skilldemonstrations of operating a computer on a network, computer storage and processing, and evaluating internet service providers.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects.

PROFESSIONAL CAREER SEARCH TECHNIQUES...focuses on the process of researching and pursuing professional career opportunities. Students will develop resume and cover letter documentation to accurately reflect personal, academic, and professional accomplishments and the connection that these elements have to various positions with employers. Interviewing skills will be a significant aspect of this experience with a focus on interviews for potential internship opportunities.

RECORDS MANAGEMENT...introduces the student to basic terms, concepts, filing rules, systems (alphabetic and numeric), non-correspondence filing, new methods of storing and recording records.

SMALL BUSINESS APPLICATIONS...will explore upcoming software/hardware trends for small businesses. Applications that are easy access and affordable will be covered, as well as devices such as iPads, SmartPhones, and tablets. Emphasis will be placed on researching and learning the most efficient way to accomplish tasks for a small business.

TRAINING TECHNIQUES...develops the skills necessary to present and provide support for training sessions, including organization of materials, procedures, and techniques. PREREQUISITE: 10106167 Microsoft Office Integration

WEB TECHNOLOGIES...provides a basic understanding of the Web as well as the tools used to create Web pages, blogs, and other features. Reviews social and business Web tools and components.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WORD - LEVEL 2...introduces the student to multi-column documents, templates, and the mail merge feature while applying WordArt, themes, styles, quick parts, and other advanced document formatting features. PREREQUISITE: 10103191 Word - Level 1 or equivalent

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 30-531-6 Technical Diploma • One Term

ABOUT THE PROGRAM

Injuries, trauma, sudden illness—medical emergencies can happen at any time, in any place. Survival often depends on the initial care the injured or severely ill person receives at the scene. If you are calm under pressure, compassionate, good at problem solving, and have the desire to help people in need, a career in Emergency Medical Services may be your calling. The Advanced EMT program provides additional knowledge and skills to Wisconsin licensed EMTs. This program focuses on intravenous fluid and medication administration as well as advanced anatomy and physiology for a greater understanding of how the human body responds to injury or illness.

PROGRAM OUTCOMES

- Prepare for incident response and EMS operations.
- Integrate pathophysiological principles and assessment findings to provide appropriate patient care.
- Demonstrate AEMT skills aligned with established standards and procedures for a variety of patient encounters.
- Communicate effectively with others.
- Demonstrate professional behavior.
- Meet state competencies listed for AEMT certification.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Submit Wisconsin Emergency Medical Technician License.

APPROXIMATE COSTS

- \$138.90 per credit tuition (WI resident) plus \$8.33 per credit student activity fee. \$10 per credit online, iFlex or hybrid fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

CONTACT

LTC Admissions Advisor
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10531110	Advanced EMT Part 1	3
10531111	Advanced EMT Part 2	2
10531112	Advanced EMT Clinical	1

TOTAL 6

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.



ADVANCED EMT CLINICAL...prepares students to apply their assessment and treatment knowledge in the emergency care environment. This course is competency based and exact clinical requirements are defined by the Wisconsin Department of Health. COREQUISITE: 10531110 AEMT Part 1 and 10531111 AEMT Part 2 and CONDITION: 305316 Advanced EMT program requirements met

ADVANCED EMT PART 1...introduces the EMT to the advanced level curriculum to include topics such as: medical terminology, advanced anatomy and physiology, advanced pharmacology, medication administration, airway management, and patient assessment. CONDITION: 305316 Advanced EMT program requirements met

ADVANCED EMT PART 2...continues the WI DHS AEMT curriculum to include the following topics: traumatic emergencies, special patient populations, scenarios, EMS operations, and National Registry exam preparation. COREQUISITE: 10531110 AEMT Part 1 and CONDITION: 305316 Advanced EMT program requirements met

Program Number 61-006-1
Certificate • 12 credits

ABOUT THE PROGRAM

Introduces the learner to crop and soil management, soil properties, and soil nutrient management. Also introduces the student to running a successful agribusiness or farm operation, which includes a basic understanding of business management practices and production agronomy concepts.

PROGRAM OUTCOMES

- Understand a crop and soil nutrient plan
- Understand soil properties and soil erosion
- Prepare for and take Pesticide Applicator Certification Exam

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application
- Complete the online Student Success Questionnaire

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

This certificate is available online or in person. Students can complete the certificate in just two terms or take fewer classes to complete the certificate at a slower pace.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

Credits transfer to LTC's Agriculture Technician Technical Diploma, which can be completed with one additional year of part-time classes. Students may then enter the second year of the associate degree, Agribusiness Science & Technology.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall)		
10006112	Farm Business Management	3
10006116	Intro to Soil Science	3
10804123	Math with Business Applications*	3
		9
Term 2 (Spring)		
10006122	Principles of Crop Production	3
		3
		TOTAL 12

*A math assessment placement test is required.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

FARM BUSINESS MANAGEMENT...provides learner with basic business management practices including the development of a business plan, establishment of short and long range goals, identification and implementation alternatives for reaching goals, and development of strategies to monitor progress. The importance of designing a business mission statement based on goals is emphasized.

INTRO TO SOIL SCIENCE...provides fundamentals of soil's physical properties, chemical properties, biological properties, soil formation, classification, essential nutrients and soil survey. There will be emphasis on soil and water conservation practices that can be used to reduce soil erosion.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

PRINCIPLES OF CROP PRODUCTION...provides knowledge of crop and soil nutrient management, including use of both commercial fertilizers and manure. Course topics include purchase or lease options for land, agronomy consulting programs, tillage and conservation plans, soil nutrient plans, cropping plans, managing nutrient waste, crop harvest and storage and production records. PREREQUISITE: 10006116 Intro to Soil Science or 10091105 Dairy Feeding Management or 10001123 Site & Soil Analysis

Program Number 61-006-2
Certificate • 12 credits

ABOUT THE PROGRAM

Introduces the learner to the financial and economic impact of running a successful farm operation. Establishes an understanding of financial software tools and their uses to provide a financial roadmap. Builds a basic understanding of business management practices and the economics systems and public policies.

PROGRAM OUTCOMES

- Apply understanding of basic financial software
- Apply management practices in reaching goals and objectives
- Understand a business plan and ROI

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application
- Complete the online Student Success Questionnaire

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

This certificate is available online or in person.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

These credits transfer into LTC's Agriculture Technician Technical Diploma. Students may then enter the second year of the associate degree, Agribusiness Science & Technology.

CONTACT

LTC Admissions Advisor
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Catalog No.	Class Title	Credit(s)
Term 1 (Fall)		
10006112	Farm Business Management	3
10804123	Math with Business Applications*	3
		6
Term 2 (Spring)		
10006110	Agricultural Finance	3
10006126	Agribusiness Economics	3
		6
		TOTAL 12

*A math assessment placement test is required.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AGRIBUSINESS ECONOMICS...introduces agricultural economic dimensions and impacts, economic principles, calculation of economic returns, and evaluation of economic alternatives. Other topics include capital use, cost appraisal, risk considerations under a variety of economic conditions, farm credit sources, and creditor relationships. COREQUISITE: 10006110 Agricultural Finance

AGRICULTURAL FINANCE...introduces learner to major aspects of agribusiness financial management through extensive problem solving, financial analysis and planning. Students will describe and calculate the sweet 16 ratios, business cash flows, inventory controls, budgeting and borrowing considerations of various types of agribusinesses. Relevant software tools will be introduced. PREREQUISITE: 10006112 Farm Business Management

FARM BUSINESS MANAGEMENT...provides learner with basic business management practices including the development of a business plan, establishment of short and long range goals, identification and implementation alternatives for reaching goals, and development of strategies to monitor progress. The importance of designing a business mission statement based on goals is emphasized.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

Introduces the learner to animal health, diseases, and immune systems, with an emphasis in healthy animals, the application of livestock breeding, phenotypic and genotypic effects, and selection. Provides an understanding of livestock anatomy, endocrinology, and factors that influence reproduction performance. Also introduces the student to financial impacts of running a successful agribusiness or farm operation, which includes a basic understanding of business management practices, and public policies.

PROGRAM OUTCOMES

- Apply genetic applications and methods of mating selection
- Apply the understanding of reproduction and fertility to reproduction performance
- Apply and know the common diseases of domestic livestock and related intervention practices
- Prepare for A.I. Certification seminar/exam *(additional vendor fee will be assessed if this option is chosen)*

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application
- Complete the online Student Success Questionnaire

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

This certificate is available online or in person.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

Credits transfer to LTC's Agriculture Technician Technical Diploma, which can be completed with one additional year of part-time classes. Students may then enter the second year of the associate degree, Agribusiness Science & Technology.

CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1 (Fall)		
10006112	Farm Business Management	3
10006114	Intro to Animal Science	3
		6
Term 2 (Spring)		
10006110	Agricultural Finance	3
10006124	Principles of Animal Breeding	3
		6
		TOTAL 12

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AGRICULTURAL FINANCE...introduces learner to major aspects of agribusiness financial management through extensive problem solving, financial analysis and planning. Students will describe and calculate the sweet 16 ratios, business cash flows, inventory controls, budgeting and borrowing considerations of various types of agribusinesses. Relevant software tools will be introduced. PREREQUISITE: 10006112 Farm Business Management

FARM BUSINESS MANAGEMENT...provides learner with basic business management practices including the development of a business plan, establishment of short and long range goals, identification and implementation alternatives for reaching goals, and development of strategies to monitor progress. The importance of designing a business mission statement based on goals is emphasized.

INTRO TO ANIMAL SCIENCE...provides animal science fundamentals including animal health, animal environments, anatomy and physiology, genetics and reproduction, animal feedstuffs, and animal-related safety.

PRINCIPLES OF ANIMAL BREEDING...applies genetic principles and reproduction physiology to livestock improvement including elementary population genetics, phenotypic and genotypic effects of selection, selection methods, and systems of mating. PREREQUISITE: 10006114 Intro to Animal Science or 10091102 Dairy Cattle Management

Program Number 10-006-2
Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

Successful individuals employed in agribusiness occupations understand the importance of running efficient and profitable operations in the areas of records/business analysis, credit/marketing/purchasing, farm business transfers, goal setting, human relations, crop/soil management, and livestock nutrition/management. Maximize your opportunities for success by increasing your agricultural business and production management knowledge.

PROGRAM OUTCOMES

- Develop an agribusiness management plan.
- Apply economic and marketing strategies to agribusiness industry.
- Apply relevant technologies.
- Create a crop management plan.
- Create a livestock management plan.
- Investigate opportunities in agribusiness.
- Interact as a professional in agribusiness.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTES

To experience technology and demonstrations in the industry and classroom, students should have transportation and participate in-person. Through PAS (Professional Agriculture Students), students participate in competitions and activities.

Program students are eligible to be issued a LTC laptop while learning and applying the software applications.

The program schedule has a mix of in-person class days and online instruction (see iFlex definition). To participate synchronously in class using videoconferencing software, a minimum of 5Mb as well as audio and visual capabilities on your computer is required.

Out-of-district students and working adults are able to take the program online, which also includes the expectation to complete assigned labs, technology exploration, and demonstrations.

Graduates of the Dairy Herd Management program can earn their Dairy Business Management associate degree with one additional year of this Agribusiness Science and Technology program's coursework.

iFlex - designed to fit your life schedule, iFlex allows you to take courses online, face-to-face, or flex between the two.

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Catalog No.	Class Title	Credit(s)
Term 1		
10006112	Farm Business Management	3
10006114	Intro to Animal Science	3
10006116	Intro to Soil Science	3
10006115	Agricultural Sales & Communications	3
10804123	Math with Business Applications	3
		15
Term 2		
10006110	Agricultural Finance	3
10006122	Principles of Crop Production	3
10006124	Principles of Animal Breeding	3
10006134	Animal Records	1
10006126	Agribusiness Economics	3
10006128	Agribusiness Internship*	2
		15
Term 3		
10006135	Agriculture Business Accounting OR 10101155 Accounting for Professionals (3 cr)	3
10006146	Precision Ag Technologies	3
10006144	Nutrition Principles	3
10809196	Introduction to Sociology	3
10801196	Oral/Interpersonal Communication	3
		15
Term 4		
10006130	Agricultural Commodity Marketing	3
10006140	Legal Aspects of Agribusiness	3
10006141	Livestock Production Systems & Management	3
10801195	Written Communications	3
10809198	Introduction to Psychology	3
		15
		TOTAL 60

*All students (online and in-person) work with instructor to select an appropriate internship based on their career goals.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AGRIBUSINESS ECONOMICS...introduces agricultural economic dimensions and impacts, economic principles, calculation of economic returns, and evaluation of economic alternatives. Other topics include capital use, cost appraisal, risk considerations under a variety of economic conditions, farm credit sources, and creditor relationships. COREQUISITE: 10006110 Agricultural Finance

AGRIBUSINESS INTERNSHIP...provides the student the opportunity to choose from a broad variety of occupational experiences in the agribusiness industry. Student will work with faculty to develop a plan and to identify, coordinate, and evaluate work-associated learning experiences as they relate to the major career focus of the student. PREREQUISITE: 10006112 Farm Business Management and COREQUISITES: 10006122 Principles of Crop Production, 10006126 Agribusiness Economics, 10006124 Principles of Animal Breeding or 10091103 Dairy Reproductive Management

AGRICULTURAL COMMODITY MARKETING...provides the student with the fundamentals of agricultural commodity marketing including risk management, futures market structure and function, futures commodity contract specification, as well as futures trading procedures and strategies including hedging and options. Students will engage in practice commodity marketing using a real world simulator and follow commodity markets and determine sources of variability affecting the futures prices. PREREQUISITE: 10006126 Agribusiness Economics or 10006135 Agriculture Business Accounting

AGRICULTURAL FINANCE...introduces learner to major aspects of agribusiness financial management through extensive problem solving, financial analysis and planning. Students will describe and calculate the sweet 16 ratios, business cash flows, inventory controls, budgeting and borrowing considerations of various types of agribusinesses. Relevant software tools will be introduced. PREREQUISITE: 10006112 Farm Business Management

AGRICULTURE BUSINESS ACCOUNTING...provides the learner with a study of accounting systems and methods appropriate for farms and agricultural businesses including the application of basic information-recording skills to allow for the construction of financial statements and filing of income tax forms. Students will produce and analyze financial statements and apply managerial accounting concepts by utilizing relevant financial software. PREREQUISITES: 10006112 Farm Business Management and COREQUISITES: 10804123 Math w/Business Apps and 10801196 Oral/Interpersonal Communication or CONDITION: 310011 Horticulture Technician enrollment requirements met

AGRICULTURE SALES AND COMMUNICATIONS...prepares the student with the tools to become an effective sales person, including pre-call planning, uncovering customer needs, conducting and completing a sale. Includes the fundamental principles of marketing agricultural products, pricing, merchandising and creating product marketing plans. Students will demonstrate effective communication skills needed to develop positive working relationships in agribusiness including team building, conflict resolution and industry advocacy.

ANIMAL RECORDS...introduces learner to records management through hands-on applications including the setup and use of computerized record-keeping software, completion of a sample farm record problem utilizing computerized records, a review of various record-keeping systems, as well as the selection and implementation of various computerized record programs. Software tools, such as PCDART, CowManager, and DairyCOMP 305, will be utilized. COREQUISITES: 10006124 Prin of Animal Breeding

FARM BUSINESS MANAGEMENT...provides learner with basic business management practices including the development of a business plan, establishment of short and long range goals, identification and implementation alternatives for reaching goals, and development of strategies to monitor progress. The importance of designing a business mission statement based on goals is emphasized.

INTRO TO ANIMAL SCIENCE...provides animal science fundamentals including animal health, animal environments, anatomy and physiology, genetics and reproduction, animal feedstuffs, and animal-related safety.

INTRO TO SOIL SCIENCE...provides fundamentals of soil's physical properties, chemical properties, biological properties, soil formation, classification, essential nutrients and soil survey. There will be emphasis on soil and water conservation practices that can be used to reduce soil erosion.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

LEGAL ASPECTS OF AGRIBUSINESS...provides students with pertinent information of the legal liabilities and regulations of an agribusiness at the state and federal levels. Course content includes legal descriptions, contractual agreements, employee and consumer rights, insurance, debt collection, as well as bankruptcy and employment protection issues as regulated by DOL, OSHA and DWD. COREQUISITE: 10006130 Ag Commodity Marketing

LIVESTOCK PRODUCTION SYSTEMS AND MANAGEMENT...engages the student in the exploration and study of a variety of livestock management systems including feeding arrangements, health, marketing considerations, the use of computer systems, personnel issues, and financial impacts of management decisions. PREREQUISITE: 10006114 Intro to Animal Science or 10091102 Dairy Cattle Management

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

NUTRITION PRINCIPLES...introduces learner to the principles of nutrition as presented on a comparative species basis including characteristics, physiological functions, interrelationships, and deficiency symptoms as they pertain to carbohydrates, fats, proteins, mineral elements, and vitamins. PREREQUISITE: 10006113 Intro to Animal Science or 10091102 Dairy Cattle Management

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PRECISION AG TECHNOLOGIES...provides experiences to the student in agricultural precision technologies including bio-technologies, application industries, livestock equipment, precision farming, financial resource management, plant protection, sustainable agriculture, environmental impacts of agriculture, agricultural workforce, and agricultural production. To experience precision technology and demonstrations throughout the industry, students are required to drive or have appropriate transportation to attend labs.

PRINCIPLES OF ANIMAL BREEDING...applies genetic principles and reproduction physiology to livestock improvement including elementary population genetics, phenotypic and genotypic effects of selection, selection methods, and systems of mating. PREREQUISITE: 10006114 Intro to Animal Science or 10091102 Dairy Cattle Management

PRINCIPLES OF CROP PRODUCTION...provides knowledge of crop and soil nutrient management, including use of both commercial fertilizers and manure. Course topics include purchase or lease options for land, agronomy consulting programs, tillage and conservation plans, soil nutrient plans, cropping plans, managing nutrient waste, crop harvest and storage and production records. PREREQUISITE: 10006116 Intro to Soil Science or 10091105 Dairy Feeding Management or 10001123 Site & Soil Analysis

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

Successful individuals employed in agribusiness occupations understand the importance of running efficient and profitable operations in the areas of records/business analysis, credit/marketing/purchasing, farm business transfers, goal setting, human relations, crop/soil management, and livestock nutrition/management. Maximize your opportunities for success by increasing your agricultural business and production management knowledge.

PROGRAM OUTCOMES

- Develop an agribusiness management plan.
- Apply economic and marketing strategies to agribusiness industry.
- Apply relevant technologies.
- Create a crop management plan.
- Create a livestock management plan.
- Investigate opportunities in agribusiness.
- Interact as a professional in agribusiness.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
 - Complete the online Student Success Questionnaire.
 - Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.
- *Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

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SPECIAL NOTES

To experience technology and demonstrations in the industry and classroom, students should have transportation and participate in-person. Through PAS (Professional Agriculture Students), students participate in competitions and activities.

Program students are eligible to be issued a LTC laptop while learning and applying the software applications.

The program schedule has a mix of in-person class days and online instruction (see iFlex definition). To participate synchronously in class using videoconferencing software, a minimum of 5Mb as well as audio and visual capabilities on your computer is required.

Out-of-district students and working adults are able to take the program online, which also includes the expectation to complete assigned labs, technology exploration, and demonstrations.

Graduates of the Dairy Herd Management program can earn their Dairy Business Management associate degree with one additional year of this Agribusiness Science and Technology program's coursework.

iFlex - designed to fit your life schedule, iFlex allows you to take courses online, face-to-face, or flex between the two.

CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10006112	Farm Business Management	3
10006116	Intro to Soil Science	3
10804123	Math with Business Applications	3
9		
Term 2 (Spring 2022)		
10006110	Agricultural Finance	3
10006122	Principles of Crop Production	3
10006126	Agribusiness Economics	3
9		
Term 3 (Fall 2022)		
10006135	Agriculture Business Accounting OR 10101155 Accounting for Professionals (3 cr)	3
10006115	Agricultural Sales & Communications	3
6		
Term 4 (Spring 2023)		
10006130	Agricultural Commodity Marketing	3
10006140	Legal Aspects of Agribusiness	3
6		
Term 5 (Fall 2023)		
10006114	Intro to Animal Science	3
10801195	Written Communications	3
6		
Term 6 (Spring 2024)		
10006124	Principles of Animal Breeding	3
10006128	Agribusiness Internship	2
10809196	Introduction to Sociology	3
8		
Term 7 (Fall 2024)		
10006146	Precision Ag Technologies	3
10006144	Nutrition Principles	3
10801196	Oral/Interpersonal Communication	3
9		
Term 8 (Spring 2025)		
10006141	Livestock Production Systems & Management	3
10006134	Animal Records	1
10809198	Introduction to Psychology	3
7		
		TOTAL 60

*All students (online and in-person) work with instructor to select an appropriate internship based on their career goals.

AGRIBUSINESS ECONOMICS...introduces agricultural economic dimensions and impacts, economic principles, calculation of economic returns, and evaluation of economic alternatives. Other topics include capital use, cost appraisal, risk considerations under a variety of economic conditions, farm credit sources, and creditor relationships. COREQUISITE: 10006110 Agricultural Finance

AGRIBUSINESS INTERNSHIP...provides the student the opportunity to choose from a broad variety of occupational experiences in the agribusiness industry. Student will work with faculty to develop a plan and to identify, coordinate, and evaluate work-associated learning experiences as they relate to the major career focus of the student. PREREQUISITE: 10006112 Farm Business Management and COREQUISITES: 10006122 Principles of Crop Production, 10006126 Agribusiness Economics, 10006124 Principles of Animal Breeding or 10091103 Dairy Reproductive Management

AGRICULTURAL COMMODITY MARKETING...provides the student with the fundamentals of agricultural commodity marketing including risk management, futures market structure and function, futures commodity contract specification, as well as futures trading procedures and strategies including hedging and options. Students will engage in practice commodity marketing using a real world simulator and follow commodity markets and determine sources of variability affecting the futures prices. PREREQUISITE: 10006126 Agribusiness Economics or 10006135 Agriculture Business Accounting

AGRICULTURAL FINANCE...introduces learner to major aspects of agribusiness financial management through extensive problem solving, financial analysis and planning. Students will describe and calculate the sweet 16 ratios, business cash flows, inventory controls, budgeting and borrowing considerations of various types of agribusinesses. Relevant software tools will be introduced. PREREQUISITE: 10006112 Farm Business Management

AGRICULTURE BUSINESS ACCOUNTING...provides the learner with a study of accounting systems and methods appropriate for farms and agricultural businesses including the application of basic information-recording skills to allow for the construction of financial statements and filing of income tax forms. Students will produce and analyze financial statements and apply managerial accounting concepts by utilizing relevant financial software. PREREQUISITES: 10006112 Farm Business Management and COREQUISITES: 10804123 Math w/Business Apps and 10801196 Oral/Interpersonal Communication or CONDITION: 310011 Horticulture Technician enrollment requirements met

AGRICULTURE SALES AND COMMUNICATIONS...prepares the student with the tools to become an effective sales person, including pre-call planning, uncovering customer needs, conducting and completing a sale. Includes the fundamental principles of marketing agricultural products, pricing, merchandising and creating product marketing plans. Students will demonstrate effective communication skills needed to develop positive working relationships in agribusiness including team building, conflict resolution and industry advocacy.

ANIMAL RECORDS...introduces learner to records management through hands-on applications including the setup and use of computerized record-keeping software, completion of a sample farm record problem utilizing computerized records, a review of various record-keeping systems, as well as the selection and implementation of various computerized record programs. Software tools, such as PCDART, CowManager, and DairyCOMP 305, will be utilized. COREQUISITES: 10006124 Prin of Animal Breeding

FARM BUSINESS MANAGEMENT...provides learner with basic business management practices including the development of a business plan, establishment of short and long range goals, identification and implementation alternatives for reaching goals, and development of strategies to monitor progress. The importance of designing a business mission statement based on goals is emphasized.

INTRO TO ANIMAL SCIENCE...provides animal science fundamentals including animal health, animal environments, anatomy and physiology, genetics and reproduction, animal feedstuffs, and animal-related safety.

INTRO TO SOIL SCIENCE...provides fundamentals of soil's physical properties, chemical properties, biological properties, soil formation, classification, essential nutrients and soil survey. There will be emphasis on soil and water conservation practices that can be used to reduce soil erosion.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

LEGAL ASPECTS OF AGRIBUSINESS...provides students with pertinent information of the legal liabilities and regulations of an agribusiness at the state and federal levels. Course content includes legal descriptions, contractual agreements, employee and consumer rights, insurance, debt collection, as well as bankruptcy and employment protection issues as regulated by DOL, OSHA and DWD. COREQUISITE: 10006130 Ag Commodity Marketing

LIVESTOCK PRODUCTION SYSTEMS AND MANAGEMENT...engages the student in the exploration and study of a variety of livestock management systems including feeding arrangements, health, marketing considerations, the use of computer systems, personnel issues, and financial impacts of management decisions. PREREQUISITE: 10006114 Intro to Animal Science or 10091102 Dairy Cattle Management

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

NUTRITION PRINCIPLES...introduces learner to the principles of nutrition as presented on a comparative species basis including characteristics, physiological functions, interrelationships, and deficiency symptoms as they pertain to carbohydrates, fats, proteins, mineral elements, and vitamins. PREREQUISITE: 10006113 Intro to Animal Science or 10091102 Dairy Cattle Management

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PRECISION AG TECHNOLOGIES...provides experiences to the student in agricultural precision technologies including bio-technologies, application industries, livestock equipment, precision farming, financial resource management, plant protection, sustainable agriculture, environmental impacts of agriculture, agricultural workforce, and agricultural production. To experience precision technology and demonstrations throughout the industry, students are required to drive or have appropriate transportation to attend labs.

PRINCIPLES OF ANIMAL BREEDING...applies genetic principles and reproduction physiology to livestock improvement including elementary population genetics, phenotypic and genotypic effects of selection, selection methods, and systems of mating. PREREQUISITE: 10006114 Intro to Animal Science or 10091102 Dairy Cattle Management

PRINCIPLES OF CROP PRODUCTION...provides knowledge of crop and soil nutrient management, including use of both commercial fertilizers and manure. Course topics include purchase or lease options for land, agronomy consulting programs, tillage and conservation plans, soil nutrient plans, cropping plans, managing nutrient waste, crop harvest and storage and production records. PREREQUISITE: 10006116 Intro to Soil Science or 10091105 Dairy Feeding Management or 10001123 Site & Soil Analysis

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 31-006-2 Technical Diploma • Two Terms

ABOUT THE PROGRAM

If a career in agriculture is in your future, this program will help you to prepare to manage a successful agribusiness operation. You will gain experience in agricultural production management and technology, as well as management principles, finance, sales, economics, crop production, and animal fundamentals.

PROGRAM OUTCOMES

- Apply relevant technologies.
- Investigate opportunities in agribusiness.
- Interact as a professional in agribusiness.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTES

To experience technology and demonstrations in the industry and classroom, students should have transportation and participate in-person. Through PAS (Professional Agriculture Students), students participate in competitions and activities.

Program students are eligible to be issued a LTC laptop while learning and applying the software applications.

The program schedule has a mix of in-person class days and online instruction (see iFlex definition). To participate synchronously in class using videoconferencing software, a minimum of 5Mb as well as audio and visual capabilities on your computer is required.

Out-of-district students and working adults are able to take the program online, which also includes the expectation to complete assigned labs, technology exploration, and demonstrations.

Agriculture Technician graduates have the opportunity to complete Agribusiness Science and Technology Associate degree with one additional year of college.

iFlex - designed to fit your life schedule, iFlex allows you to take courses online, face-to-face, or flex between the two.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10006112	Farm Business Management	3
10006114	Intro to Animal Science	3
10006116	Intro to Soil Science	3
10006115	Agricultural Sales & Communications	3
10804123	Math with Business Applications	3
		15
Term 2		
10006110	Agricultural Finance	3
10006122	Principles of Crop Production	3
10006124	Principles of Animal Breeding	3
10006134	Animal Records	1
10006126	Agribusiness Economics	3
10006128	Agribusiness Internship*	2
		15
		TOTAL 30

*All students (online and in-person) work with instructor to select an appropriate internship based on their career goals.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AGRIBUSINESS ECONOMICS...introduces agricultural economic dimensions and impacts, economic principles, calculation of economic returns, and evaluation of economic alternatives. Other topics include capital use, cost appraisal, risk considerations under a variety of economic conditions, farm credit sources, and creditor relationships. COREQUISITE: 10006110 Agricultural Finance

AGRIBUSINESS INTERNSHIP...provides the student the opportunity to choose from a broad variety of occupational experiences in the agribusiness industry. Student will work with faculty to develop a plan and to identify, coordinate, and evaluate work-associated learning experiences as they relate to the major career focus of the student. PREREQUISITE: 10006112 Farm Business Management and COREQUISITES: 10006122 Principles of Crop Production, 10006126 Agribusiness Economics, 10006124 Principles of Animal Breeding or 10091103 Dairy Reproductive Management

AGRICULTURAL FINANCE...introduces learner to major aspects of agribusiness financial management through extensive problem solving, financial analysis and planning. Students will describe and calculate the sweet 16 ratios, business cash flows, inventory controls, budgeting and borrowing considerations of various types of agribusinesses. Relevant software tools will be introduced. PREREQUISITE: 10006112 Farm Business Management

AGRICULTURE SALES AND COMMUNICATIONS...prepares the student with the tools to become an effective sales person, including pre-call planning, uncovering customer needs, conducting and completing a sale. Includes the fundamental principles of marketing agricultural products, pricing, merchandising and creating product marketing plans. Students will demonstrate effective communication skills needed to develop positive working relationships in agribusiness including team building, conflict resolution and industry advocacy.

ANIMAL RECORDS...introduces learner to records management through hands-on applications including the setup and use of computerized record-keeping software, completion of a sample farm record problem utilizing computerized records, a review of various record-keeping systems, as well as the selection and implementation of various computerized record programs. Software tools, such as PCDART, CowManager, and DairyCOMP 305, will be utilized. COREQUISITES: 10006124 Principles of Animal Breeding

FARM BUSINESS MANAGEMENT...provides learner with basic business management practices including the development of a business plan, establishment of short and long range goals, identification and implementation alternatives for reaching goals, and development of strategies to monitor progress. The importance of designing a business mission statement based on goals is emphasized.

INTRO TO ANIMAL SCIENCE...provides animal science fundamentals including animal health, animal environments, anatomy and physiology, genetics and reproduction, animal feedstuffs, and animal-related safety.

INTRO TO SOIL SCIENCE...provides fundamentals of soil's physical properties, chemical properties, biological properties, soil formation, classification, essential nutrients and soil survey. There will be emphasis on soil and water conservation practices that can be used to reduce soil erosion.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

PRINCIPLES OF ANIMAL BREEDING...applies genetic principles and reproduction physiology to livestock improvement including elementary population genetics, phenotypic and genotypic effects of selection, selection methods, and systems of mating. PREREQUISITE: 10006114 Intro to Animal Science or 10091102 Dairy Cattle Management

PRINCIPLES OF CROP PRODUCTION...provides knowledge of crop and soil nutrient management, including use of both commercial fertilizers and manure. Course topics include purchase or lease options for land, agronomy consulting programs, tillage and conservation plans, soil nutrient plans, cropping plans, managing nutrient waste, crop harvest and storage and production records. PREREQUISITE: 10006116 Intro to Soil Science or 10091105 Dairy Feeding Management or 10001123 Site & Soil Analysis

Program Number 31-405-1 Technical Diploma • Four Terms

ABOUT THE PROGRAM

If you love cars and are seeking a career that offers challenging work, provides abundant opportunities for growth and advancement, and rewards hard work and dedication, think seriously about the auto collision industry. Pursuing a career in the collision industry can take your interests and talents to the next level by developing highly sought-after skills. There has never been a better time to consider a career in an industry with such excellent growth potential. Jobs in the collision industry will never be outsourced, and this job saves lives by returning safe and properly repaired vehicles to the road.

PROGRAM OUTCOMES

- Straighten collision damaged sheet metal.
- Refinish automobile body parts.
- Replace non-structural panels and parts.
- Perform auto collision welding procedures.
- Repair plastic and composite body parts.
- Repair and replace moveable automotive glass.
- Repair collision damaged light truck frames and unibody structural components.
- Replace restraint systems.
- Estimate collision damage repair costs.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.
- Students are eligible to purchase Snap-On tools as part of their tuition in Terms 1, 2 and 3 at an approximate total cost of \$2,300.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- The program is accredited by ASE (Automotive Service Excellence) and students are well prepared to take the ASE Exam.
- Students are prepared and take two of the I-CAR Welding Certifications. They are the MIG Steel and MIG Aluminum ICAR Welding Exams.
- This program accepts new students in both the fall and spring terms. Spring entry students will complete in two years; however, they will use the following term sequence: Term 2, Term 1, Term 4, Term 3.

CONTACT

LTC Admissions Advisor
920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
31405320	Introduction to Auto Collision	1
31405322	Auto Collision Panel Repair	2
31405304	Auto Collision Mechanical & Electrical	3
31405324	Auto Collision Plastic & Composite Panel Repair	2
31405326	Auto Collision Panel Replacement & Alignment	2
31801359	Communication Skills for the Workplace	2
		12
Term 2		
31405340	Introduction to Auto Refinishing	1
31405332	Auto Collision Wire Welding	2
31405342	Auto Refinishing Masking/Preparation	2
31405346	Auto Refinishing Color Matching/Blending	2
31405348	Auto Refinishing Water Borne Systems	2
31405344	Auto Refinishing Multiple Panel	2
31405311	Sheet Metal Fabrication	2
		13
Term 3		
32405333	Collision Center Best Practices	1
31405308	Collision Estimating & Repair Planning	2
31405347	Custom Painting	1
32405325	Cycle Time and Shop Production 1	4
32405329	Cycle Time and Shop Production 2	4
		12
Term 4		
31405341	Structural Analysis	1
32405306	Vehicle Anchoring & Structural Repair	3
32405309	Structural Steel Replacement	3
32405313	Hybrid/Electric Vehicle Safety	1
31405349	MIG Aluminum Welding & Panel Repair	3
32405317	Internship - Auto Collision	1
		12
		TOTAL 49

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

AUTO COLLISION MECHANICAL AND ELECTRICAL...provides the learner with the knowledge and skills to remove and install vehicle powertrains, to inspect and replace mechanical and electrical components, and to service air conditioning systems. Students also learn to diagnose and repair vehicle wiring, restraint systems (airbags), and suspension/steering systems. COREQUISITE: 31405320 Intro to Auto Collision

AUTO COLLISION PANEL REPAIR...provides the learner with hands-on activities to gain the skills necessary for metal finishing, panel straightening, application of body fillers, and use of hydraulics to straighten panels and make body panel adjustments. COREQUISITE: 31405320 Intro to Auto Collision

AUTO COLLISION PANEL REPLACEMENT AND ALIGNMENT...prepares the student to apply straightening, welding, restoring, corrosion protection, alignment, and panel replacement skills. COREQUISITE: 31405320 Intro to Auto Collision

AUTO COLLISION PLASTIC AND COMPOSITE PANEL REPAIR...prepares the learner to work on repairing damaged plastic panels using adhesives and airless welding techniques. The repair of SMC, FRP, ABS, TPO, and other popular plastics are taught. COREQUISITE: 31405320 Intro to Auto Collision

AUTO COLLISION WIRE WELDING...introduces the learner to information and skills necessary to safely operate gas metal arc welding, aluminum welding, and oxyacetylene cutting as it applies to auto collision. Upon completion, the student is prepared to take the I-CAR steel weld qualification test.

AUTO REFINISHING COLOR MATCHING/BLENDING...prepares the student with an understanding of color movement using the color wheel and the differences in spray gun technique as it applies to blending and how to solve paint color matching problems. COREQUISITE: 31405340 Intro to Auto Refinishing

AUTO REFINISHING MASKING/PREPARATION...enhances the learner's ability to understand automotive finishes and the equipment, paint area, and refinish area and to develop a thorough understanding of surface preparation as it relates to vehicle refinishing. COREQUISITE: 31405340 Intro to Auto Refinishing

AUTO REFINISHING MULTIPLE PANEL...provides the learner with the skills to spray complete panels and vehicles using the latest spray technology and equipment, troubleshoot paint problems, and detail the finish to a preaccident condition. COREQUISITE: 31405344 Intro to Auto Refinishing

AUTO REFINISHING WATER BORNE SYSTEMS...provides the learner with specific knowledge and skills necessary to work with water borne products. Learners will be introduced to application methods, mixing and other considerations unique to water borne refinishing systems. COREQUISITE: 31405340 Intro to Auto Refinishing

AUTOMOTIVE SHEET METAL FABRICATION...prepares learners to develop metal-working skills to the next level in this advanced auto-body course. Students will learn to shape steel vehicle panels using the English wheel, power hammer, and bead roller as well as other metal shaping tools. Learners have the opportunity to create their own unique parts and designs. COREQUISITE: 31405340 Intro to Auto Refinishing

COLLISION CENTER BEST PRACTICES...provides learners with the knowledge and skills needed to provide excellent customer service. Learn skills to identify and resolve concerns in a professional manner. Build positive customer relationships for collision repair businesses. PREREQUISITE: 32405348 Auto Refinishing Water Borne Systems

COLLISION ESTIMATING AND REPAIR PLANNING...introduces the learner to various damage appraisal methods and provides the skills necessary to create computerized estimates and work orders with an emphasis on customer service. PREREQUISITE: 31405348 Auto Refinishing Water Borne Systems

COMMUNICATION SKILLS FOR THE WORKPLACE...prepares the student to develop paper job-search tools and job-related writing skills to increase job stability; introduces the students to team-building skills to resolve organizational problems; introduces the student to the skills of effective listening; prepares the student to respond to workplace criticism and praise; and introduces the student to interpersonal relationship skills, including effective interviewing skills, customer relations, and management/employee relations.

CUSTOM PAINTING...introduces the learner to many popular custom painting techniques. Students will have an overview of hand painted pinstripe applications, multi-stage candy coat finishes, using an airbrush, masking methods, and equipment cleaning and maintenance. PREREQUISITE: 31405332 Auto Collision Wire Welding

CYCLE TIME AND SHOP PRODUCTION 1...prepares learners to enter the workforce by applying their practical skills and performing live customer work. This course reinforces the team approach as it applies to shop production and repair work performed by students and will be assessed using real-world criteria. PREREQUISITE: 32405348 Auto Refinishing Water Borne Systems

CYCLE TIME AND SHOP PRODUCTION 2...learners prepare to enter the workforce by applying their practical skills and performing live customer work. This course reinforces cycle time and shop production by performing vehicle repairs using specialized cells and the assembly line method. Repair work performed by students will be assessed using real-world criteria. PREREQUISITE: 32405348 Auto Refinishing Water Borne Systems

HYBRID/ELECTRIC VEHICLE SAFETY...provides the learner with the knowledge and skills necessary in order to properly and safely repair vehicles equipped with high voltage systems. Learners will shut down and initiate high voltage vehicle systems, assess damaged components unique to hybrid and electric vehicles and learn the fundamentals of how hybrid and electric vehicle systems operate. PREREQUISITE: 32405348 Auto Refinishing Water Borne Systems

INTERNSHIP - AUTO COLLISION...requires students to complete 72 hours (1 credit) of work in an automotive collision repair facility. Students are responsible for seeking and obtaining the internship position. Course requirements include maintaining a log of work activities, identifying and receiving approval from the job supervisor and instructor, and completing a work-related project. Students may meet periodically at LTC. PREREQUISITE: 32405329 Cycle Time & Shop Production 2

INTRODUCTION TO AUTO COLLISION...introduces the learner to the auto collision course procedures, practices, and grading policy and develops safe work habits and attitudes. Many of the hand and power tools are identified.

INTRODUCTION TO AUTO REFINISHING...introduces the learner to auto collision and refinishing course procedures, practices, and grading policy and develops safer work habits and attitudes.

MIG ALUMINUM WELDING AND PANEL REPAIR...provides the learner with skills to complete repair procedures unique to vehicles with aluminum structures using specialty tools and methods. OEM repair methods from major automotive manufacturers are taught and assessed in this course. Learners have the opportunity to earn the I-CAR WCA03 Aluminum Weld Test Certification. PREREQUISITE: 31405332 Auto Collision Wire Welding

STRUCTURAL ANALYSIS...provides the learner with knowledge and hands-on experiences in measuring and analyzing vehicle frames, structures, and body panels using tape measures, tram and self-centering gauges. Vehicles are also measured with mechanical and computerized measuring systems. Some vehicle structural damage may be repaired in this course if time and appropriate type of damaged vehicle is available. Students will compile a portfolio to showcase projects and accomplishments. PREREQUISITE: 31405332 Auto Collision Wire Welding

STRUCTURAL STEEL REPLACEMENT...prepares the student to apply steel MIG welding skills combined with steel sectioning methods to perform proper steel sectioning procedures. Learners will perform sectioning procedures approved by OEM manufacturers and prepare to earn the I-CAR SPS05 Steel Sectioning Certification. PREREQUISITE: 32405332 Auto Collision Wire Welding

VEHICLE ANCHORING AND STRUCTURAL REPAIR...provides the learner with skills to use state of the art Car-O-liner equipment such as the Evolution jig type anchoring systems and the B73 truck clamp system to properly anchor vehicles for structural repairs. Learners will gain valuable experience using the Car-O-Liner vision electromechanical measuring system. Structural repairs will be made to vehicles according to OEM guidelines. PREREQUISITE: 32405332 Auto Collision Wire Welding

Program Number 31-404-3 Technical Diploma • Four Terms

ABOUT THE PROGRAM

Most of us place great value on owning and operating our own vehicles. Our independence stems from our ability to jump in our cars and trucks and go wherever we want, whenever we want. When our independence is threatened because our vehicles aren't working properly, the first person we seek is a qualified automotive maintenance technician. If you're mechanically talented, like to solve problems, and enjoy working with people, success in the automotive maintenance field may be just down the road for you.

PROGRAM OUTCOMES

- Demonstrate professionalism appropriate for the auto service industry
- Perform maintenance and repair of automotive steering and suspension systems
- Perform maintenance and repair of automotive brake systems
- Perform maintenance and repair of automotive electrical and electronic systems
- Perform maintenance and repair of automotive internal combustion engines
- Perform maintenance and repair of automotive transmission/transaxle systems
- Perform maintenance and repair of automotive manual drive train and axle systems
- Perform maintenance and repair of automotive heating and air conditioning systems
- Perform maintenance and repair of engine performance systems

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.
- Students are eligible to purchase Snap-On tools as part of their Term 1, 2 and 3 enrollments. The total tool cost is approximately \$2,400.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTES

- The Spring Terms 2 and 4 are 17 weeks in length.
- This program is certified by ASE (Automotive Service Excellence), and students are well-prepared to take the ASE Exam.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10106116	Computer Essentials	1
31404303	Auto Mechanical Hand & Torque Tools	1
31404301	Auto Orientation and Safety	1
31442345	Auto Servicing Welding	1
31404370	Auto Brakes	3
31404312	Auto Mechanical Math and Measuring	1
31404311	Auto Electrical Math 1	1
31404310	Auto Introduction to Electricity 2	1
31404313	Auto Electricity Fundamentals 3	2
		12
Term 2		
31404372	Auto Suspension and Steering	3
31404376	Auto Engine Repair	4
31404323	Auto Wiring Mechanics 4	2
31404326	Auto Basic Electrical 5	3
		12
Term 3		
31801359	Communication Skills for the Workplace	2
31404328	Auto Air Conditioning	2
31404316	Differential and Manual Transmissions	3
31404327	Auto Electrical Systems 6	2
31404329	Auto Engine Performance 1	3
		12
Term 4		
31404334	Automatic Transmissions	5
31404333	Auto Engine Performance 2	2
31404385	Auto Engine Performance 3	5
		12
		TOTAL 48

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AUTO AIR CONDITIONING...provides the learner with a thorough knowledge of the operation, diagnosis, and repair procedures for automotive air conditioning systems. The learner will perform recovery, evacuation and recharge tasks, system diagnosis, and will have the opportunity to become EPA Section 609 Certified. PREREQUISITE: 31404301 Auto Orientation & Safety

AUTO BASIC ELECTRICAL 5...prepares the learner to diagnose and repair computer-controlled circuits. Learners will diagnose automotive networks, computerized body controls, and supplemental restraint systems. COREQUISITE: 31404323 Auto Wiring Mechanics 4

AUTO BRAKES...provides the learner with a thorough knowledge of automotive mechanical and hydraulic brake systems. The learner will diagnose, service, and repair automotive brake systems, antilock brake systems, and traction control systems. COREQUISITE: 31404301 Auto Orientation & Safety

AUTO ELECTRICAL MATH 1...provides the learner with the required math skills for automotive electrical troubleshooting. Students will use decimals, symbols, and formulas to quantify electricity.

AUTO ELECTRICAL SYSTEMS 6...prepares the learner to diagnose security, comfort, and convenience systems. Operation of collision avoidance and other driver aids will be covered. PREREQUISITE: 31404326 Auto Basic Electrical 5

AUTO ELECTRICITY FUNDAMENTALS 3...prepares the learner to troubleshoot inoperative electrical circuits using various tools and methods. Learners will learn to quantify electrical behavior in simple circuits using a digital volt ohm meter. COREQUISITE: 31404310 Auto Intro to Electricity 2

AUTO ENGINE PERFORMANCE 1...introduces the learner to the fundamentals of engine operation and lab scopes. Prepares the learner to diagnose and repair gasoline engine fuel, ignition, and performance concerns. COREQUISITE: 31404327 Auto Electrical Systems 6

AUTO ENGINE PERFORMANCE 2...prepares the learner to diagnose and repair basic computerized engine control feedback systems using specialized diagnostic equipment. PREREQUISITE: 31404329 Auto Engine Performance 1

AUTO ENGINE PERFORMANCE 3...prepares the learner to diagnose and repair advanced powertrain systems using specialized diagnostic equipment. Engine performance concerns on turbocharged, non-turbocharged, diesel, and hybrid engines will be addressed. COREQUISITE: 31404333 Auto Engine Performance 2 or PREREQUISITE: 31404382 Auto Engine Performance 1

AUTO ENGINE REPAIR...provides the learner with a thorough knowledge of automotive engine construction and operation. The learner will disassemble an engine, measure internal clearances, perform engine mechanical diagnostics, and service cooling systems. PREREQUISITE: 31404301 Auto Orientation & Safety

AUTO INTRODUCTION TO ELECTRICITY 2...introduces the learner to the characteristics and behaviors of electricity and electromagnetism. Prepares the learner to use basic electrical terms, tools, and theory for troubleshooting automotive electrical circuits. COREQUISITE: 31404311 Auto Electrical Math 1

AUTO MECHANICAL HAND AND TORQUE TOOLS...prepares the learner to use automotive hand and torque tools.

AUTO MECHANICAL MATH AND MEASURING...prepares the learner with the required math skills needed for the automotive servicing industry. The learner will perform a variety of measurements using U.S. Standard and metric measuring instruments, and will be provided the opportunity to achieve the NC3 Certifications of Completion. Training on conversions, units of measure, and calculations will also be provided.

AUTO ORIENTATION AND SAFETY...prepares the learner to work effectively and efficiently in the automotive lab. Shop safety and proper procedures are emphasized.

AUTO SERVICING WELDING...provides the learner with a thorough knowledge of welding practices used in the automotive industry. Learners will perform a variety of welds using OAW, SMAW, GMAW, and GTAW.

AUTO SUSPENSION AND STEERING...provides the learner with a thorough knowledge of automotive steering systems, suspension systems, wheel and tire service, and wheel alignment. The learner will diagnose and repair front and rear suspension systems, perform wheel and tire service, diagnose and repair vehicle steering parts and components, and perform front and four-wheel alignments. COREQUISITE: 31404301 Auto Orientation & Safety

AUTO WIRING MECHANICS 4...prepares the learner to interpret automotive wiring diagrams and troubleshoot automotive circuits. Learners will utilize wiring diagrams to diagnose inoperative lighting, starting, and charging systems. COREQUISITE: 31404313 Auto Electricity Fundamentals 3

AUTOMATIC TRANSMISSIONS...prepares the learner to develop skills in the operation and servicing of automatic transmissions. The learner will disassemble, inspect, repair and reassemble various automatic transmissions and learn proper procedures for diagnosis of these assemblies. PREREQUISITE: 31404301 Auto Orientation & Safety

COMMUNICATION SKILLS FOR THE WORKPLACE...prepares the student to develop paper job-search tools and job-related writing skills to increase job stability; introduces the students to team-building skills to resolve organizational problems; introduces the student to the skills of effective listening; prepares the student to respond to workplace criticism and praise; and introduces the student to interpersonal relationship skills, including effective interviewing skills, customer relations, and management/employee relations.

COMPUTER ESSENTIALS...covers computer technology and basic computer skills for the student who is just starting classes at LTC. This course will include topics related to uses of computer hardware and software, internet searching, e-mail, MyLTC, online courses, and an introduction to documents and presentations.

DIFFERENTIALS AND MANUAL TRANSMISSIONS...prepares the learner with a thorough knowledge of the operation, diagnosis, and repair procedures of differential assemblies and manual transmissions. The learner will disassemble, inspect and reassemble differentials and various manual transmissions. PREREQUISITE: 31404301 Auto Orientation & Safety

Program Number 10-170-1

Associate Degree in Applied Science • Varies

ABOUT THE PROGRAM

You've read the scrolling captions for the hearing-impaired on your TV screen. The person providing instantaneous text of programs is trained in realtime transcription techniques and technology. These skills can also be used to provide CART (Communication Access Realtime Translation) for hearing-impaired students in educational as well as public settings. If you're an excellent listener, have strong language and communication skills, are committed to accuracy and able to work on deadline, a career in broadcast captioning may be a perfect fit for your talents.

PROGRAM OUTCOMES

- Utilize machine shorthand with a computer-aided transcription system to write the spoken word and produce a transcript.
- Perform as a realtime reporter with skills to obtain certification.
- Demonstrate knowledge of legal and medical concepts and terminology.
- Apply the NCRA Code of Professional Ethics and Certification Standards.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete Notification of Laptop/Steno Rental Equipment form.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Students are required to rent a stenograph machine and laptop computer through the rental program available at LTC. LTC's Broadcast Captioning program follows the National Court Reporters Association (NCRA) standards. Upon completion of this curriculum, the student will have dual degrees in Court Reporting and Broadcast Captioning.

GRADUATION REQUIREMENT

Three 5-minute timings must be passed in each of the following categories with a minimum of 95 percent accuracy:

- Two-voice testimony @ 225 wpm
- Jury charge @ 200 wpm
- Literary @ 180 wpm
- Broadcast Captioning Internship of 40 hours must be taken within 18 months of graduation.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10170106	Realtime Reporting 1	5
10170804	Realtime Reporting 1 Lab	1
10170144	Realtime Reporting Orientation	1
10801195	Written Communication	3
10809198	Introduction to Psychology	3
10170184	English for Realtime Reporters	1
		14
Term 2		
10170105	Realtime Reporting 2	5
10170805	Realtime Reporting 2 Lab	1
10170159	Realtime Reporting Technology	2
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
10170160	Legal Terminology	1
		12
Term 3 (Summer)		
10170108	Realtime Reporting Speed Development	2
10170104	Broadcast Captioning Research Methods	1
10809122	Introduction to American Government OR 10809172 Introduction to Diversity Studies	3
10170126	Skillbuilding 1 (optional) (2 cr)	
10170127	Skillbuilding 2 (optional) (2 cr)	
10170136	Skillbuilding 3 (optional) (2 cr)	
		6
Term 4		
10170109	Literary 1 - Advanced	2
10170128	Jury Charge 1 - Advanced	2
10170156	Testimony 1 - Advanced	3
10804123	Math with Business Applications OR 10804107 College Math OR 10806112 Principles of Sustainability	3
10170161	Realtime Reporting Technology Advanced	2
		12
Term 5		
10170145	Court Reporting Internship	1
10170111	Literary 2 - Advanced	2
10170129	Jury Charge 2 - Advanced	2
10170157	Testimony 2 - Advanced	3
10170146	Four Voice	1
10170141	Court Reporting Procedures	2
10170101	Captioning/CART	3
10170171	Medical Reporting & Terminology	2
		16
Term 6		
10170143	Internship in Broadcast Captioning/CART	1
		1
		TOTAL 61

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

BROADCAST CAPTIONING RESEARCH METHODS...prepares the learner to prepare (research) prior to broadcast, conduct research in preparation for broadcasting international news, national news, local news, weather reports, sporting events, writing geographical terms, utilize culturally diverse terminology, and create job dictionaries.

CAPTIONING/CART...prepares the student to write Realtime dictation at 180 wpm, analyze deaf culture, analyze captioning/CART procedures, prepare for broadcast production, configure CAT software for captioning, set up captioning hardware, operate the CAT system in captioning mode, utilize proper technology to control caption spacing and placement, write a news broadcast for 30 minutes non-stop, configure CART software, and analyze the contents of the CART provider's manual. PREREQUISITE: 10170156 Testimony 1 - Adv and 10170109 Literary 1 - Adv and COREQUISITE: 10170157 Testimony 2 - Adv

COURT REPORTING INTERNSHIP...prepares the student to write machine shorthand verbatim for a minimum of 40 hours of actual writing time in the courtroom, classroom, and deposition environment under the supervision of a working reporter; prepare a 40-page transcript, and summarize the internship experience in a narrative report. PREREQ: 10106108or10170108 Realtime Rptg Speed Dev, 10106128or10170128 Jury Chrg 1-Adv, 10106109or10170109 Lit 1-Adv, 10106156or10170156 Test 1-Adv & COREQ: 10106129or10170129 Jury Chrg 2-Adv, 10106111or10170111 Lit 2-Adv & 10106157or10170157 Test 2-Adv

COURT REPORTING PROCEDURES...introduces the student to reporting procedures for which reporters are responsible in the courtroom, deposition, and real-time reporting environments, including preparing salable transcripts, researching legal citations, and developing professional development plans. PREREQUISITE: 10170156 Testimony 1 Adv

ENGLISH FOR REALTIME REPORTERS...enhances the student's ability to use proper English grammar, spelling, punctuation, capitalization, and vocabulary techniques in the transcription of the spoken word.

FOUR VOICE...prepares the student to write four-voice testimony from material dictated at a minimum speed of 160 wpm for 5 minutes with a minimum of 95 percent accuracy. PREREQUISITE: 10170156 Testimony 1 - Advanced

INTERNSHIP IN BROADCAST CAPTIONING/CART...prepares the learner to caption live broadcast, use television broadcast terminology, describe television broadcast operations, and provide CART services to a hearing-impaired person. Students must be writing at 180 words per minute literary prior to enrolling in this course. PREREQ: 10106108or10170108 Realtime Rptg Speed Dev, 10106128or10170128 Jury Chrg 1-Adv, 10106109or10170109 Lit 1-Adv, 10106156or10170156 Test 1-Adv & COREQ: 10106129or10170129 Jury Chrg 2-Adv, 10106111or10170111 Lit 2-Adv & 10106157or10170157 Test 2-Adv

INTRODUCTION TO AMERICAN GOVERNMENT...introduces American political processes and institutions. It focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. It explores the role of the media, interest groups, political parties and public opinion in the political process. It also explores the role of state and national government in our federal system. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

JURY CHARGE 1 - ADVANCED...prepares the student to write jury charge material at 160 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy and prepare salable transcripts. Course requires a minimum grade of "B" or better. PREREQUISITE: 10170121 Jury Charge 1 - Beginner or 10106121 Jury Charge 1 - Beginner or CONDITION: Minimum of 130 WPM met

JURY CHARGE 2 - ADVANCED...prepares the learner to write jury charge material at 200 words per minute for 5 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy and prepare salable transcripts. Course requires a minimum grade of "B" or better. PREREQUISITE: 10170122 Jury Charge 2 - Beginner or 10106122 Jury Charge 2 - Beginner or CONDITION: Minimum of 180 WPM met

LEGAL TERMINOLOGY...provides the student with the ability to spell, pronounce, and define legal terms.

LITERARY 1 - ADVANCED...prepares the learner to write literary material at 150 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy, write and read back current events dictation, and prepare salable transcripts. Course requires a minimum grade of "B" or better. PREREQUISITE: 10170113 Literary 1 - Beginner or 10106113 Literary 1 - Beginner or CONDITION: Minimum of 130 WPM met

LITERARY 2 - ADVANCED...prepares the learner to write literary material at 180 words per minute for 5 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy, write and read back current events dictation, and prepare salable transcripts. Course requires a minimum grade of "B" or better. PREREQUISITE: 10170114 Literary 2 - Beginner or 10106114 Literary 2-Beginner or CONDITION: min of 160 words per minute met

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

MEDICAL REPORTING/TERMINOLOGY...prepares the student to write medical terminology in machine shorthand using appropriate medical terminology from material dictated at a minimum speed of 150 wpm for 5 minutes with a minimum of 95 percent accuracy. The student will research medical information, prepare salable transcripts, and submit timings. COREQUISITE: 10170156 Testimony 1-Adv or 10106156 Testimony 1 - Adv

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

REALTIME REPORTING 1...prepares learners to use machine shorthand to write consonants, vowels, numbers, multi-syllabic words, multi-consonant words, punctuation and special symbols, short forms & phases, words in their singular and plural forms, and prefixes and suffixes. Concurrent registration in Realtime Reporting 1 Lab is required. CONDITION: 101701 Broadcast Capt or 101702 Court Rep or 101061 Judicial Rep program reqs met

REALTIME REPORTING 1 LAB...prepares the learner to use machine shorthand to write consonants, vowels, numbers, multi-syllabic words, multi-consonant words, punctuation and special symbols, short forms and phrases, words in their singular and plural forms, and prefixes and suffixes. Concurrent registration in Realtime Reporting 1 is required. COREQUISITE: 10170106 Realtime Reporting 1 or 10106104 Realtime Reporting 1 and CONDITION: 101701 Broadcast Captioning or 101702 Court Reporting or 101061 Judicial Reporting program requirement met

REALTIME REPORTING 2...prepares learner to write multi-syllabic words; punctuation and special symbols, short forms and phrases, prefixes and suffixes; numbers, frequently used words and phrases, contractions using the Z-rule, the "Flagged Alphabet," apply realtime conflict elimination principles, apply realtime theory and write dictation using a realtime theory at a minimum speed of 100 wpm. Concurrent registration in Realtime Reporting 2 Lab is required. PREREQUISITES: 10170106 Realtime Reporting 1 or 10106104 Realtime Reporting 1 and 10170804 Realtime Reporting 1 Lab or 10106804 Realtime Reporting 1 Lab

REALTIME REPORTING 2 LAB...expands the learner's ability to write multi-syllabic words; punctuation and special symbols, short forms and phrases, prefixes and suffixes; numbers, frequently used words and phrases, contractions using the Z-rule, the "Flagged Alphabet," apply realtime conflict elimination principles, apply realtime theory and write dictation using a realtime theory. Concurrent registration in Realtime Reporting 2 is required. COREQUISITES: 10170105 Realtime Reporting 2 or 10106105 Realtime Reporting 2

REALTIME REPORTING ORIENTATION...prepares the student to use computer-assisted, real-time transcription software, Windows, e-mail, a steno machine, and a laptop in writing machine shorthand in court reporting and to complete and submit required coursework. CONDITION: 101701 Broadcast Captioning or 101702 Court Reporting program reqs met

REALTIME REPORTING SPEED DEVELOPMENT...further develops skills acquired in Realtime Reporting 2 on literary and testimony material beginning at 100 wpm. Scheduled during the summer term, students must pass two, 3-minute timings at a minimum speed of 110 words per minute. PREREQUISITE: 10170105 Realtime Reporting 2 or 10106105 Realtime Reporting 2 and 10170805 Realtime Reporting Lab 2

REALTIME REPORTING TECHNOLOGY...prepares the student to use CAT (Computer-Assisted Transcription) and real-time software; build personal dictionaries; and read, translate, and edit transcripts. Students are introduced to real-time translation procedures in court, depositions, captioning, and educational environments.

REALTIME REPORTING TECHNOLOGY ADVANCED...prepares the learner to expand their knowledge of computer-assisted transcription and realtime software, dictionary management, specialized editing functions, transcript preparation, auto-included block files, and specialized macros for Steno-related tasks. PREREQUISITE: 10170159 Realtime Reporting Technology

TESTIMONY 1 - ADVANCED...prepares the learner to write 2-voice testimony material at 160 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy and prepare salable transcripts. Course requires a minimum grade of "B" or better. PREREQUISITE: 10170153 Testimony 1 - Beginner or 10106153 Testimony 1 - Beginner or CONDITION: or Minimum of 130 WPM met

TESTIMONY 2 - ADVANCED...prepares the learner to write 2-voice testimony material at 225 words per minute for 5 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy and prepare salable transcripts. Course requires a minimum grade of "B" or better. PREREQUISITE: 10170154 Testimony 2 - Beginner or 10106154 Testimony 2 - Beginner or CONDITION: Minimum of 180 WPM

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

Business managers are found in every sector of the economy in nearly all work settings from manufacturing to health care. The Business Management program provides graduates with the knowledge and skills for positions such as an entry-level manager, office manager, shift coordinator, or team leader, or graduates may start their own business. The successful business manager oversees day-to-day activities and leads the team or organization to the next level of performance. Managers plan, organize, direct, and control the tasks that carry out the work of the business or nonprofit organization. If you set goals for yourself and strive to accomplish them, prefer working with others rather than alone, enjoy serving as a leader even if it means more work, and want to improve your skills and promotion potential, then a career in business management may be a good choice for you.

PROGRAM OUTCOMES

- Plan the operation of a business across functional areas.
- Organize resources to achieve the goals of the organization.
- Direct individuals and/or processes to meet organizational goals.
- Control business processes.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Students are encouraged to complete Excel - Level 1 prior to Business Accounting.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10103121	Excel - Level I	1
10103191	Word - Level I	1
10196189	Team Building and Problem Solving	3
10102110	Introduction to Business	3
10801195	Written Communication OR 10801136 English Composition 1	3
10804123	Math with Business Applications	3
		14
Term 2		
10101131	Business Accounting	4
10105128	Personal Branding	2
10196193	Human Resource Management	3
10104102	Marketing, Principles of	3
10801198	Speech OR 10801196 Oral/Interpersonal Communication	3
		15
Term 3		
10101107	Managerial Accounting	4
10182102	Service Operations Management	3
10182108	Purchasing	3
10809195	Economics	3
10809198	Introduction to Psychology	3
		16
Term 4		
10102107	Internship - Business Management OR 10138101 Introduction to Global Business	3
10102123	Business Management-Capstone	3
10196188	Project Management	3
10102160	Business Law 1	3
10809122	Introduction to American Government	3
		15
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

BUSINESS ACCOUNTING...introduces Business Management students to the core concepts of accounting and how a manager uses accounting in running a business. The student will also learn how to use financial statements to manage a business.

BUSINESS LAW 1...provides the learner with the skills to summarize the American legal system; diagram the state/federal court systems; evaluate dispute resolution methods; sequence the civil litigation process; summarize the administrative agencies; differentiate civil and criminal law; apply theories of negligence, intentional tort, and product liability; summarize elements of a contract; assess the validity of a contract; assess third-party rights and available remedies; and summarize Article II of the UCC.

BUSINESS MANAGEMENT-CAPSTONE...assesses the role of business, its internal structure and its relationship to the external environment. Each learner analyzes the functions of business planning, information systems, operations management, information technology, marketing and how they interact and drive business activities. Students recognize what they have learned throughout the program. They assemble a portfolio using research, samples of their best work, and reflection papers to analyze their attainment of college core abilities. PREREQUISITES: 10102110 Intro to Business, 10104102 Principles of Marketing, 10196193 Human Resource Management and COREQUISITE: 10101131 Business Accounting

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

HUMAN RESOURCE MANAGEMENT...applies the skills/tools necessary to effectively value and apply employees' abilities and needs to organization goals. Learners will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies/procedures, training, performance management, employee counseling/development, and effective use of compensation and benefit strategies.

INTERNSHIP-BUSINESS MANAGEMENT...requires students to complete 216 hours of performing work in a business/industrial service setting related to their Business Management program objectives. Students are responsible for seeking and obtaining the internship position. Course requirements include maintaining a log of work activities, identifying and receiving approval from the job supervisor and instructor, and completing a work-related project. Students may meet periodically at LTC. PREREQUISITES: 10102110 Intro to Business, 10104102 Principles of Management, 10196193 Human Resource Management and COREQUISITES: 10101131 Business Accounting and 10102123 Business Management Capstone

INTRODUCTION TO AMERICAN GOVERNMENT...introduces American political processes and institutions. It focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. It explores the role of the media, interest groups, political parties and public opinion in the political process. It also explores the role of state and national government in our federal system. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO BUSINESS...provides an introduction to the world of business from both the organizational and managerial viewpoint. It examines areas of business including the business environment, business formation, planning, operations, accounting, marketing, human resource management, and building effective teams.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

MANAGERIAL ACCOUNTING...prepares the learner to analyze financial performance; prepare and evaluate budgets; and compare and manage capital. (Accounting students will require the Accounting 1 prerequisite requirement for this course.) PREREQUISITE: 10101131 Business Accounting or 10101111 Accounting 1

MARKETING, PRINCIPLES OF...introduces the student to the consumer decision process model, the bases used to segment a market, basic concepts about goods, services, and ideas, the nature of supply chain and distribution, integrated marketing communications, and the stages of the product life cycle and their impact on the marketing mix. COREQUISITE: 10104104 Selling Strategies or CONDITION: 101023 Business Management enrollment requirements met

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

PERSONAL BRANDING...focuses on the importance of developing a strong brand identity for yourself as a professional. As a prospective employee, you are constantly selling yourself from how you talk, walk, dress, your facial expressions, and your body language; people are always forming impressions of you. In this course, you will develop a professional resume, cover letter, practice interview skills, and learn the role of social media in career development.

PROJECT MANAGEMENT...introduces the learner to explore the relationship of existing and emerging processes and technologies to manufacturing strategy and supply chain-related functions. This course addresses three main topics: aligning resources with the strategic plan, configuring and integrating operating processes to support the strategic plan, and implementing change.

PURCHASING...introduces the participant to basic purchasing, quality specifications, inventory control, supplier selection, price aspects, research and measurement, negotiation, and global purchasing. This course is exciting for anyone interested in working in a challenging and rewarding purchasing and supply chain management career.

SERVICE OPERATIONS MANAGEMENT...introduces the student to the basic coverage of the concepts and current issues in service operation management. Topics include the value equation in operations management; understanding services; building the service system; operating the service system; enterprise resource management (ERP) and supply chain management concepts in the service sector.

SPEECH...explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

TEAMBUILDING AND PROBLEM SOLVING...applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, a systematic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, and evaluation.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 50-410-1
4-Year Contract

Work Hours (including related instruction): 6240
Related Instruction Hours: 400 • Night School Hours: 120

ABOUT THE APPRENTICESHIP

Apprenticeships are employer-sponsored training programs. You must have a contract before being invited to school. A special application process is used for these programs. Please contact the Apprenticeship Office for the proper forms. Apprenticeship means you earn while you learn. If you want a career in a skilled trade, apprenticeship is the best way to get there. You'll combine on-the-job training with on-campus learning—you'll have the best of both worlds when it comes to learning the skills you need to get ahead. And even better, you'll earn a paycheck while you learn those skills.

ABOUT THE CAREER

Architects create ideas and develop plans for buildings—carpenters turn ideas and plans into homes, offices, stores—all the structures in which we live, work and play. The Carpentry Apprenticeship program is an employer-sponsored, hands-on training program under the supervision of a joint apprenticeship committee. If you're detail-oriented; good at following directions; and enjoy working with your mind, hands, and tools to build things, becoming a journey-level carpenter could be a very rewarding career choice for you.

CAREERS

Graduates of LTC's Carpentry Apprenticeship program work as journey-level carpenters in the areas of construction, maintenance, and repair of structures, both commercial and residential.

CONSTRUCTION APPRENTICE APPLICATION REQUIREMENTS

- Apprentice Application
- Proof of Age
- Carpentry Entrance Assessment
- High School Transcripts or Equivalent
- Advisory Committee Interview

PROGRAM OUTCOMES

- Build forms and rough frame.
- Read construction prints.
- Install exterior finishing.
- Install interior finishing and hardware.
- Install interior system including: drywall, insulation, acoustical ceilings, movable partitions, and access panel systems.
- Fit hardware to exterior and interior applications.

APPROXIMATE COSTS

Contact the LTC Apprenticeship Office or visit www.gotoltc.edu/apprenticeship for detailed information.

PLACEMENT SCORES

Seventy (70) percent or better on Carpenter Entrance Assessment.

SPECIAL NOTE

Upon completion of the apprentice requirements, you'll be issued a Letter of Introduction, which states your requirements have been met. You'll use this Letter of Introduction to apply for work in the trade. You must have a sponsoring employer before receiving a contract and being invited to school.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

Catalog No.	Class Title	Credit(s)
Term 1		
50410715	Construction Carpentry Safety	1
50410719	Site Development for Carpentry Apprentices	1
2		
Term 2		
50410720	Concrete Forms for Carpentry Apprentices	1
50410721	Shoring & Floor Construction for Carpentry Apprentices	1
2		
Term 3		
50410722	Wall Construction for Carpentry Apprentices	1
50410724	Interior Finishing for Carpentry Apprentices	1
2		
Term 4		
50410716	Scaffold Erector and Tool Safety for Carpentry Apprentices	1
50410726	Roof Framing for Carpentry Apprentices	1
2		
Term 5		
50410727	Stair Design and Building for Carpentry Apprentices	1
50410725	Exterior Finishing and Doors for Carpentry Apprentices	1
2		
Term 6		
50410723	Metal Framing for Carpentry Apprentices	1
50410717	Basic Welding for Carpentry Apprentices	1
2		

TOTAL 12

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with the Apprenticeship office for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

BASIC WELDING FOR CARPENTRY...will include arc and wire welding. Welding principles will be discussed and basic processes examined. Safety, set-up, and welding techniques commonly used by the trade will be addressed. Skill development will include basic arc and wire welding as well as burning, torching, and plasma cutting. Blueprint reading, safety and applicable commercial building codes will be reviewed. CONDITION: 504101 Carpentry Apprentice requirements met

CONCRETE FORMS FOR CARPENTRY APPRENTICES...will explore trade practices related to concrete forms. Course topics include Symons handset forms, MEVA gang forming, hardware and rebar requirements, reinforcement techniques and concrete science. Key principles involved in slump testing and preparing concrete will be discussed. Blueprint reading, safety, commercial codes, and related requirements will be addressed in this course. CONDITION: 504101 Carpentry Apprentice Reqs Met

CONSTRUCTION CARPENTRY SAFETY...will introduce safe work practices, safety requirements, and personal protective equipment. Instruction includes forklift, rough terrain vehicle and aerial lift safety and operation. Construction trade safety best practices will be discussed. Trenching and rigging and signaling safety requirements and operation will also be covered. CONDITION: 504101 Carpentry Apprentice requirements met

EXTERIOR FINISHING AND DOORS FOR CARPENTRY...will examine exterior finishing and doors systems in this course. Exterior finishing topics include installation of windows and siding following specifications provided on blueprints. Door systems include hollow metal door frames; doors; door hardware, hangers and closures; and other related components. Blueprint reading, commercial building codes, and other requirements for doors and exteriors will be covered. CONDITION: 504101 Carpentry Apprentice requirements met

INTERIOR FINISHING FOR CARPENTRY APPRENTICES...will explore interior finishing techniques related to the trade. Trim and paneling will examine baseboard, casing, sills, jams, trims, and paneling installations. Cabinets and backing installation and blueprints are included in the course. Laminate and solid surface installation and manufacturing will be discussed. Acoustical ceiling basics, layouts, mains, and math are addressed. CONDITION: 504101 Carpentry Apprentice requirements met

METAL FRAMING FOR CARPENTRY APPRENTICES...will cover metal framing requirements related to commercial building codes. Blueprint reading and safety related to metal stud work are included. Course topics include structural studs, walls and shafts, soffits, joists, firestops, and other related concepts. Hands-on skill development in cutting studs for various job requirements is included. CONDITION: 504101 Carpentry Apprentice requirements met

ROOF FRAMING FOR CARPENTRY APPRENTICES...will apply blueprint reading skills to roofing systems and framing requirements. Rafters, gables, hips, intersecting, valleys, cornices and trusses will be covered. Course includes the installations of pre-engineered components as well as the awareness of how to make trusses and related components. Applicable commercial building codes, safety requirements, and related concepts will be addressed. CONDITION: 504101 Carpentry Apprentice requirements met

SCAFFOLD ERECTOR AND TOOL SAFETY...will cover scaffold systems, safety, and assembly in this course. Additional topics include tool safety, and basic blueprint reading. Tube and clamp, welding frame, and mobile towers will be compared. Common scaffold systems and set-ups for various job site situations will be discussed. Beginning tool safety for protecting workers, equipment and property will be examined. Blueprint reading skills will be introduced. CONDITION: 504101 Carpentry Apprentice requirements met

SHORING AND FLOOR CONSTRUCTION FOR CARPENTRY...will cover trade practices involving concrete shoring and floor construction. Course topics include elevated slabs and beams, EFCO systems, decks and Ellis clamps, plywood and concrete systems, precast and tilt-up slabs, and slab-on-grade with slopes. Hands-on learning opportunities related to the course topics are included. Codes, safety, blueprint reading and other related requirements are included. CONDITION: 504101 Carpentry Apprentice requirements met

SITE DEVELOPMENT FOR CARPENTRY APPRENTICES...will expose apprentices to trade practices related to site development. Use of a transit and level will be covered and skills developed related to working with building layouts. Elevation specifications and symbols will be examined. Total station fundamentals will be applied to various job sites. Blueprint reading, commercial building codes, safety, and related concepts when working on a job site. CONDITION: 504101 Carpentry Apprentice requirements met

STAIR DESIGN AND BUILDING CARPENTRY...will examine stair design, layout, and building in this course. Interpreting blueprints and building codes related to stairs and ADA accessibility will be addressed along with layout and frame wood and metal and concrete stairs based on codes and standards. Stairs will be built in team or class projects. Applying use of concrete forms to stairways will be covered. Reviewing and applying commercial codes to stairway construction for public buildings will also be covered. CONDITION: 504101 Carpentry Apprentice requirements met

WALL CONSTRUCTION FOR CARPENTRY APPRENTICE...will teach wall construction techniques involved with wood framing. Course topics include stick framing walls and headers, wood framing practices, drywall and insulation, drywall taping, and wall finishing. Blueprint reading, safety, and tool use are included. Commercial building codes related to wall construction will be reviewed. CONDITION: 504101 Carpentry Apprentice requirements met

ABOUT THE PROGRAM

Learners will gain an understanding of children’s needs and the behaviors that are needed to function in today’s childcare environment. Students will gain skills in the childcare industry that can transfer directly into employment. This certificate could result in a completer gaining a higher YoungStar rating, and in turn resulting in a safer and more productive environment for the child/children.

PROGRAM OUTCOMES

- Gain awareness of proper nutrient, licensing rules and regulations, health and safety standards essential to the education and welfare of young children
- Comprehend professional terminology used in the early childhood field

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application
- Complete Student Success Questionnaire

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

To practice in the field completers will need to successfully pass a background information check.

The Registry Preschool Credential - after successful completion of ECE: Child Development, ECE: Social Studies, Art & Music, ECE: Health, Safety & Nutrition, ECE: Guiding Children’s Behavior, ECE: Foundations of Early Childhood Education and ECE: Introductory Practicum, students are eligible to enroll in ECE: Preschool Practicum which serves as the capstone course in The Registry Preschool Credential. The student will be placed in an early childhood setting with 3-5 yr old children and create a portfolio that prepares them for The Registry commission. If you would like more information about receiving this credential, please contact Jennifer Irish, ECE Instructor at jennifer.irish@gotoltc.edu or 920-693-1348.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

A Child Care Professional pathway certificate will train students for work in the occupation of childcare. There are an estimated 203 annual job openings within a 50 mile radius of Sheboygan and Manitowoc counties. This certificate also ladders into the Childcare Services technical diploma program and Early Childhood Education associate degree. After completing the associate degree program students can continue their education at various 4-year colleges.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
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COURSES

10307151	ECE: Infant and Toddler Development	3
10307167	ECE: Health, Safety and Nutrition	3
10307110	ECE: Social Studies, Art & Music	3
10307179	ECE: Child Development	3

TOTAL 12

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

ECE: CHILD DEVELOPMENT...examines child development within the context of the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children ages three through five; analyze development of children ages five through eight; relate child development research findings to teaching practice; analyze the role of heredity and the environment; examine the role of brain development in early learning (ages 3-8); examine developmental and environmental assessment strategies for children ages 3-8.

ECE: HEALTH, SAFETY AND NUTRITION...examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; examine governmental regulations and professional standards as they apply to health, safety, and nutrition; plan a safe early childhood environment; plan a healthy early childhood environment; plan nutritionally sound menus; examine child abuse and neglect issues and mandates; describe Sudden Infant Death Syndrome (SIDS) risk reduction strategies; describe strategies to recognize and prevent the occurrence of abusive head trauma including Shaken Baby Syndrome (SBS); incorporate health, safety, and nutrition concepts into the children's curriculum.

ECE: INFANT AND TODDLER DEVELOPMENT...will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze development of infants and toddlers (conception to thirty-six months); correlate prenatal and postnatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine culturally and developmentally appropriate environments for infants and toddlers, examine the role of brain development in early learning (conception through thirty-six months); examine caregiving routines as curriculum; and examine developmental and environmental assessment strategies for infants and toddlers.

ECE: SOCIAL STUDIES, ART, AND MUSIC...will focus on beginning level curriculum development in the specific integrated content areas of social studies, art, music, & movement (SSAMM).

Program Number 31-307-1 Technical Diploma • Two Terms

ABOUT THE PROGRAM

Students in this fast-growing field receive training in planning and implementing developmentally appropriate curriculum for specific age levels; using positive guidance techniques to manage an early childhood classroom; providing for the health, safety and physical needs of the children; and work with parents to provide a link between the center and the home.

PROGRAM OUTCOMES

- Relate knowledge of child development to practice
- Create relationships with children, family and the community
- Apply observation, documentation, and assessment strategies
- Implement developmentally appropriate teaching and learning activities
- Demonstrate professionalism
- Follow health, safety and nutrition practices

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire. This will also include a discussion and given paperwork to complete fingerprint-based background check request form a semester prior to enrolling in Introductory Practicum.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.
- Submit Infant/Child CPR/AED certification to program staff.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.
- Fingerprint-based background check current fee of \$39 (subject to change)

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Introductory Practicum students are required to attend all course reflections to receive required trainings (36 hours of lecture + 72 hours of field experience).

Intermediate Practicum students are also required to attend all course reflections (36 hours of lecture + 72 hours of field experience).

RELATED PROGRAMS

- Early Childhood Education Associate Degree

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10307148	ECE: Foundations of Early Childhood Education	3
10307151	ECE: Infant & Toddler Development	3
10307174	ECE: Introductory Practicum	3
10307110	ECE: Social Studies, Art & Music	3
10801195	Written Communications	3
		15
Term 2		
10307179	ECE: Child Development	3
10307188	ECE: Guiding Children's Behavior	3
10307177	ECE: Intermediate Practicum	3
10307108	ECE: Early Language & Literacy	3
10307167	ECE: Health, Safety, and Nutrition	3
10809172	Introduction to Diversity Studies	3
		18
		TOTAL 33

ECE: CHILD DEVELOPMENT...examines child development within the context of the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children ages three through five; analyze development of children ages five through eight; relate child development research findings to teaching practice; analyze the role of heredity and the environment; examine the role of brain development in early learning (ages 3-8); examine developmental and environmental assessment strategies for children ages 3-8.

ECE: EARLY LANGUAGE AND LITERACY...explores strategies to encourage the development of early language and literacy knowledge and skill building in children birth to 8 years of age. Learners will investigate the components of literacy including; literacy and a source of enjoyment, vocabulary and oral language, phonological awareness, knowledge of print, letters and words, comprehension and an understanding of books and other texts. Theories and philosophies regarding children's language and literacy development will be addressed. Dual language learning will be examined within the context of developmentally appropriate practices. Assessment tools for early language and literacy acquisition will be reviewed.

ECE: FOUNDATIONS OF EARLY CHILDHOOD EDUCATION...introduces you to the early childhood profession. Course competencies include: explore the concepts of diversity, cultural responsiveness, and anti-bias as it relates to early childhood education, investigate the history of early childhood education, examine regulatory requirements for early childhood education programs in WI, summarize types of early childhood education settings, identify the components of a quality early childhood education program, summarize responsibilities of early childhood education professionals, explore early childhood curriculum models and examine the critical role of play as it relates to developmentally appropriate practice.

ECE: GUIDING CHILDREN'S BEHAVIOR...examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze techniques for and effects of strong relationship-building with children and families; identify positive and proactive guidance principles and techniques to support children; analyze environmental influences on child behavior; identify strategies that support children's active engagement in the learning environment; identify strategies that proactively teach emotional literacy and regulation techniques; identify strategies that proactively teach friendship skills; identify strategies that proactively teach children calming, relaxation, and problem-solving techniques; utilize observation and assessment techniques to assess and interpret behavior; create a behavior support plan based on a functional behavior assessment; create a guidance philosophy. This course meets the requirements of the "24 hour Wisconsin" Pyramid Model training.

ECE: HEALTH, SAFETY AND NUTRITION...examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; examine governmental regulations and professional standards as they apply to health, safety, and nutrition; plan a safe early childhood environment; plan a healthy early childhood environment; plan nutritionally sound menus; examine child abuse and neglect issues and mandates; describe Sudden Infant Death Syndrome (SIDS) risk reduction strategies; describe strategies to recognize and prevent the occurrence of abusive head trauma including Shaken Baby Syndrome (SBS); incorporate health, safety, and nutrition concepts into the children's curriculum.

ECE: INFANT AND TODDLER DEVELOPMENT...will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze development of infants and toddlers (conception to thirty-six months); correlate prenatal and postnatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine culturally and developmentally appropriate environments for infants and toddlers, examine the role of brain development in early learning (conception through thirty-six months); examine caregiving routines as curriculum; and examine developmental and environmental assessment strategies for infants and toddlers.

ECE: INTERMEDIATE PRACTICUM...will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for children. PREREQUISITE: 10307174 ECE: Introductory Practicum and CONDITION: 103071 Early Childhood Education or 313071 Child Care Services program admissions requirements met

ECE: INTRODUCTORY PRACTICUM...will learn about and apply the course competencies in an actual early childhood setting. You will explore the standards for quality early childhood education, demonstrate professional behaviors, and meet the requirements for training in the Wisconsin Model Early Learning Standards. Fingerprint-based background check completed with result of "Final Eligibility" is required. CONDITION: 103071 Early Childhood Education admission requirements met or 313071 Child Care Services admission requirements met

ECE: SOCIAL STUDIES, ART, AND MUSIC...will focus on beginning level curriculum development in the specific integrated content areas of social studies, art, music, & movement (SSAMM).

INTRODUCTION TO DIVERSITY STUDIES...introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 32-444-1 Technical Diploma • Four Terms

ABOUT THE PROGRAM

Learn CNC and Machining at your own pace, through hands-on learning, and with your instructor and success coach to guide you. Computer numerical control (CNC) machining is used to perform a wide range of manufacturing tasks including milling, drilling, and turning. Technicians work with CNC equipment from setup through operation, producing parts and tools from metal, plastic, or other materials. CNC technicians program the equipment to control speed, feed, and path of the cut. They inspect the finished product to ensure it is a quality part and ready for the next step in production. If you like to create things with your hands, are fascinated with technology, and want above-average earning power, the CNC Technician program is for you.

PROGRAM OUTCOMES

- Apply basic safety practices in the machine shop.
- Interpret industrial/engineering drawings.
- Apply precision measuring methods to part inspection.
- Perform basic machine tool equipment setup and operation.
- Perform programming, setup, and operation of CNC machine tools.
- Perform advanced CNC Machinist operations.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This program is Competency-Based. Competency-Based Education (CBE) is learning at your own pace by mastering competencies through demonstration. Once all competencies for a program have been assessed and mastered, students will earn a certificate, diploma, or degree.

RELATED PROGRAMS

- Machinist Apprenticeship
- Tool and Die Apprenticeship

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
31420310	Shop Tools and Fasteners	1
31420330	Precision Measuring	1
31420385	Orthographic Projection Print	1
31420325	Machining Math Basic	1
31420338	Drills and Saws	1
31420340	Lathe-Facing and Turning	1
31420350	Mill-Squaring	1
31420386	GD&T Intro	1
31420326	Machining Geometry and Basic Trigonometry	1
31420342	Lathe-Hole Producing and Threading	1
31420351	Mill-Slots and Holes	1
31444301	Mill-G&M Code	1
31444303	CNC Machining Operation	1
31444309	CNC Turning Operation	1
31420359	Safe Heat Treating Operations	1
		15
Term 2		
31801361	Interpersonal Skills	1
31801360	Workplace Fundamentals	1
31444305	Turning-G&M Code	1
31444307	Mill-2D Using CAM	1
31420353	ProtoTrak Mill-Squaring Programming	1
31420354	ProtoTrak Mill-Slot and Hole Programming	1
31420356	Surface Grinder Operations	1
31444311	CNC Turning-Turning and Cut Off Setup	1
31444313	CNC Turning-Hole Producing Setup/Threading	1
31444315	CNC Machining-Facing and End Milling Setup	1
31444317	CNC Machining-Hole/Slot/Engraving Setup	1
31444321	CNC Turning-Toolpaths Using CAM	1
31420361	Complex Print Drawings	1
31420362	Advanced Precision Measuring	1
31420363	GD&T-Inspection	1
		15
Term 3		
31444319	CNC Milling-Adv G&M Code Programming	1
31444323	CNC Machining-Probing/Editing/G&M Code	1
31444325	CNC Machining-Work Holding	1
31444327	CNC Turning-Program Editing	1
31444329	CNC Turning-G&M Code Programming	1
31444331	CNC Machining-G&M Code Programming	1
31444333	CNC Machining-Setup/Operation w/G&M Code	1
31444335	CNC Turning-Adv G&M Code Programming	1
31444357	CNC Turning-Setup and Operation	1
31420364	ProtoTrak-Adv Conversational Programming	1
31420365	ProtoTrak-Adv Programming with A.G.E./DXF	1
31444347	HSM for SolidWorks	1
		12
Term 4		
32444306	CNC Skills Portfolio	1
32444343	CNC Technician Internship	2
31444339	CNC Machining-G&M Programming Using CAM	1
31444341	CNC Machining-Setup/Operation Using CAM	1
31444343	CNC Turning-G&M Programming Using CAM	1
31444345	CNC Turning-Setup & Operation Using CAM	1
31444349	CNC Turning with Live Tooling-Operation	1
31444351	CNC Turning with Live Tooling-Programming	1
31444353	CNC Turning w/Live Tooling-G&M Programming	1
10620167	Robotics-Teach Pendant/Controls	1
10620179	Robotics-Editing Programs	1
		12
		TOTAL 54

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

Please see *Machine Tool Operation for Term 1 and 2 course descriptions.*

CNC MACHINING-G&M CODE PROGRAMMING...prepares the learner to create G&M code programs to produce parts on a CNC machining center. COREQUISITES: 31444325 CNC Machining-Work Holding or PREREQUISITES: 32444302 Advanced Machining Centers 1A and 31420315 CAM for Milling Machines

CNC MACHINING-G&M PROGRAMMING USING CAM...prepares the learner to create G&M code programs using CAM for CNC machining center. COREQUISITE: 31444325 CNC Machining - Work Holding or PREREQUISITE: 32444308 Advanced Machining Centers 1B

CNC MACHINING-PROBING/EDITING/G&M CODE...prepares the learner to perform probing on CNC machining center for location and editing G&M code programs. COREQUISITE: 31444317 CNC Machining-Hole/Slot/Engraving Setup or PREREQUISITE: 31420382 Machine Tool CNC Machining Centers

CNC MACHINING-SETUP/OPERATION USING CAM...prepares the learner to operate CNC machining center using student developed CAM programs. COREQUISITE: 31444339 CNC Machining-G&M Programming using CAM

CNC MACHINING-SETUP/OPERATION WITH G&M CODE...prepares the learner to setup and operate CNC machining center using student developed G&M code programs. COREQUISITE: 31444331 CNC Machining - G&M Code Programming

CNC MACHINING-WORK HOLDING...prepares the learner to create parts using various work holding techniques on the CNC machining center. COREQUISITE: 31444323 CNC Machining-Probing/Editing/G&M Code

CNC MILLING-ADVANCED G&M CODE PROGRAMMING...prepares the learner to create advanced milling G&M code programs. COREQUISITE: 31444305 Turning G&M Code or PREREQUISITES: 31420313 or 10420184 MT Programming

CNC SKILLS PORTFOLIO...prepares learner to create a portfolio of program projects. COREQUISITES: 31444341 CNC Machining-Setup/Operation using CAM and 31444345 CNC Turning-Setup and Operation using CAM

CNC TECHNICIAN INTERNSHIP...prepares learner to apply technical skills as well as work productively, communicate effectively, and demonstrate ethics in a professional workplace. COREQUISITES: 31444333 CNC Machining-Setup/Operate with G&M Code and 31444357 CNC Turing-Setup and Operation

CNC TURNING WITH LIVE TOOLING-G&M PROGRAMMING...prepares the learner to operate CNC turning center with live tooling using student developed G&M code programs. COREQUISITE: 31444351 CNC Turning with Live Tooling-Programming

CNC TURNING WITH LIVE TOOLING-OPERATION...prepares the learner to operate CNC turning center with live tooling safely. COREQUISITES: 31444341 CNC Machining-Setup/Operation using CAM and 31444345 CNC Turning-Setup and Operation using CAM

CNC TURNING WITH LIVE TOOLING-PROGRAMMING...prepares the learner to write G&M code programs for CNC turning center with live tooling. COREQUISITE: 31444349 CNC Turning with Live Tooling-Operation

CNC TURNING-ADVANCED G&M CODE PROGRAMMING...prepares the learner to create advanced G&M code programs for CNC turning center. COREQUISITE: 31444329 CNC Turning-G&M Code Programming or PREREQUISITES: 32444307 Advanced Turning Centers 1A and 32444310 CAM for Turning Machines

CNC TURNING-G&M CODE PROGRAMMING...prepares the learner to create G&M code programs to produce parts on a CNC turning center. COREQUISITE: 31444327 CNC Turning-Program Editing

CNC TURNING-G&M CODE PROGRAMMING USING CAM...prepares the learner to create G&M code programs using CAM for CNC turning center. COREQUISITE: 31444329 CNC Turning - G&M Code Programming or PREREQUISITE: 32444308 Advanced Turning Centers 1B

CNC TURNING-PROGRAM EDITING...prepares the learner to edit programs to produce parts on CNC turning center. COREQUISITE: 31444313 CNC Turning/Hole Producing Setup/Threading or PREREQUISITE: 31420380 MT CNC Turning Centers and 10420184 or 31420313 Machine Tool Programming

CNC TURNING-SETUP AND OPERATION...prepares the learner to setup and operate CNC turning center using tailstock and lefthand tooling. COREQUISITE: 31444335 CNC Turning-Advanced G&M Code Programming

CNC TURNING-SETUP AND OPERATION USING CAM...prepares the learner to operate CNC turning center using student developed CAM programs. COREQUISITE: 31444343 CNC Turning-G&M Programming Using CAM

HSM FOR SOLIDWORKS...prepares the learner to create G&M code programs using HSM for Solidworks software.

PROTOTRAK-ADV CONVERSATIONAL PROGRAMMING...prepares the learner to perform advanced sub routine functions using conversational programming on ProtoTrak vertical milling machine. COREQUISITE: 31420354 ProtoTrak Mill-Slot and Hole Programming or PREREQUISITE: 31420352 Machine Tool Mills 2

PROTOTRAK-ADV PROGRAMMING WITH A.G.E./DXF...prepares the learner to create conversational programs using A.G.E. (Auto Geometry Engine) and DXF functions on ProtoTrak vertical milling machine. COREQUISITE: 31420364 ProtoTrak-Advanced Conversational Programming

ROBOTICS-EDITING PROGRAMS...teaches troubleshooting and repairing issues in a robot program. COREQUISITE: 10620167 Robotics-Teach Pendant/Controls

ROBOTICS-TEACH PENDANT/CONTROL...instructs students on using a teach pendant to control a robot. COREQUISITE: 10620179 Robotics-Editing Programs

Program Number 61-536-1
Certificate • 15 credits

ABOUT THE PROGRAM

If you are ill or injured, you have access to an enormous variety of therapeutic medications, and you trust your pharmacy to correctly interpret and fill your prescriptions. Pharmacy technicians contribute to our safety by assisting pharmacists in a variety of technical tasks. If you are attentive to detail, organized, a good communicator, and like math, science, and working with people, a career as a pharmacy technician may be your prescription for success.

PROGRAM OUTCOMES

- Demonstrate personal/interpersonal knowledge and skills in the practice of pharmacy.
- Demonstrate foundational professional knowledge and skills for the practice of pharmacy.
- Prepare prescriptions/medication orders and pharmaceutical products for dispensing, distribution, and disposal.
- Compound nonsterile medications.
- Follow established policies and procedures for procurement, billing, reimbursement and inventory management.
- Utilize pharmacy technology and informatics.
- Adhere to state and federal regulations governing the practice of pharmacy.
- Apply the principles of quality assurance to the practice of pharmacy.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Complete Pharmacy Technician Program Handbook form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

- LTC offers its Pharmacy Technician program in cooperation with technical colleges across the state. As a pharmacy technician student, you will attend live, interactive TV classes sent from LTC to your local technical college or home computer; receive laboratory training in local pharmacies; participate in real-world, hands-on training during a 8-week clinical program; and take general studies classes at your local technical college.
- The Pharmacy Technician program conducted at Lakeshore Technical College, Cleveland, WI is accredited by the American Society of Health-System Pharmacists.
- Must have reliable internet service.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10501101	Medical Terminology	3
10536120	Fundamentals of Reading Prescriptions	1
10536110	Pharmaceutical Calculations	3
		7
Term 2		
10501102	Health Insurance and Reimbursement	3
10536122	Pharmacology	3
10536138	Pharmacy Community Clinical	2
		8

TOTAL 15

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

FUNDAMENTALS OF READING PRESCRIPTIONS...prepares the learner to work in a community or hospital pharmacy by exploring the role of a pharmacy technician within the healthcare team; examining each step in the prescription filling process; and identifying the key top 200 drugs by brand and generic name and therapeutic class. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management admission requirements met and Reading placement assessment equivalent

HEALTH INSURANCE AND REIMBURSEMENT...provides the learner with an understanding of the various types of insurance and managed care plans, and the cycle of medical claims processing. The learner will review cases, develop critical thinking skills in analyzing information, and selecting processes for reimbursement success.

MEDICAL TERMINOLOGY...focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

PHARMACEUTICAL CALCULATIONS...prepares the learner to enlarge and reduce formulas and solve proportions, dilutions, allegations, and other calculations pertinent to the preparation of pharmaceuticals using metric, apothecary, avoirdupois, and household measuring systems. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management or 195316 Employed Pharmacy Technician admission requirements met

PHARMACOLOGY...enhances the learner's ability to act and react appropriately in the pharmacy by learning how drugs work through examination of the anatomy, physiology, pathophysiology, and drug therapy for each of the major systems. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management or 615361 Community Retail Pharmacy Technician or 195361 Employed Pharmacy Technician admissions requirements met and Reading placement assessment equivalent

PHARMACY COMMUNITY CLINICAL...provides hands-on experience in a community pharmacy for 108 hours during quarter two. Areas of instruction include interpretation of prescriptions, entering prescriptions on computer, patient profiles, correctly filling and labeling prescriptions, billing patient and third parties, customer service, over-the-counter medications, purchasing, checking in deliveries, and inventory control, compounding and patient confidentiality. PREREQUISITES: 10536120 Fund of Rdg Prescr, 10536113 Pharm Bus Appls, 10501102 Hlth Ins & Reim, and 10536110 Pharm Calc, and CONDITION: 315361 Pharmacy Tech, 105361 Pharmacy Services Mgmt or 615361 Community Retail Pharmacy Tech admission requirements met

ABOUT THE PROGRAM

The Construction Trades Fundamentals Pathway Certificate provides the needed knowledge and skills to start a career in the construction trades. Students will learn basic knowledge about various construction trades as well as how to work safely.

PROGRAM OUTCOMES

- Demonstrate safety and proper use of materials, tools, and equipment
- Demonstrate proper use of hand and power tools
- Interpret construction documents and blueprints
- Demonstrate wood frame layout and assembly
- Recognize plumbing, HVAC, and electrical systems

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

CONTACT

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Catalog No.	Class Title	Credit(s)
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COURSES

10410101	Introduction to Construction	2
10413105	Basic Electricity for Construction Trades	2
10410102	Blueprint Reading for Building Construction	2
10804113	College Technical Mathematics 1A	3
10442100	Welding Introduction	1
10410103	OSHA 30 for Construction	2
10601110	Mechanical Service Applications-Sheet Metal	3

TOTAL 15

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

BASIC ELECTRICITY FOR CONSTRUCTION TRADES...provides practical DC/AC concepts to introduce various components, electrical quantities, and measuring values in DC and AC circuits. Circuit measurement of voltage, current, and resistance will be taken with analog and digital meters applying basic concepts. The student will learn about electrical theory, electrical safety, basic circuit design, measuring equipment, general wiring practices, motors, and transformers.

BLUEPRINT READING FOR BUILDING CONSTRUCTION...provides instruction in reading and interpreting shop drawings, residential drawings, and commercial building plans. Emphasis is placed on building terminology and learning conventional techniques of communicating building methods from the designer to the builder. Students learn to visualize the structure and to interpret elevations, plan views, details, and sections from drawings. They also learn to read and interpret building specifications.

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. **PREREQUISITES:** 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtn Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

INTRODUCTION TO CONSTRUCTION...provides the learner with an overview of the various construction trades including framing, roofing, masonry block work, masonry flat work, electrical, HVAC, plumbing, and finish cabinetry work.

MECHANICAL SERVICE APPLICATIONS-SHEET METAL...introduces the student to copper soldering and brazing, oxy-acetylene torch usage for welding and brazing steel, sheet metal layout and fabrication, press fitting pipe, corrugated stainless steel tubing, PVC, and black iron pipe assembly procedures.

OSHA 30 FOR CONSTRUCTION...is an introductory course designed to provide instruction on general construction safety and health topics. The participant is given an overview of the key components of the Occupation Safety and Health Act of 1970, to become familiar with the enforcement and compliance efforts. The course is taught by certified OSHA instructors.

WELDING INTRODUCTION...introduces the learner to the world of welding, weld shop safety practices, welding terminology, and welding machine setup to industry standards. Learners will be introduced to the three major welding processes: SMAW, GMAW, and GTAW and will build skills welding with each process in the flat and horizontal positions while using the common welding joints found in industry. The learner will process material using the two major hand-held cutting processes - Oxyfuel and PAC.

Program Number 10-170-2
Associate Degree in Applied Science • Varies

ABOUT THE PROGRAM

You've seen high-profile trials with a person keying the testimony into a stenograph machine or read the scrolling captions for the hearing-impaired on your TV screen. The person writing the spoken words at speeds ranging from 180 to 225 words a minute is a court reporter. If you're an excellent listener, have strong language and communications skills, and are committed to accuracy and confidentiality, a career in court reporting may be a perfect fit for you.

PROGRAM OUTCOMES

- Utilize machine shorthand with a computer-aided transcription system to write the spoken word and produce a transcript.
- Perform as a realtime reporter with skills to obtain certification.
- Demonstrate knowledge of legal and medical concepts and terminology.
- Apply the NCRA Code of Professional Ethics and Certification Standards.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Complete Notification of Laptop/Steno Rental Equipment form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- Students are required to rent a stenograph machine and laptop computer through the rental program available at LTC. LTC's Court Reporting program is certified by the National Court Reporters Association (NCRA).
- LTC shares its Court Reporting program with Fox Valley Technical College (FVTC) Appleton and Northeast Wisconsin Technical College (NWTC)-Green Bay. LTC also offers an opportunity for students to complete the program at the Lakeland College-Milwaukee campus.

GRADUATION REQUIREMENT

Three 5-minute timings must be passed in each of the following categories with a minimum of 95 percent accuracy:

- Two-voice testimony @ 225 wpm
- Jury charge @ 200 wpm
- Literary @ 180 wpm
- Court Reporting Internship of 40 hours must be taken within 18 months of graduation.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10170106	Realtime Reporting 1	5
10170804	Realtime Reporting 1 Lab	1
10170144	Realtime Reporting Orientation	1
10801195	Written Communication	3
10809198	Introduction to Psychology	3
10170184	English for Realtime Reporters	1
		14
Term 2		
10170105	Realtime Reporting 2	5
10170805	Realtime Reporting 2 Lab	1
10170159	Realtime Reporting Technology	2
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
10170160	Legal Terminology	1
		12
Term 3 (Summer)		
10170108	Realtime Reporting Speed Development	2
10170104	Broadcast Captioning Research Methods	1
10809122	Introduction to American Government OR 10809172 Introduction to Diversity Studies	3
10170126	Skillbuilding 1 (optional) (2 cr)	
10170127	Skillbuilding 2 (optional) (2 cr)	
10170136	Skillbuilding 3 (Optional) (2 cr)	
		6
Term 4		
10170109	Literary 1 - Advanced	2
10170128	Jury Charge 1 - Advanced	2
10170156	Testimony 1 - Advanced	3
10170161	Realtime Reporting Technology Adv	2
10804123	Math with Business Applications OR 10804107 College Math OR 10806112 Principles of Sustainability	3
		12
Term 5		
10170145	Court Reporting Internship	1
10170111	Literary 2 - Advanced	2
10170129	Jury Charge 2 - Advanced	2
10170157	Testimony 2 - Advanced	3
10170146	Four Voice	1
10170141	Court Reporting Procedures	2
10170101	Captioning/CART	3
10170171	Medical Reporting & Terminology	2
		16
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

BROADCAST CAPTIONING RESEARCH METHODS...prepares the learner to prepare (research) prior to broadcast, conduct research in preparation for broadcasting international news, national news, local news, weather reports, sporting events, writing geographical terms, utilize culturally diverse terminology, and create job dictionaries.

CAPTIONING/CART...prepares the student to write Realtime dictation at 180 wpm, analyze deaf culture, analyze captioning/CART procedures, prepare for broadcast production, configure CAT software for captioning, set up captioning hardware, operate the CAT system in captioning mode, utilize proper technology to control caption spacing and placement, write a news broadcast for 30 minutes non-stop, configure CART software, and analyze the contents of the CART provider's manual. PREREQ: 10170156 Testimony 1-Adv and 10170109 Literary 1-Adv and COREQUISITE: 10170157 Testimony 2-Adv

COURT REPORTING INTERNSHIP...prepares the student to write machine shorthand verbatim for a minimum of 40 hours of actual writing time in the courtroom, classroom, and deposition environment under the supervision of a working reporter; prepare a 40-page transcript, and summarize the internship experience in a narrative report. PREREQ: 10106108or10170108 Realtime Rptg Speed Dev, 10106128or10170128 Jury Chrg 1-Adv, 10106109or10170109 Lit 1-Adv, 10106156or10170156 Test 1-Adv & COREQ: 10106129or10170129 Jury Chrg 2-Adv, 10106111or10170111 Lit 2-Adv & 10106157or10170157 Test 2-Adv

COURT REPORTING PROCEDURES...introduces the student to reporting procedures for which reporters are responsible in the courtroom, deposition, and real-time reporting environments, including preparing salable transcripts, researching legal citations, and developing professional development plans. PREREQUISITE: 10170156 Testimony 1 Advanced

ENGLISH FOR REALTIME REPORTERS...enhances the student's ability to use proper English grammar, spelling, punctuation, capitalization, and vocabulary techniques in the transcription of the spoken word.

FOUR VOICE...prepares the student to write four-voice testimony from material dictated at a minimum speed of 160 wpm for 5 minutes with a minimum of 95 percent accuracy. PREREQUISITE: 10170156 Testimony 1 – Advanced

INTRODUCTION TO AMERICAN GOVERNMENT...introduces American political processes and institutions. It focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. It explores the role of the media, interest groups, political parties and public opinion in the political process. It also explores the role of state and national government in our federal system. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

JURY CHARGE 1 - ADVANCED...prepares the student to write jury charge material at 160 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy and prepare salable transcripts. Course requires a minimum grade of "B" or better. PREREQUISITE: 10170121 Jury Charge 1 - Beginner or 10106121 Jury Charge 1 - Beginner or CONDITION: Minimum of 130 WPM met

JURY CHARGE 2 - ADVANCED...prepares the learner to write jury charge material at 200 words per minute for 5 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy and prepare salable transcripts. Course requires a minimum grade of "B" or better. PREREQUISITE: 10170122 Jury Charge 2 - Beginner or 10106122 Jury Charge 2 - Beginner or CONDITION: Minimum of 180 WPM met

LEGAL TERMINOLOGY...provides the student with the ability to spell, pronounce, and define legal terms.

LITERARY 1 - ADVANCED...prepares the learner to write literary material at 150 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy, write and read back current events dictation, and prepare salable transcripts. Course requires a minimum grade of "B" or better. PREREQUISITE: 10170113 Literary 1 - Beginner or 10106113 Literary 1 - Beginner or CONDITION: Minimum of 130 WPM met

LITERARY 2- ADVANCED...prepares the learner to write literary material at 180 words per minute for 5 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy, write and read back current events dictation, and prepare salable transcripts. Course requires a minimum grade of "B" or better. PREREQUISITE: 10170114 Literary 2 - Beginner or 10106114 Literary 2 - Beginner or CONDITION: min of 160 wpm met

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

MEDICAL REPORTING/TERMINOLOGY...prepares the student to write medical terminology in machine shorthand using appropriate medical terminology from material dictated at a minimum speed of 150 wpm for 5 minutes with a minimum of 95 percent accuracy. The student will research medical information, prepare salable transcripts, and submit timings. COREQUISITE: 10170156 Testimony 1 - Advanced or 10106156 Testimony 1 – Advanced

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

REALTIME REPORTING 1...prepares the learners to use machine shorthand to write consonants, vowels, numbers, multi-syllabic words, multi-consonant words, punctuation and special symbols, short forms and phrases, words in their singular and plural forms, and prefixes and suffixes. Concurrent registration in Realtime Reporting 1 Lab is required. CONDITION: 101701 Broadcast Captioning or 101702 Court Reporting or 101061 Judicial Reporting program requirements met

REALTIME REPORTING 1 LAB...prepares the learner to use machine shorthand to write consonants, vowels, numbers, multi-syllabic words, multi-consonant words, punctuation and special symbols, short forms and phrases, words in their singular and plural forms, and prefixes and suffixes. Concurrent registration in Realtime Reporting 1 is required. COREQUISITE: 10170106 Realtime Reporting 1 or 10106104 Realtime Reporting 1 and CONDITION: 101701 Broadcast Captioning or 101702 Court Reporting or 101061 Judicial Reporting program requirement met

REALTIME REPORTING 2...prepares the learner to write multi-syllabic words; punctuation and special symbols, short forms and phrases, prefixes and suffixes; numbers, frequently used words and phrases, contractions using the Z-rule, the "Flagged Alphabet," apply realtime conflict elimination principles, apply realtime theory and write dictation using a realtime theory at a minimum speed of 100 wpm. Concurrent registration in Realtime Reporting 2 Lab is required. PREREQUISITES: 10170106 Realtime Reporting 1 or 10106104 Realtime Reporting 1 and 10170804 Realtime Reporting 1 Lab or 10106804 Realtime Reporting 1 Lab

REALTIME REPORTING 2 LAB...expands the learner's ability to write multi-syllabic words; punctuation and special symbols, short forms and phrases, prefixes and suffixes; numbers, frequently used words and phrases, contractions using the Z-rule, the "Flagged Alphabet," apply realtime conflict elimination principles, apply realtime theory and write dictation using a realtime theory. Concurrent registration in Realtime Reporting 2 is required. COREQUISITES: 10170105 Realtime Rep 2 or 10106105 Realtime Reporting 2

REALTIME REPORTING ORIENTATION...prepares the student to use computer-assisted, real-time transcription software, Windows, e-mail, a steno machine, and a laptop in writing machine shorthand in court reporting and to complete and submit required coursework. CONDITION: 101701 Broadcast Captioning or 101702 Court Reporting program requirements met

REALTIME REPORTING SPEED DEVELOPMENT...further develops skills acquired in Realtime Reporting 2 on literary and testimony material beginning at 100 wpm. Scheduled during the summer term, students must pass two, 3-minute timings at a minimum speed of 110 words per minute. PREREQUISITE: 10170105 Realtime Reporting 2 or 10106105 Realtime Reporting 2 and 10170805 Realtime Reporting Lab 2

REALTIME REPORTING TECHNOLOGY...prepares the student to use CAT (Computer-Assisted Transcription) and real-time software; build personal dictionaries; and read, translate, and edit transcripts. Students are introduced to real-time translation procedures in court, depositions, captioning, and educational environments.

REALTIME REPORTING TECHNOLOGY ADVANCED...prepares the learner to expand their knowledge of computer-assisted transcription and realtime software, dictionary management, specialized editing functions, transcript preparation, auto-included block files, and specialized macros for Steno-related tasks. PREREQUISITE: 10170159 Realtime Reporting Technology

TESTIMONY 1 - ADVANCED...prepares the learner to write 2-voice testimony material at 160 words per minute for 3 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy and prepare salable transcripts. Course requires a minimum grade of "B" or better. PREREQUISITE: 10170153 Testimony 1 - Beginner or 10106153 Testimony 1 - Beginner or CONDITION: or Minimum of 130 WPM met

TESTIMONY 2 - ADVANCED...prepares the learner to write 2-voice testimony material at 225 words per minute for 5 minutes and transcribe at least 3 timings with a minimum of 95 percent accuracy and prepare salable transcripts. Course requires a minimum grade of "B" or better. PREREQUISITE: 10170154 Testimony 2 - Beginner or 10106154 Testimony 2 - Beginner or CONDITION: Minimum of 180 WPM

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

**Program Number 31-504-7
 Technical Diploma • Three Terms**
ABOUT THE PROGRAM

This program incorporates the Wisconsin Department of Justice Recruit Academy portion of LTC's Criminal Justice Associate Degree. This offers those individuals that have already completed necessary college coursework to complete a Department of Justice Recruit Academy at Lakeshore Technical College.

PROGRAM OUTCOMES

- Think critically.
- Manage emergencies.
- Communicate effectively.
- Demonstrate professionalism.
- Interact with others.
- Demonstrate tactical skills.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee. (No felony arrest or domestic violence convictions)
- Complete the online Student Success Questionnaire.
- Complete Firearms User Background Disclosure form.
- Submit US citizenship status.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned advisor to discuss motor vehicle record, plan your first semester schedule, review your entire plan of study, and discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This unique program permits individuals that already have 24 accredited college credits to complete a Department of Justice Recruit Academy and gain the necessary credentials to become a certifiable candidate for law enforcement job opportunities.

Individuals seeking Department of Justice Academy completion will need to complete a mandatory physical fitness test for admission to the academy component of this program.

Lakeshore Technical College's Criminal Justice Law Enforcement Academy prepares students to obtain state certification to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examinations, or licensure for other states.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Spring)		
10504700	Introduction to Criminal Justice	3
10504915	Basic Patrol Response	2
10501916	Basic Tactics	2
10504703	Basic Investigations	3
10504920	Physical Fitness Phase 1	1
10801196	Oral/Interpersonal Communicaton	3
		14
Term 2 (Summer)		
10504917	Intermediate Investigation	1
10504711	Intermediate Patrol Responses	2
10504712	Advanced Tactics 1	2
10504706	Emergency Vehicle Response	2
10504921	Physical Fitness Phase 2	1
		8
Term 3 (Fall)		
10504713	Advanced Tactics 2	2
10504918	Advanced Investigations	5
10504709	Traffic Response	3
10504708	Physical Fitness Phase 3	1
10504714	Special Response Tactics	1
10504195	Law Enforcement Capstone	2
		14
		TOTAL 36

Students seeking Department of Justice certification must complete the courses in the program in the sequence required by the Department of Justice Recruit Academy phases.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ADVANCED INVESTIGATIONS...instructs students in applying the skills from the Phase III topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Moral Reasoning and Professional Responsibility, Fair and Impartial Policing, Victims, Sexual Assault, Child Maltreatment, Interrogations, Physical Evidence Collection, Testifying in Court, Juvenile Law, Hazardous Materials, Domestic, and DOJ Integration Exercises. PREREQUISITE: 10504917 Intermediate Investigations

ADVANCED TACTICS 1...teaches and applies the skills from the phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy: Firearms 2. PREREQUISITE: 10504916 Basic Tactics

ADVANCED TACTICS 2...teaches and applies the skills from the phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy: Defence and Arrest Tactics (DAAT). PREREQUISITE: 10504917 Intermediate Investigation

BASIC INVESTIGATIONS...teaches and applies the skills from the Phase 1 topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Constitutional Law, Crimes, Interviews, and Report Writing. Student learning will occur through lecture, on campus lab activities, and the Department of Justice 720 Academy Integration Exercises. CONDITION: 105046 Criminal Justice Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy program requirements met

BASIC PATROL RESPONSE...instructs students through classroom lecture, on campus lab and Wisconsin Department of Justice Integration activities. Students will learn and apply skills addressed in the following Department of Justice 720 academy Phase I topics: Basic Response(RESPOND), TraCS, Traffic Law Enforcement, and First Aid/ CPR/AED.

BASIC TACTICS...instructs students in the skills from Phase I topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Defense and Arrest Tactics, Fundamentals of Firearms, Vehicle Contacts, and Officer Wellness. Student learning will occur through: lecture, on campus lab activities, and the Department of Justice 720 Academy Integration Exercises. CONDITION: 105046 Criminal Justice Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy

EMERGENCY VEHICLE RESPONSE...teaches and applies the skills from the Phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Emergency Vehicle Operations and Control (EVOC) and Vehicle Contacts 2. Student learning will occur through lecture, on campus lab activities, and Wisconsin Department of Justice 720 Academy Integration Exercises. PREREQUISITE: 10504916 or 10504702 Basic Tactics

INTERMEDIATE INVESTIGATION...instructs students in the skills from the Phase II topics outlined in the WI Department of Justice 720 Academy. Topics include: Constitutional Law II and Evidence Collection. Student learning will occur through lecture and the Wisconsin Department of Justice 720 Academy Integration Exercises. PREREQUISITE: 10504703 Basic Investigations

INTERMEDIATE PATROL RESPONSE...teaches and applies the skills from the phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy: Crisis Management, Professional Communications part 2, and Integration Exercise. PREREQUISITE: 10504915 Basic Patrol Response

INTRODUCTION TO CRIMINAL JUSTICE...focuses on the following phase 1 topics as addressed in the Wisconsin Department of Justice Academy 720 curriculum framework: Academy Orientation, Fundamentals of Criminal Justice, Ethics, Cultural Competency, Agency Policy, Professional Communications, Radio Procedures, Critical Thinking, and Integration Exercises to apply learning. PREREQUISITE: 10831103 Intro to College Writing or test or waiver equivalency and 10838105 Intro to Reading Skills or test or waiver equivalency and CONDITION:105046 Criminal Justice Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy program requirements met

LAW ENFORCEMENT CAPSTONE...instructs students how to complete practice scenarios for Phase III Wisconsin Department of Justice 720 Academy testing. Additionally, the Phase III practical testing will occur. COREQUISITE: 10504709 Traffic Response and 10504918 Advanced Investigation

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PHYSICAL FITNESS PHASE 1...applies the physical fitness skills required by the Wisconsin Department of Justice 720 academy in this phase 1 course. Students will apply learning in an instructor facilitated lab with on and off campus physical fitness activities. CONDITION: 105046 Criminal Justice Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy

PHYSICAL FITNESS PHASE 2...applies the physical fitness skills required by the Wisconsin Department of Justice 720 academy in this phase 2 course. Students will apply learning in an instructor facilitated lab with on campus physical fitness activities. PREREQUISITE: 10504920 Physical Fitness Phase 1

PHYSICAL FITNESS PHASE 3...applies the physical fitness skills required by the Wisconsin Department of Justice 720 Academy in this Phase 3 course. Students will apply learning in independent lab activities and an on campus physical fitness test/assessment. PREREQUISITE:10504705 Advanced Tactics or 10504921 Physical Fitness Phase 2

SPECIAL RESPONSE TACTICS...will teach the students, casualty care, tactics related to approaching, controlling, and intervening in unknown-risk and high-risk situations. PREREQUISITE: 10504711 Intermediate Patrol Response

TRAFFIC RESPONSE...teaches and applies the skills from the Phase 3 topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Traffic Law Enforcement - Core and Radar, Traffic Crash Investigations and Incident Management, and Operating While Intoxicated (OWI) and Standard Field Sobriety Testing (SFST), and Crimes. Student learning will occur through lecture and on campus lab activities. PREREQUISITE: 10504706 Emergency Vehicle Response

**Program Number 10-504-6
 Associate Degree in Applied Science • Four Terms**
ABOUT THE PROGRAM

To serve and protect. These words define the commitment of law enforcement personnel. If you're a law-abiding individual who values honesty, order, detail, and you possess the desire and ability to work with and assist people in a variety of situations, you may want to consider dedicating yourself to an ever-changing career in law enforcement.

PROGRAM OUTCOMES

- Think critically.
- Manage emergencies.
- Communicate effectively.
- Demonstrate professionalism.
- Interact with others.
- Demonstrate tactical skills.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee. (No felony arrest or domestic violence convictions)
- Complete the online Student Success Questionnaire.
- Complete Firearms User Background Disclosure form.
- Submit US citizenship status.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned advisor to discuss motor vehicle record, plan your first semester schedule, review your entire plan of study, and discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

LTC's Criminal Justice–Law Enforcement program is approved by the Wisconsin Department of Justice, Training and Standards Bureau. The Wisconsin Department of Justice reserves the right to make changes to the Recruit Academy embedded within this program, which may necessitate curriculum changes.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10504118	Intro to Public Safety	2
10504170	Public Safety Fitness	1
10504910	Law Enforcement Career Development	2
10801195	Written Communication	3
10809198	Introduction to Psychology	3
10804107	College Mathematics	3
		14
Term 2		
10504700	Introduction to Criminal Justice	3
10504915	Basic Patrol Response	2
10504916	Basic Tactics	2
10504703	Basic Investigations	3
10504920	Physical Fitness Phase 1	1
10504108	Professional Communications in Public Safety	1
10809122	Introduction to American Government OR 10809166 Introduction to Ethics: Theory & Application	3
		15
Term 3 (Summer)		
10504917	Intermediate Investigation	1
10504711	Intermediate Patrol Response	2
10504706	Emergency Vehicle Response	2
10504921	Physical Fitness Phase 2	1
10504712	Advanced Tactics 1	2
10801198	Speech	3
10801196	Oral/Interpersonal Communications	3
		14
Term 4		
10504713	Advanced Tactics 2	2
10504918	Advanced Investigations	5
10504714	Special Response Tactics	1
10504709	Traffic Response	3
10504171	Advanced Patrol Techniques	3
10504708	Physical Fitness Phase 3	1
10504195	Law Enforcement Capstone	2
		17
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

ADVANCED INVESTIGATIONS...instructs students in applying the skills from the Phase III topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Moral Reasoning and Professional Responsibility, Fair and Impartial Policing, Victims, Sexual Assault, Child Maltreatment, Interrogations, Physical Evidence Collection, Testifying in Court, Juvenile Law, Hazardous Materials, Domestic, and DOJ Integration Exercises. PREREQUISITE: 10504917 Intermediate Investigations

ADVANCED PATROL TECHNIQUES...provides the learner with the specialized knowledge and skills to perform a Pursuit Intervention Technique (PIT) and conduct modified high risk contacts. Additionally, learners will incorporate multiple previously learned traffic concepts into scenario based applications, and learn a variety of restraint and transport procedures. PREREQUISITE: 10504706 Emergency Vehicle Response

ADVANCED TACTICS 1...teaches and applies the skills from the phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy: Firearms 2. PREREQUISITE: 10504916 Basic Tactics

ADVANCED TACTICS 2...teaches and applies the skills from the phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy: Defence and Arrest Tactics (DAAT). PREREQUISITE: 10504917 Intermediate Investigation

BASIC INVESTIGATIONS...teaches and applies the skills from the Phase 1 topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Constitutional Law, Crimes, Interviews, and Report Writing. Student learning will occur through lecture, on campus lab activities, and the Department of Justice 720 Academy Integration Exercises. CONDITION: 105046 Criminal Justice Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy program requirements met

BASIC PATROL RESPONSE...instructs students through classroom lecture, on campus lab and Wisconsin Department of Justice Integration activities. Students will learn and apply skills addressed in the following Department of Justice 720 academy Phase I topics: Basic Response(RESPOND), TraCS, Traffic Law Enforcement, and First Aid/ CPR/ AED.

BASIC TACTICS...instructs students in the skills from Phase I topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Defense and Arrest Tactics, Fundamentals of Firearms, Vehicle Contacts, and Officer Wellness. Student learning will occur through: lecture, on campus lab activities, and the Department of Justice 720 Academy Integration Exercises. CONDITION: 105046 Criminal Justice Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy

COLLEGE MATHEMATICS...is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic and algebra; 2) geometry and trigonometry; and 3) probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent

EMERGENCY VEHICLE RESPONSE...teaches and applies skills from the Phase 2 topics outlined in the WI Dept of Justice 720 Academy. Topics include: Emergency Vehicle Operations and Control (EVOC) and Vehicle Contacts 2. Student learning will occur through lecture, on campus lab activities, and WI Department of Justice 720 Academy Integration Exercises. PREREQUISITE: 10504916 or 10504702 Basic Tactics

INTERMEDIATE INVESTIGATION...instructs students in the skills from the Phase II topics outlined in the WI Department of Justice 720 Academy. Topics include: Constitutional Law II and Evidence Collection. Student learning will occur through lecture and the Wisconsin Department of Justice 720 Academy Integration Exercises. PREREQUISITE: 10504703 Basic Investigations

INTERMEDIATE PATROL RESPONSE...teaches and applies the skills from the phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy: Crisis Management, Professional Communications part 2, and Integration Exercise. PREREQUISITE: 10504915 Basic Patrol Response

INTRODUCTION TO AMERICAN GOVERNMENT...introduces American political processes and institutions. It focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. It explores the role of the media, interest groups, political parties and public opinion in the political process. It also explores the role of state and national government in our federal system. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO CRIMINAL JUSTICE...focuses on the following phase 1 topics as addressed in the Wisconsin Department of Justice Academy 720 curriculum framework: Academy Orientation, Fundamentals of Criminal Justice, Ethics, Cultural Competency, Agency Policy, Professional Communications, Radio Procedures, Critical Thinking, and Integration Exercises to apply learning. PREREQUISITE: 10831103 Intro to College Writing or test or waiver equivalency and 10838105 Intro to Reading Skills or test or waiver equivalency and CONDITION: 105046 Criminal Justice Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy program requirements met

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO PUBLIC SAFETY...gives the student a working knowledge of Emergency Management, Public Safety Occupations and the Incident Command System.

LAW ENFORCEMENT CAPSTONE...instructs students how to complete practice scenarios for Phase III Wisconsin Department of Justice 720 Academy testing. Additionally, the Phase III practical testing will occur. COREQUISITE: 10504709 Traffic Response and 10504918 Advanced Investigation

LAW ENFORCEMENT CAREER DEVELOPMENT...provides an in-depth study of the hiring process commonly used by law enforcement agencies. It also focuses on the skills that are essential to obtain and maintain employment as a police officer and prepares the student for future interviews. In addition, the course provides meaningful information about career options in the Criminal Justice field as well as options within the law enforcement field itself. CONDITION: 105046 Criminal Justice-Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy program requirements met

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PHYSICAL FITNESS PHASE 1...applies the physical fitness skills required by the Wisconsin Department of Justice 720 academy in this phase 1 course. Students will apply learning in an instructor facilitated lab with on and off campus physical fitness activities. CONDITION: 105046 Criminal Justice Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy

PHYSICAL FITNESS PHASE 2...applies the physical fitness skills required by the Wisconsin Department of Justice 720 academy in this phase 2 course. Students will apply learning in an instructor facilitated lab with on campus physical fitness activities. PREREQUISITE: 10504920 Physical Fitness Phase 1

PHYSICAL FITNESS PHASE 3...applies the physical fitness skills required by the Wisconsin Department of Justice 720 Academy in this Phase 3 course. Students will apply learning in independent lab activities and an on campus physical fitness test/assessment. PREREQUISITE: 10504705 Advanced Tactics or 10504921 Physical Fitness Phase 2

PROFESSIONAL COMMUNICATION IN PUBLIC SAFETY...provides the learner with the fundamentals of verbal and nonverbal communications for Public Safety professions. Students will harness the skills to prepare effective field notes, prepare various uniform report forms, organize information in reports, write narratives, and analyze reports for required components.

PUBLIC SAFETY FITNESS...gives the student a basic understanding of fitness for a career in Public Safety occupations.

SPECIAL RESPONSE TACTICS...will teach the students, casualty care, tactics related to approaching, controlling, and intervening in unknown-risk and high-risk situations. PREREQUISITE: 10504711 Intermediate Patrol Response

SPEECH...explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

TRAFFIC RESPONSE...teaches and applies the skills from the Phase 3 topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Traffic Law Enforcement - Core and Radar, Traffic Crash Investigations and Incident Management, and Operating While Intoxicated (OWI) and Standard Field Sobriety Testing (SFST), and Crimes. Student learning will occur through lecture and on campus lab activities. PREREQUISITE: 10504706 Emergency Vehicle Response

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-504-6
Associate Degree in Applied Science
ABOUT THE PROGRAM

To serve and protect. These words define the commitment of law enforcement personnel. If you're a law-abiding individual who values honesty, order, detail, and you possess the desire and ability to work with and assist people in a variety of situations, you may want to consider dedicating yourself to an ever-changing career in law enforcement.

PROGRAM OUTCOMES

- Think critically.
- Manage emergencies.
- Communicate effectively.
- Demonstrate professionalism.
- Interact with others.
- Demonstrate tactical skills.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
 - Complete background check and \$20 processing fee. (No felony arrest or domestic violence convictions)
 - Complete the online Student Success Questionnaire.
 - Complete Firearms User Background Disclosure form.
 - Submit US citizenship status.
 - Complete DMI (District Mutual Insurance) form.
 - Complete Technical Standards form.
 - Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.
- *Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

LTC's Criminal Justice–Law Enforcement program is approved by the Wisconsin Department of Justice, Training and Standards Bureau. The Wisconsin Department of Justice reserves the right to make changes to the Recruit Academy embedded within this program, which may necessitate curriculum changes.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10801195	Written Communication	3
10809198	Introduction to Psychology	3
10504118	Intro to Public Safety	2
		8
Term 2 (Spring 2022)		
10504108	Professional Communications in Public Safety	1
10801196	Oral/Interpersonal Communications	3
10809122	Introduction to American Government OR 10809166 Introduction to Ethics: Theory & Application	3
		7
Term 3 (Fall 2022)		
10804107	College Mathematics	3
10504170	Public Safety Fitness	1
10801198	Speech	3
10504910	Law Enforcement Career Development	2
		9
Term 4 (Spring 2023)		
10504700	Introduction to Criminal Justice	3
10504915	Basic Patrol Response	2
10504916	Basic Tactics	2
10504703	Basic Investigations	3
10504920	Physical Fitness Phase 1	1
		11
Term 5 (Summer 2023)		
10504711	Intermediate Patrol Response	2
10504706	Emergency Vehicle Response	2
10504917	Intermediate Investigations	1
10504712	Advanced Tactics 1	2
10504921	Physical Fitness Phase 2	1
		8
Term 6 (Fall 2023)		
10504713	Advanced Tactics 2	2
10504714	Special Response Tactics	1
10504171	Advanced Patrol Techniques	3
10504708	Physical Fitness Phase 3	1
10504709	Traffic Response	3
10504918	Advanced Investigations	5
10504195	Law Enforcement Capstone	2
		17
		TOTAL 60

ADVANCED INVESTIGATIONS...instructs students in applying the skills from the Phase III topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Moral Reasoning and Professional Responsibility, Fair and Impartial Policing, Victims, Sexual Assault, Child Maltreatment, Interrogations, Physical Evidence Collection, Testifying in Court, Juvenile Law, Hazardous Materials, Domestic, and DOJ Integration Exercises. PREREQUISITE: 10504917 Intermediate Investigations

ADVANCED PATROL TECHNIQUES...provides the learner with the specialized knowledge and skills to perform a Pursuit Intervention Technique (PIT) and conduct modified high risk contacts. Additionally, learners will incorporate multiple previously learned traffic concepts into scenario based applications, and learn a variety of restraint and transport procedures. PREREQUISITE: 10504706 Emergency Vehicle Response

ADVANCED TACTICS 1...teaches and applies the skills from the phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy: Firearms 2. PREREQUISITE: 10504916 Basic Tactics

ADVANCED TACTICS 2...teaches and applies the skills from the phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy: Defence and Arrest Tactics (DAAT). PREREQUISITE: 10504917 Intermediate Investigation

BASIC INVESTIGATIONS...teaches and applies the skills from the Phase 1 topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Constitutional Law, Crimes, Interviews, and Report Writing. Student learning will occur through lecture, on campus lab activities, and the Department of Justice 720 Academy Integration Exercises. CONDITION: 105046 Criminal Justice Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy program requirements met

BASIC PATROL RESPONSE...instructs students through classroom lecture, on campus lab and Wisconsin Department of Justice Integration activities. Students will learn and apply skills addressed in the following Department of Justice 720 academy Phase I topics: Basic Response(RESPOND), TraCS, Traffic Law Enforcement, and First Aid/ CPR/ AED.

BASIC TACTICS...instructs students in the skills from Phase I topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Defense and Arrest Tactics, Fundamentals of Firearms, Vehicle Contacts, and Officer Wellness. Student learning will occur through: lecture, on campus lab activities, and the Department of Justice 720 Academy Integration Exercises. CONDITION: 105046 Criminal Justice Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy

COLLEGE MATHEMATICS...is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic and algebra; 2) geometry and trigonometry; and 3) probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent

EMERGENCY VEHICLE RESPONSE...teaches and applies skills from the Phase 2 topics outlined in the WI Dept of Justice 720 Academy. Topics include: Emergency Vehicle Operations and Control (EVOC) and Vehicle Contacts 2. Student learning will occur through lecture, on campus lab activities, and WI Department of Justice 720 Academy Integration Exercises. PREREQUISITE: 10504916 or 10504702 Basic Tactics

INTERMEDIATE INVESTIGATION...instructs students in the skills from the Phase II topics outlined in the WI Department of Justice 720 Academy. Topics include: Constitutional Law II and Evidence Collection. Student learning will occur through lecture and the Wisconsin Department of Justice 720 Academy Integration Exercises. PREREQUISITE: 10504703 Basic Investigations

INTERMEDIATE PATROL RESPONSE...teaches and applies the skills from the phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy: Crisis Management, Professional Communications part 2, and Integration Exercise. PREREQUISITE: 10504915 Basic Patrol Response

INTRODUCTION TO AMERICAN GOVERNMENT...introduces American political processes and institutions. It focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. It explores the role of the media, interest groups, political parties and public opinion in the political process. It also explores the role of state and national government in our federal system. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO CRIMINAL JUSTICE...focuses on the following phase 1 topics as addressed in the Wisconsin Department of Justice Academy 720 curriculum framework: Academy Orientation, Fundamentals of Criminal Justice, Ethics, Cultural Competency, Agency Policy, Professional Communications, Radio Procedures, Critical Thinking, and Integration Exercises to apply learning. PREREQUISITE: 10831103 Intro to College Writing or test or waiver equivalency and 10838105 Intro to Reading Skills or test or waiver equivalency and CONDITION: 105046 Criminal Justice Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy program requirements met

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO PUBLIC SAFETY...gives the student a working knowledge of Emergency Management, Public Safety Occupations and the Incident Command System.

LAW ENFORCEMENT CAPSTONE...instructs students how to complete practice scenarios for Phase III Wisconsin Department of Justice 720 Academy testing. Additionally, the Phase III practical testing will occur. COREQUISITE: 10504709 Traffic Response and 10504918 Advanced Investigation

LAW ENFORCEMENT CAREER DEVELOPMENT...provides an in-depth study of the hiring process commonly used by law enforcement agencies. It also focuses on the skills that are essential to obtain and maintain employment as a police officer and prepares the student for future interviews. In addition, the course provides meaningful information about career options in the Criminal Justice field as well as options within the law enforcement field itself. CONDITION: 105046 Criminal Justice-Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy program requirements met

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PHYSICAL FITNESS PHASE 1...applies the physical fitness skills required by the Wisconsin Department of Justice 720 academy in this phase 1 course. Students will apply learning in an instructor facilitated lab with on and off campus physical fitness activities. CONDITION: 105046 Criminal Justice Law Enforcement 2 or 315047 Criminal Justice 720 Embedded Academy

PHYSICAL FITNESS PHASE 2...applies the physical fitness skills required by the Wisconsin Department of Justice 720 academy in this phase 2 course. Students will apply learning in an instructor facilitated lab with on campus physical fitness activities. PREREQUISITE: 10504920 Physical Fitness Phase 1

PHYSICAL FITNESS PHASE 3...applies the physical fitness skills required by the Wisconsin Department of Justice 720 Academy in this Phase 3 course. Students will apply learning in independent lab activities and an on campus physical fitness test/assessment. PREREQUISITE: 10504705 Advanced Tactics or 10504921 Physical Fitness Phase 2

PROFESSIONAL COMMUNICATION IN PUBLIC SAFETY...provides the learner with the fundamentals of verbal and nonverbal communications for Public Safety professions. Students will harness the skills to prepare effective field notes, prepare various uniform report forms, organize information in reports, write narratives, and analyze reports for required components.

PUBLIC SAFETY FITNESS...gives the student a basic understanding of fitness for a career in Public Safety occupations.

SPECIAL RESPONSE TACTICS...will teach the students, casualty care, tactics related to approaching, controlling, and intervening in unknown-risk and high-risk situations. PREREQUISITE: 10504711 Intermediate Patrol Response

SPEECH...explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

TRAFFIC RESPONSE...teaches and applies the skills from the Phase 3 topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Traffic Law Enforcement - Core and Radar, Traffic Crash Investigations and Incident Management, and Operating While Intoxicated (OWI) and Standard Field Sobriety Testing (SFST), and Crimes. Student learning will occur through lecture and on campus lab activities. PREREQUISITE: 10504706 Emergency Vehicle Response

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

The Culinary and Baking Basics Technical Diploma provides an introduction to the growing Baking industry and prepares the learner for an entry-level position in the baking and food service industry. Students will learn the principles and techniques used in the preparation of high-quality baked goods and pastries, maintain sanitation standards and work with diverse food inventories.

PROGRAM OUTCOMES

- Apply principles of safety and sanitation in food service operations.
- Apply principles of nutrition.
- Demonstrate culinary skills.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10316101	Product Identification and Purchasing	2
10316102	Skills Development	3
10316104	Introduction to Baking and Pastry	3
10109112	Sanitation	1

TOTAL 9

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

INTRODUCTION TO BAKING AND PASTRY...introduces learners to the principles and techniques used in the preparation of high-quality baked goods and pastries. Students develop skills in breads, muffins, biscuits, custards, pies, cakes, pastries and specialized desserts. Skills include creaming, blending, meringues, straight dough, custards and frozen desserts. Safety, sanitation and cost control concepts are applied.

PRODUCT IDENTIFICATION AND PURCHASING...through identification, the study of origins and seasonality, discussion of quality, use, safe handling and fabrication, learners will explore vegetables, seafood, meats, fruits, herbs, spices, oils, vinegar and the nature of taste and flavor. The USDA grading system and butchery concepts are included. Safety, sanitation and cost control concepts are applied.

SANITATION FOR FOOD SERVICE...provides face to face food safety training, testing and materials to food service managers. The Serv Safe Manager certification test is included and a passing score earns the Serv Safe Food Protection Manager Certification.

SKILLS DEVELOPMENT...explores the advanced professional kitchen, covering soups, sauces and cooking methods. Content includes stock preparation, reduction techniques and a wide variety of classic soups, in addition to contemporary sauce preparation, the 5 Mother Sauces and their many derivatives. Advanced cooking methods are applied to batch and single entree preparation. Styles of plating are explored. **CONDITION:** 103161 Culinary Arts or 313161 Culinary Technical Diploma or 303162 Culinary and Baking Basics Technical Diploma program requirements met

Program Number 10-316-1
Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

If you are creative, enjoy the constantly evolving food service industry, work well with people, and have a love of food, LTC's Culinary Arts Program may be the best place to launch your career. Graduates of the program become chefs, independent restaurateurs, bakers or pastry chefs, sales staff for the food industry, food service managers, and corporate chefs. The program is offered at our state-of-the-art culinary and baking labs on the Cleveland campus. Students learn in a hands-on environment with small faculty-to-student ratios. The program is rich with practical experience in American regional and international cuisines. The program requires day, evening, and some Saturday hours. LTC's Culinary Arts program is accredited by the Accrediting Commission of the American Culinary Federation Education Foundation. Upon graduation, our Associate Degree graduates earn their Certified Culinarian (CC) professional credential through the American Culinary Federation Education Foundation.

PROGRAM OUTCOMES

- Apply principles of safety and sanitation in food service operations.
- Apply principles of nutrition.
- Demonstrate culinary skills.
- Manage food service operations.
- Plan menus.
- Analyze food service financial information.
- Relate food service operations to sustainability.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10109112	Sanitation for Food Service	1
10109108	Dining Room and Beverage Service	2
10316101	Product Identification and Purchasing	2
10316102	Skills Development	3
10316104	Introduction to Baking and Pastry	3
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
		14
Term 2		
10316107	Introduction to Stocks, Soups and Sauces	2
10316110	Cooking Methods	3
10316111	Garde Manger	2
10316116	Introduction to Restaurant Operations	2
10316117	Advanced Patisserie and Desserts	3
10809172	Introduction to Diversity Studies OR 10809196 Introduction to Sociology	3
		15
Term 3		
10001115	Culinary Plants Fall	1
10109158	Hospitality Cost Controls	3
10316122	Classic and Contemporary French Cuisine	3
10316126	Advanced Restaurant Operations	2
10316138	Culinary Leadership	3
10806112	Principles of Sustainability OR 10804123 Math with Business Applications	3
		15
Term 4		
10001116	Culinary Plants - Spring	1
10316121	Advanced Garde Manger and Catering	3
10316134	Culinary Internship	2
10316131	Global Cuisine	3
10316136	Nutrition	1
10801195	Written Communications	3
10809198	Introduction to Psychology	3
		16
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ADVANCED GARDE MANGER AND CATERING...covers executing finer techniques in smaller quantities, to allow learners to explore Charcuterie items including sausages, cured and smoked meats. Compound salads, terrines, pates, canapés, and vegetable and fruit displays are covered. Presentation techniques are emphasized including ice sculpting. Safety, sanitation and cost control concepts are applied. COREQUISITE: 10316126 Advanced Restaurant Operations

ADVANCED PATISSERIE AND DESSERTS...introduces learners to new styles of pastries and desserts, per assignments and in group projects for our restaurant menu and catering events. Content will include production, preparation, plating, garnishing and display of a variety of desserts; all in conjunction with other culinary courses. Skills include buffet and plate composition, various decorating techniques and menu writing. Safety, sanitation and math concepts are applied. PREREQUISITE: 10316104 Intro to Baking

ADVANCED RESTAURANT OPERATIONS...reinforces knowledge and skills learned in Restaurant 1 to begin building on that knowledge. Various French Cuisine, Leadership and Menu Planning concepts are explored and reinforced. PREREQUISITE: 10316115 Intro to Restaurant Operations

CLASSIC AND CONTEMPORARY FRENCH CUISINE...is a more advanced course, including technique, cooking methods, French sauces, line cooking, plating, and how the practice of those skills finds relevance in the professional restaurant kitchen. Students explore the history, culture, and techniques of specific regions in France and many countries influenced by French cooking. Professional recipes are developed, field tested and applied. PREREQUISITE: 10316116 Intro to Restaurant Operations or 10316114 Culinary Practicum 2

COOKING METHODS...explores the advanced professional kitchen, covering soups, sauces and cooking methods. Content includes stock preparation, reduction techniques and a wide variety of classic soups, in addition to contemporary sauce preparation, the 5 Mother Sauces and their many derivatives. Advanced cooking methods are applied to batch and single entree preparation. Styles of plating are explored. PREREQUISITES: 10109112 Sanitation for Food Service and 10316102 Skills Development

CULINARY INTERNSHIP...applies program objectives and competencies under supervision in culinary settings, preparing foods that are cooked to order. Activities may include day, evening, and weekend requirements. Students enhance the learning experience through journal writing and other written assignments. A final program portfolio is required per rubric. COREQUISITES: 10316121 Advanced Garde Manager and Catering and 10316131 Global Cuisine and instructor verification of eligibility

CULINARY LEADERSHIP...includes review and application of industry-specific skills needed to master the effective management of a profitable and efficient culinary operation. Includes recipe and product development, menu scripting, time management, principles of leadership, staff motivation, developing a community of excellence, staff scheduling, writing a business plan, developing standard operating procedures, resume and portfolio development, professional development planning, interviewing and public speaking skills. COREQUISITE: 10316126 Advanced Restaurant Operations

CULINARY PLANTS - FALL...introduces students to fall culinary plant production through the maintenance of summer vegetables in the field and raised beds, and through fall plantings. Garden cleanup, soil enhancing practices, and hoop house production will be explored; planting of winter crops will be conducted. Season-extension techniques, vegetable-storage techniques, and harvesting crops for winter forcing will be practiced with familiar and exotic crops.

CULINARY PLANTS - SPRING...introduces students to winter vegetable production, planning for the summer season, and spring work in the greenhouse, garden, and hoop house. Students will produce crops for harvest in the heated greenhouse, force winter vegetables, develop a planting plan, harvest vegetables from the unheated hoop house, and learn about different production methods (organic vs sustainable vs conventional).

DINING ROOM AND BEVERAGE SERVICE...introduces learners to dining room and beverage service including wine, spirits, beer, mixology, and non-alcoholic drinks. Helps learners refine their customer service and meal delivery skills through the study and application of proper, customer-oriented dining room service environments including etiquette, dining room safety, set-up, American and French table service, and menu knowledge skills. Concepts include histories of table service, psychology of the customer, and service sequence.

GARDE MANGER...includes basic concepts of timing, seasoning and fine garnishing. Focus is placed upon the preparation and plating of appetizers and hors d'oeuvre, salads, vegetables, fruits, dressings, garnishing and displays. The learner will participate in a variety of class projects and catering assignments. Teamwork, communication skills, sanitation, safety, cost control, professionalism are emphasized. PREREQUISITE: 10316101 Product ID and Purchasing

GLOBAL CUISINE...applies skills and methods to production, seasoning, cooking techniques, plate presentation and speed while exploring Central and Eastern Europe, Mediterranean, and Italian cuisines, along with cuisines of the Orient, the Pacific Rim, Latin America, Mexico, India, Caribbean Islands, and Sub-Saharan Africa. Student creativity is emphasized along with all ACF standards of professionalism. Safety, sanitation, and cost control concepts are applied. PREREQUISITE: 10316125 Culinary Practicum 3 or 10316126 Advanced Restaurant Operations

HOSPITALITY COST CONTROLS...applies concepts of controlling costs with emphasis on cost-to-sales relationship. Students calculate the costs of goods, selling price and relative percentages, forecast sales, conduct yield analysis and calculate break-even periods.

INTRODUCTION TO BAKING AND PASTRY...introduces learners to the principles and techniques used in the preparation of high-quality baked goods and pastries. Students develop skills in breads, muffins, biscuits, custards, pies, cakes, pastries and specialized desserts. Skills include creaming, blending, meringues, straight dough, custards and frozen desserts. Safety, sanitation and cost control concepts are applied.

INTRODUCTION TO DIVERSITY STUDIES...introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. COREQ: 10838105 Intro Rdg & Study Skills or Rdg placement assmnt equiv

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO RESTAURANT OPERATIONS...exposes students to basic food preparation, emphasized by using fundamental concepts and developing skills and techniques used in professional cookery. Various Cooking Methods, Garde Manger and Patisserie concepts are explored and reinforced.

INTRODUCTION TO STOCKS, SOUPS, AND SAUCES...continues with fundamental principles of classic stocks, soups, and hot and cold sauces. The traditional mother and small sauces are covered. Stabilizing and thickening methods include roux, beurre manie, arrowroot, and puree, reduction, and emulsion techniques. Students practice in the use of tools, utensils, and equipment emphasizing safety and sanitation. CONDITION: 103161 or 103161Z Culinary Arts or 313161 or 313161Z Culinary Technical Diploma program requirements met and PREREQUISITE: 10316102 Skill Development

NUTRITION...examines basic principles of nutrition and explores the nutritional needs for various populations including children, teens, the aging, vegetarians, sports enthusiasts, and those with conditions such as obesity, heart disease, diabetes, gastrointestinal disorders, hypertension and food allergies. Recipe modification, food quality and menu planning for these populations is a focus. Safety, sanitation and cost control concepts are applied. This course includes a service learning component.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PRINCIPLES OF SUSTAINABILITY...prepares students to develop sustainable literacy, analyze interconnections among physical and biological sciences and environmental systems, summarize effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal/recycling in the U.S., and analyze approaches used by your community. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PRODUCT IDENTIFICATION AND PURCHASING...through identification, the study of origins and seasonality, discussion of quality, use, safe handling and fabrication, learners will explore vegetables, seafood, meats, fruits, herbs, spices, oils, vinegar and the nature of taste and flavor. The USDA grading system and butchery concepts are included. Safety, sanitation and cost control concepts are applied.

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SKILLS DEVELOPMENT...explores the advanced professional kitchen, covering soups, sauces and cooking methods. Content includes stock preparation, reduction techniques and a wide variety of classic soups, in addition to contemporary sauce preparation, the 5 Mother Sauces and their many derivatives. Advanced cooking methods are applied to batch and single entree preparation. Styles of plating are explored. CONDITION: 103161 Culinary Arts or 313161 Culinary Technical Diploma or 303162 Culinary and Baking Basics Technical Diploma program requirements met

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

**Program Number 31-316-1
 Technical Diploma • Four Terms**
ABOUT THE PROGRAM

If you are creative, enjoy the constantly evolving food service industry, work well with people, and have a love of food, LTC's Culinary Arts Program may be the best place to launch your career. Graduates of the program become chefs, independent restaurateurs, bakers or pastry chefs, sales staff for the food industry, food service managers, and corporate chefs. The program is offered at our state-of-the-art culinary and baking labs on the Cleveland campus. Students learn in a hands-on environment with small faculty-to-student ratios. The program is rich with practical experience in American regional and international cuisines. The program requires day, evening, and some Saturday hours. LTC's Culinary Arts program is accredited by the Accrediting Commission of the American Culinary Federation Education Foundation. Upon graduation, our Associate Degree graduates earn their Certified Culinarian (CC) professional credential through the American Culinary Federation Education Foundation.

PROGRAM OUTCOMES

- Apply principles of safety and sanitation in food service operations.
- Apply principles of nutrition.
- Demonstrate culinary skills.
- Manage food service operations.
- Plan menus.
- Analyze food service financial information.
- Relate food service operations to sustainability.

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- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

RELATED PROGRAMS

- Culinary Arts Associate Degree

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10109108	Dining Room and Beverage Service	2
10109112	Sanitation for Food Service	1
10316101	Product Identification and Purchasing	2
10316102	Skill Development	3
10316104	Introduction to Baking and Pastry	3
10801196	Oral/Interpersonal Communication OR	3
	10801198 Speech	
		14
Term 2		
10316107	Introduction to Stocks, Soups and Sauces	2
10316110	Cooking Methods	3
10316111	Garde Manger	2
10316116	Introduction to Restaurant Operations	2
10316117	Advanced Patisserie and Desserts	3
		12
Term 3		
10001115	Culinary Plants - Fall	1
10109158	Hospitality Cost Controls	3
10316122	Classic and Contemporary French Cuisine	3
10316126	Advanced Restaurant Operations	2
10316138	Culinary Leadership	3
		12
Term 4		
10001116	Culinary Plants - Spring	1
10316121	Advanced Garde Manger and Catering	3
10316134	Culinary Internship	2
10316131	Global Cuisine	3
10316136	Nutrition	1
		10

TOTAL 48

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ADVANCED RESTAURANT OPERATIONS...reinforces knowledge and skills learned in Restaurant 1 to begin building on that knowledge. Various French Cuisine, Leadership and Menu Planning concepts are explored and reinforced. PREREQUISITE: 10316115 Intro to Restaurant Operations

CLASSIC AND CONTEMPORARY FRENCH CUISINE...is a more advanced course, including technique, cooking methods, French sauces, line cooking, plating, and how the practice of those skills finds relevance in the professional restaurant kitchen. Students explore the history, culture, and techniques of specific regions in France and many countries influenced by French cooking. Professional recipes are developed, field tested and applied. PREREQUISITE: 10316116 Intro to Restaurant Operations or 10316114 Culinary Practicum 2

COOKING METHODS...explores the advanced professional kitchen, covering soups, sauces and cooking methods. Content includes stock preparation, reduction techniques and a wide variety of classic soups, in addition to contemporary sauce preparation, the 5 Mother Sauces and their many derivatives. Advanced cooking methods are applied to batch and single entree preparation. Styles of plating are explored. PREREQUISITES: 10109112 Sanitation for Food Service and 10316102 Skills Development

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DINING ROOM AND BEVERAGE SERVICE...introduces learners to dining room and beverage service including wine, spirits, beer, mixology, and non-alcoholic drinks. Helps learners refine their customer service and meal delivery skills through the study and application of proper, customer-oriented dining room service environments including etiquette, dining room safety, set-up, American and French table service, and menu knowledge skills. Concepts include histories of table service, psychology of the customer, and service sequence.

GARDE MANGER...includes basic concepts of timing, seasoning and fine garnishing. Focus is placed upon the preparation and plating of appetizers and hors d'oeuvre, salads, vegetables, fruits, dressings, garnishing and displays. The learner will participate in a variety of class projects and catering assignments. Teamwork, communication skills, sanitation, safety, cost control, professionalism are emphasized. PREREQUISITE: 10316101 Product ID and Purchasing

GLOBAL CUISINE...applies skills and methods to production, seasoning, cooking techniques, plate presentation and speed while exploring Central and Eastern Europe, Mediterranean, and Italian cuisines, along with cuisines of the Orient, the Pacific Rim, Latin America, Mexico, India, Caribbean Islands, and Sub-Saharan Africa. Student creativity is emphasized along with all ACF standards of professionalism. Safety, sanitation, and cost control concepts are applied. PREREQUISITE: 10316125 Culinary Practicum 3 or 10316126 Advanced Restaurant Operations

HOSPITALITY COST CONTROLS...applies concepts of controlling costs with emphasis on cost-to-sales relationship. Students calculate the costs of goods, selling price and relative percentages, forecast sales, conduct yield analysis and calculate break-even periods.

INTRODUCTION TO BAKING AND PASTRY...introduces learners to the principles and techniques used in the preparation of high-quality baked goods and pastries. Students develop skills in breads, muffins, biscuits, custards, pies, cakes, pastries and specialized desserts. Skills include creaming, blending, meringues, straight dough, custards and frozen desserts. Safety, sanitation and cost control concepts are applied.

INTRODUCTION TO RESTAURANT OPERATIONS...exposes students to basic food preparation, emphasized by using fundamental concepts and developing skills and techniques used in professional cookery. Various Cooking Methods, Garde Manger and Patisserie concepts are explored and reinforced.

INTRODUCTION TO STOCKS, SOUPS, AND SAUCES...continues with fundamental principles of classic stocks, soups, and hot and cold sauces. The traditional mother and small sauces are covered. Stabilizing and thickening methods include roux, beurre manie, arrowroot, and puree, reduction, and emulsion techniques. Students practice in the use of tools, utensils, and equipment emphasizing safety and sanitation. CONDITION: 103161 or 103161Z Culinary Arts or 313161 or 313161Z Culinary Technical Diploma program requirements met and PREREQUISITE: 10316102 Skill Development

NUTRITION...examines basic principles of nutrition and explores the nutritional needs for various populations including children, teens, the aging, vegetarians, sports enthusiasts, and those with conditions such as obesity, heart disease, diabetes, gastrointestinal disorders, hypertension and food allergies. Recipe modification, food quality and menu planning for these populations is a focus. Safety, sanitation and cost control concepts are applied. This course includes a service learning component.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PRODUCT IDENTIFICATION AND PURCHASING...through identification, the study of origins and seasonality, discussion of quality, use, safe handling and fabrication, learners will explore vegetables, seafood, meats, fruits, herbs, spices, oils, vinegar and the nature of taste and flavor. The USDA grading system and butchery concepts are included. Safety, sanitation and cost control concepts are applied.

SANITATION FOR FOOD SERVICE...provides face to face food safety training, testing and materials to food service managers. The Serv Safe Manager certification test is included and a passing score earns the Serv Safe Food Protection Manager Certification.

SKILLS DEVELOPMENT...explores the advanced professional kitchen, covering soups, sauces and cooking methods. Content includes stock preparation, reduction techniques and a wide variety of classic soups, in addition to contemporary sauce preparation, the 5 Mother Sauces and their many derivatives. Advanced cooking methods are applied to batch and single entree preparation. Styles of plating are explored. CONDITION: 103161 Culinary Arts or 313161 Culinary Technical Diploma or 303162 Culinary and Baking Basics Technical Diploma program requirements met

ABOUT THE PROGRAM

Of the 9,520 Wisconsin dairy farms, 96% are family-owned. The Dairy Business Management Individual Technical Studies (ITS) Associate Degree prepares individuals whose goal is to take over or manage a family dairy farm and to train those entering the dairy industry for the first time to become managers/owners. This program will expand on already learned hands-on skills and strengthen the business knowledge needed to be the manager/owner of a farm operation. The target audience for this ITS degree includes graduates of a dairy-related technical diploma and those currently employed as dairy workers who envision a transition to a dairy management related career.

PROGRAM OUTCOMES

- Manage herd nutrition.
- Manage herd reproduction.
- Manage herd health.
- Demonstrate farm and herd record management.
- Develop a business and transition plan.
- Apply economic and marketing strategies.
- Manage farm financials.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Complete On-Farm Placement and Release form.
- Ensure enrolled in or graduate of Dairy Herd Management program.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

To experience technology and demonstrations in industry, LTC and MPTC students are required to have transportation and participate in these lab activities throughout the year. Program students also have the opportunity to join PAS (Professional Agriculture Students) and participate in their competitions and activities. Terms 1 and 2 of this curriculum completes the Dairy Herd Management technical diploma. Terms 3 and 4 are available online, at LTC and are also available through simultaneous class videoconferencing using your computer.

If you have completed the Agribusiness Science & Technology degree and wish to pursue this degree, you have completed some Term 1 and 2 course equivalents. Please work with your counselor to apply these dual credits.

CONTACT

Alison Driscoll, Program Counselor
 920.693.1610 • alison.driscoll@gotoltc.edu

Catalog No.	Proposed Courses	Credit(s)
Term 1		
10091102	Dairy Cattle Management	3
10091103	Dairy Reproductive Management OR 10006124 Principles of Animal Breeding (3 cr) AND 10091135 Dairy Cattle AI Training (1 cr)	3
10091115	Nutrition Principles - Dairy	3
10091104	On-Farm Internship 1	1
10091117	Animal Records - Dairy	1
10804123	Math with Business Applications	3
		14
Term 2		
10091105	Dairy Feeding Management	3
10091106	Dairy Management Applications OR 10006141 Livestock Production Systems (3 cr) AND 10091119 Dairy Management Site Farm Experience (1 cr)	3
10091107	Dairy Employability and Management	3
10091108	Quality Milk Production	3
10091109	On-Farm Internship 2	1
10091113	Dairy Issues and Advocacy	1
		14
Term 3		
10006112	Farm Business Management	3
10006146	Precision Ag Technologies	3
10006135	Agriculture Business Accounting OR 10101155 Accounting for Professionals (3 cr)	3
10809196	Introduction to Sociology	3
10801196	Oral/Interpersonal Communication	3
		15
Term 4		
10006122	Principles of Crop Production	3
10006130	Ag Commodity Marketing	3
10006140	Legal Aspects of Agribusiness	3
10006128	Agribusiness Internship	2
10801195	Written Communications	3
10809198	Introduction to Psychology	3
		17
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2018-2019 rates.

AGRIBUSINESS INTERNSHIP...provides the student the opportunity to choose from a broad variety of occupational experiences in the agribusiness industry. Student will work with faculty to develop a plan and to identify, coordinate, and evaluate work-associated learning experiences as they relate to the major career focus of the student. PREREQUISITE: 10006112 Farm Business Management and COREQUISITES: 10006122 Principles of Crop Production, 10006126 Agribusiness Economics, 10006124 Principles of Animal Breeding or 10091103 Dairy Reproductive Management

AGRICULTURAL COMMODITY MARKETING...provides the student with the fundamentals of agricultural commodity marketing including risk management, futures market structure and function, futures commodity contract specification, as well as futures trading procedures and strategies including hedging and options. Students will engage in practice commodity marketing using a real world simulator and follow commodity markets and determine sources of variability affecting the futures prices. PREREQUISITE: 10006126 Agribusiness Economics or 10006135 Agribusiness Business Accounting

AGRICULTURE BUSINESS ACCOUNTING...provides the learner with a study of accounting systems and methods appropriate for farms and agricultural businesses including the application of basic information-recording skills to allow for the construction of financial statements and filing of income tax forms. Students will produce and analyze financial statements and apply managerial accounting concepts by utilizing relevant financial software. PREREQUISITES: 10006112 Farm Business Mng and COREQUISITES: 10804123 Math w/Business Apps and 10801196 Oral/Interpersonal Comm or CONDITION: 310011 Horticulture Tech enrollment requirements met

ANIMAL RECORDS - DAIRY...introduces learner to records management through hands-on applications including the set-up and use of computerized record-keeping software, completion of sample farm record problems utilizing computerized record-keeping systems, as well as the selection and implementation of various computerized record programs. Software tools, such as PCDART, CowManager, and DairyCOMP 305, will be utilized. COREQUISITE: 10091103 Dairy Reproductive Management

DAIRY CATTLE MANAGEMENT...introduces the student to herd health and preventative medicine through understanding cow behavior, signs of illness, metabolic disorders, infectious disease, vaccination programs, and herd records to develop and implement a herd-health protocol. Students will learn and use basic tools and equipment of herd health programs.

DAIRY EMPLOYABILITY AND MANAGEMENT...prepares students to be employees and/or managers on the dairy farm setting. Students will learn about setting goals to reach dairy industry benchmarks, and develop appropriate dairy farm management and conflict-resolution skills through the UWEX Employer of Choice training. Team-building activities, mock interviews, and job shadowing will develop skills necessary for successful employment. Students will gather and organize all pieces of their portfolio upon completion of the program.

DAIRY FEEDING MANAGEMENT...provides the student with proper harvesting and storage practices to ensure the best forage for the cow's diet. Students will learn diet specifications for each step of the cow's life cycle, ration formulations, developing feed inventories, and maximizing resource allocations. PREREQUISITE: 10091115 Nutrition Principles - Dairy or 10006144 Nutrition Principles

DAIRY ISSUES AND ADVOCACY...prepares students to be advocates for the dairy industry. With agriculture becoming more publicized and scrutinized every day, students will learn how to promote and apply these concepts within the industry. Students will learn the skills to talk and respond to dairy farm issues that the industry faces.

DAIRY MANAGEMENT APPLICATIONS...provides students with information to build protocols for dairy farm management. Students will learn about the proper environment, health protocols, and the care of cows in each part of their life cycle. DairyCare 365 and the F.A.R.M. program will also be utilized. One-on-one rotations to selected site farms allow students to learn and practice troubleshooting and problem-solving on the farm. COREQUISITE: 10091102 Dairy Cattle Management

DAIRY REPRODUCTIVE MANAGEMENT...prepares participants for the mating and breeding of the dairy herd. Topics include linear evaluation, selection indexes, anatomy, hormonal cycles, artificial insemination, estrus detection, activity monitors, and genomics. Live cattle for artificial insemination practices are featured.

FARM BUSINESS MANAGEMENT...provides learner with basic business management practices including the development of a business plan, establishment of short and long range goals, identification and implementation alternatives for reaching goals, and development of strategies to monitor progress. The importance of designing a business mission statement based on goals is emphasized.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

LEGAL ASPECTS OF AGRIBUSINESS...provides students with pertinent information of the legal liabilities and regulations of an agribusiness at the state and federal levels. Course content includes legal descriptions, contractual agreements, employee and consumer rights, insurance, debt collection, as well as bankruptcy and employment protection issues as regulated by DOL, OSHA and DWD. COREQUISITE: 10006130 Ag Commodity Marketing

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

NUTRITION PRINCIPLES - DAIRY...instructs students in utilizing basic nutrition skills to analyze rations and complete basic ration formulations. This course introduces the principles of nutrition as presented on a comparative species basis including characteristics, physiological functions, interrelationships, and deficiency symptoms as they pertain to carbohydrates, fats, proteins, mineral elements, and vitamins. COREQUISITE: 10804123 Math with Business Apps

ON-FARM INTERNSHIP 1...provides the student with the ability and skills to perform industry expectations as a dairy herdsman, including milking, feeding, calf care, scheduling, employer/employee communications, and general farm duties. Students work with their internship farm to complete the internship skills checklist. COREQUISITE: 10091115 Nutrition Principles-Dairy

ON-FARM INTERNSHIP 2...provides the student with enhanced skills, beyond the On-Farm Internship 1 course, to perform industry expectations as a dairy herdsman, including milking, feeding, calf care, scheduling, employer/employee communications, and general farm duties. Students work with their internship farm to complete the internship skills checklist. PREREQUISITE: 10091104 On-Farm Internship 1

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PRECISION AG TECHNOLOGIES...provides experiences to the student in agricultural precision technologies including bio-technologies, application industries, livestock equipment, precision farming, financial resource management, plant protection, sustainable agriculture, environmental impacts of agriculture, agricultural workforce, and agricultural production. To experience precision technology and demonstrations throughout the industry, students are required to drive or have appropriate transportation to attend labs.

PRINCIPLES OF CROP PRODUCTION...provides knowledge of crop and soil nutrient management, including use of both commercial fertilizers and manure. Course topics include purchase or lease options for land, agronomy consulting programs, tillage and conservation plans, soil nutrient plans, cropping plans, managing nutrient waste, crop harvest and storage and production records. PREREQUISITE: 10006116 Intro to Soil Science or 10091105 Dairy Feeding Management or 10001123 Site & Soil Analysis

QUALITY MILK PRODUCTION...introduces the student to the process of how milk is produced and how to harvest it for a maximum profit to the farmer, including the major principles of milk secretion, the anatomy and physiology of the udder, milk letdown, proper milking practices, mastitis, efficient milking systems, and how to properly milk cows as well as treat and prevent udder infections.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 31-091-1 Technical Diploma • Two Terms

ABOUT THE PROGRAM

If your goal is to become a successful dairy herdsman, employee, or owner, this program provides a foundation of knowledge and skills to manage dairy cattle and to navigate the ever-changing dairy industry. Students participate in hands-on learning with various dairy operations as they develop solid herdsman skills, proper management techniques, employability skills, and the ability to utilize technology to improve animal welfare and production. Courses focus on practical dairy applications, such as feeding, milk production, reproductive programs, animal records, communications, and employability.

PROGRAM OUTCOMES

- Manage herd nutrition.
- Manage herd reproduction.
- Manage herd health.
- Demonstrate farm and herd record management.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Each student will be assigned to a farm for supervised, on-the-job training. An internship agreement will be completed and signed by both the student and farm representative. Graduates of LTC's Dairy Herd Management program receive national AI certification. To experience technology and demonstrations in industry, students are required to have transportation and participate in these lab activities throughout the year. Program students also have the opportunity to join PAS (Professional Agriculture Students) Organization and participate in their competitions and activities.

If you would like an associate degree focusing on dairy business operations, the Dairy Business Management ITS program may be your choice. Graduates of this Dairy Herd Management technical diploma can attend an additional year of agribusiness classes to achieve this associate degree focusing on Dairy Business Management.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10091102	Dairy Cattle Management	3
10091103	Dairy Reproductive Management OR 10006124 Principles of Animal Breeding (3 cr) AND 10091135 Dairy Cattle AI Training (1 cr)	3
10091115	Nutrition Principles - Dairy	3
10091104	On-Farm Internship 1	1
10091117	Animal Records - Dairy	1
10804123	Math with Business Applications	3
		14

Term 2		
10091105	Dairy Feeding Management	3
10091106	Dairy Management Applications OR 10006141 Livestock Production Systems (3 cr) AND 10091119 Dairy Management Site Farm Exp (1 cr)	3
10091107	Dairy Employability and Management	3
10091108	Quality Milk Production	3
10091109	On-Farm Internship 2	1
10091113	Dairy Issues and Advocacy	1
		14

TOTAL 28

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

ANIMAL RECORDS - DAIRY...introduces learner to records management through hands-on applications including the set-up and use of computerized record-keeping software, completion of sample farm record problems utilizing computerized record-keeping systems, as well as the selection and implementation of various computerized record programs. Software tools, such as PCDART, CowManager, and DairyCOMP 305, will be utilized. COREQUISITE: 10091103 Dairy Reproductive Management

DAIRY CATTLE MANAGEMENT...introduces the student to herd health and preventative medicine through understanding cow behavior, signs of illness, metabolic disorders, infectious disease, vaccination programs, and herd records to develop and implement a herd-health protocol. Students will learn and use basic tools and equipment of herd health programs.

DAIRY EMPLOYABILITY AND MANAGEMENT...prepares students to be employees and/or managers on the dairy farm setting. Students will learn about setting goals to reach dairy industry benchmarks, and develop appropriate dairy farm management and conflict-resolution skills through the UWEX Employer of Choice training. Team-building activities, mock interviews, and job shadowing will develop skills necessary for successful employment. Students will gather and organize all pieces of their portfolio upon completion of the program.

DAIRY FEEDING MANAGEMENT...provides the student with proper harvesting and storage practices to ensure the best forage for the cow's diet. Students will learn diet specifications for each step of the cow's life cycle, ration formulations, developing feed inventories, and maximizing resource allocations. PREREQUISITE: 10091115 Nutrition Principles - Dairy or 10006144 Nutrition Principles

DAIRY ISSUES AND ADVOCACY...prepares students to be advocates for the dairy industry. With farming becoming more publicized and scrutinized every day, students will learn how to promote and apply these concepts within the industry. Students will learn the skills to talk and respond to dairy farm issues that the industry faces.

DAIRY MANAGEMENT APPLICATIONS...provides students with information to build protocols for dairy farm management. Students will learn about the proper environment, health protocols, and the care of cows in each part of their life cycle. DairyCare 365 and the F.A.R.M. program will also be utilized. One-on-one rotations to selected site farms allow students to learn and practice troubleshooting and problem-solving on the farm. COREQUISITE: 10091102 Dairy Cattle Management

DAIRY REPRODUCTIVE MANAGEMENT...prepares participants for the mating and breeding of the dairy herd. Topics include linear evaluation, selection indexes, anatomy, hormonal cycles, artificial insemination, estrus detection, activity monitors, and genomics. Live cattle for artificial insemination practices are featured.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

NUTRITION PRINCIPLES - DAIRY...instructs students in utilizing basic nutrition skills to analyze rations and complete basic ration formulations. This course introduces the principles of nutrition as presented on a comparative species basis including characteristics, physiological functions, interrelationships, and deficiency symptoms as they pertain to carbohydrates, fats, proteins, mineral elements, and vitamins. COREQUISITE: 10804123 Math with Business Apps

ON-FARM INTERNSHIP 1...provides the student with the ability and skills to perform industry expectations as a dairy herdsman, including milking, feeding, calf care, scheduling, employer/employee communications, and general farm duties. Students work with their internship farm to complete the internship skills checklist. COREQUISITE: 10091115 Nutrition Principles-Dairy

ON-FARM INTERNSHIP 2...provides the student with enhanced skills, beyond the On-Farm Internship 1 course, to perform industry expectations as a dairy herdsman, including milking, feeding, calf care, scheduling, employer/employee communications, and general farm duties. Students work with their internship farm to complete the internship skills checklist. PREREQUISITE: 10091104 On-Farm Internship 1

QUALITY MILK PRODUCTION...introduces the student to the process of how milk is produced and how to harvest it for a maximum profit to the farmer, including the major principles of milk secretion, the anatomy and physiology of the udder, milk letdown, proper milking practices, mastitis, efficient milking systems, and how to properly milk cows as well as treat and prevent udder infections.

Program Number 31-091-1
Technical Diploma
ABOUT THE PROGRAM

If your goal is to become a successful dairy herdsman, employee, or owner, this program provides a foundation of knowledge and skills to manage dairy cattle and to navigate the ever-changing dairy industry. Students participate in hands-on learning with various dairy operations as they develop solid herdsman skills, proper management techniques, employability skills, and the ability to utilize technology to improve animal welfare and production. Courses focus on practical dairy applications, such as feeding, milk production, reproductive programs, animal records, communications, and employability.

PROGRAM OUTCOMES

- Manage herd nutrition.
- Manage herd reproduction.
- Manage herd health.
- Manage herd/farm business.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Complete On-Farm Placement and Release form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Each student will be assigned to a farm for supervised, on-the-job training. An internship agreement will be completed and signed by both the student and farm representative. Graduates of LTC's Dairy Herd Management program receive national AI certification. To experience technology and demonstrations in industry, students are required to have transportation and participate in these lab activities throughout the year. Program students also have the opportunity to join PAS (Professional Agriculture Students) Organization and participate in their competitions and activities.

If you would like an associate degree focusing on dairy business operations, the Dairy Business Management ITS program may be your choice. Graduates of this Dairy Herd Management technical diploma can attend an additional year of agribusiness classes to achieve this associate degree focusing on Dairy Business Management.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10091102	Dairy Cattle Management	3
10091103	Dairy Reproductive Management OR 10006124 Principles of Animal Breeding (3 cr) AND 10091135 Dairy Cattle AI Training (1 cr)	3
10091117	Animal Records - Dairy	1
		7
Term 2 (Spring 2022)		
10091108	Quality Milk Production	3
10091106	Dairy Management Applications OR 10091102 Dairy Cattle Mgmt (3 cr) AND 10091119 Dairy Management Site Farm Exp (1 cr)	3
10091113	Dairy Issues and Advocacy	1
		7
Term 3 (Fall 2022)		
10091115	Nutrition Principles - Dairy	3
10091104	On-Farm Internship 1	1
10804123	Math with Business Applications	3
		7
Term 4 (Spring 2023)		
10091105	Dairy Feeding Management	3
10091107	Dairy Employability and Management	3
10091109	On-Farm Internship 2	1
		7

TOTAL 28

ANIMAL RECORDS - DAIRY...introduces learner to records management through hands-on applications including the set-up and use of computerized record-keeping software, completion of sample farm record problems utilizing computerized record-keeping systems, as well as the selection and implementation of various computerized record programs. Software tools, such as PCDART, CowManager, and DairyCOMP 305, will be utilized. COREQUISITE: 10091103 Dairy Reproductive Management

DAIRY CATTLE MANAGEMENT...introduces the student to herd health and preventative medicine through understanding cow behavior, signs of illness, metabolic disorders, infectious disease, vaccination programs, and herd records to develop and implement a herd-health protocol. Students will learn and use basic tools and equipment of herd health programs.

DAIRY EMPLOYABILITY AND MANAGEMENT...prepares students to be employees and/or managers on the dairy farm setting. Students will learn about setting goals to reach dairy industry benchmarks, and develop appropriate dairy farm management and conflict-resolution skills through the UWEX Employer of Choice training. Team-building activities, mock interviews, and job shadowing will develop skills necessary for successful employment. Students will gather and organize all pieces of their portfolio upon completion of the program.

DAIRY FEEDING MANAGEMENT...provides the student with proper harvesting and storage practices to ensure the best forage for the cow's diet. Students will learn diet specifications for each step of the cow's life cycle, ration formulations, developing feed inventories, and maximizing resource allocations. PREREQUISITE: 10091115 Nutrition Principles - Dairy or 10006144 Nutrition Principles

DAIRY ISSUES AND ADVOCACY...prepares students to be advocates for the dairy industry. With farming becoming more publicized and scrutinized every day, students will learn how to promote and apply these concepts within the industry. Students will learn the skills to talk and respond to dairy farm issues that the industry faces.

DAIRY MANAGEMENT APPLICATIONS...provides students with information to build protocols for dairy farm management. Students will learn about the proper environment, health protocols, and the care of cows in each part of their life cycle. DairyCare 365 and the F.A.R.M. program will also be utilized. One-on-one rotations to selected site farms allow students to learn and practice troubleshooting and problem-solving on the farm. COREQUISITE: 10091102 Dairy Cattle Management

DAIRY REPRODUCTIVE MANAGEMENT...prepares participants for the mating and breeding of the dairy herd. Topics include linear evaluation, selection indexes, anatomy, hormonal cycles, artificial insemination, estrus detection, activity monitors, and genomics. Live cattle for artificial insemination practices are featured.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

NUTRITION PRINCIPLES - DAIRY...instructs students in utilizing basic nutrition skills to analyze rations and complete basic ration formulations. This course introduces the principles of nutrition as presented on a comparative species basis including characteristics, physiological functions, interrelationships, and deficiency symptoms as they pertain to carbohydrates, fats, proteins, mineral elements, and vitamins. COREQUISITE: 10804123 Math with Business Apps

ON-FARM INTERNSHIP 1...provides the student with the ability and skills to perform industry expectations as a dairy herdsman, including milking, feeding, calf care, scheduling, employer/employee communications, and general farm duties. Students work with their internship farm to complete the internship skills checklist. COREQUISITE: 10091115 Nutrition Principles-Dairy

ON-FARM INTERNSHIP 2...provides the student with enhanced skills, beyond the On-Farm Internship 1 course, to perform industry expectations as a dairy herdsman, including milking, feeding, calf care, scheduling, employer/employee communications, and general farm duties. Students work with their internship farm to complete the internship skills checklist. PREREQUISITE: 10091104 On-Farm Internship 1

QUALITY MILK PRODUCTION...introduces the student to the process of how milk is produced and how to harvest it for a maximum profit to the farmer, including the major principles of milk secretion, the anatomy and physiology of the udder, milk letdown, proper milking practices, mastitis, efficient milking systems, and how to properly milk cows as well as treat and prevent udder infections.

Program Number 30-508-2
Technical Diploma • One Term

ABOUT THE PROGRAM

Think about your last dental visit. Your dentist likely worked closely with a dental assistant to perform your exam or procedures. Dental assistants are vital to the safe and efficient operation of the dental office—they assist the dentist in the treatment room, in the lab, and with business administration. If you're interested in a career that focuses on helping people and offers plenty of variety in the workday, dental assisting is a great choice for you.

PROGRAM OUTCOMES

- Perform a variety of entry-level supportive dental procedures.
- Manage infection and hazard control.
- Produce diagnostic radiographs/digital images.
- Perform basic laboratory procedures.
- Demonstrate professional behaviors, ethics, and appearance.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Submit Healthcare Provider CPR or Professional Rescuer certification.
- Complete Technical Standards form.
- Submit a Dental Exam form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Graduates are eligible to apply for Radiography and Infection Control, two sections of the Dental Assistant National Board Exam. The Chairside section of the exam requires two years of chairside experience. Hepatitis B vaccination is strongly recommended.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
31508302	Dental Chairside	5
31508304	Dental and General Anatomy	2
31508305	Applied Dental Radiography	2
31508306	Dental Assistant Clinical	3
31508307	Dental Assistant Professionalism	1
10508101	Dental Health Safety	1
10508113	Dental Materials	2
		16
		TOTAL 16

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

APPLIED DENTAL RADIOGRAPHY...prepares students to operate x-ray units and expose bitewing, periapical, extra oral, and occlusal radiographs. Emphasis is placed on protection against x-ray hazards. Students also process, mount, and evaluate radiographs for diagnostic value. Students also expose digital images and evaluate the image for diagnostic value. In this course students demonstrate competency on a manikin. In addition, students expose bitewing radiographs on a peer and role-play as a patient. COREQUISITES: 31508304 Dental & General Anatomy, 31508307 Dental Professionalism and CONDITION: 305082 Dental Assistant adm requirements met

DENTAL & GENERAL ANATOMY...prepares dental assistant students to apply fundamentals of general and dental anatomy to informed decision-making and to professional communication with colleagues and patients. COREQUISITES: 31508305 Applied Dental Radiography and 31508307 Dental Assistant Professionalism and CONDITION: 305082 Dental Assistant admission requirements met

DENTAL ASSISTANT CLINICAL...allows students to apply the skills developed in Dental Health Safety, Dental Chairside, Dental Materials, Dental Radiography, and Professionalism in a clinical setting with patients. It emphasizes the integration of core abilities and basic communication skills. COREQUISITE: 10508113 Dental Mtls, 31508302 Dental Chairside, 31508304 Dent/Gen Anat, 31508305 Appl Dental Radio, 31508307 Dental Prof, 10508101 Dent Hlth Sfty, and CONDITION: 305082 Dental Asst admission requirements met

DENTAL ASSISTANT PROFESSIONAL...prepares dental assistant students for professional success in a dental practice or another dental health care environment. Students develop professional appearance and image. More importantly, they learn to work within the ethical guidelines and legal framework. In preparation for entering the work force, dental assistants customize or develop their portfolios and lay out an on-going professional development plan. COREQUISITES: 31508304 Dental & General Anatomy, 31508305 Applied Dental Radiography and CONDITION: 305082 Dental Assistant admission requirements met

DENTAL CHAIRSIDE...prepares dental assistant students to chart oral cavity structures, dental pathology, and restorations; assist dentist with basic dental procedures including examinations, pain control, amalgam restoration, and cosmetic restoration. Students will also develop the ability to educate patients about preventative dentistry, brushing/flossing techniques, and dental procedures using lay terminology. Students will apply decoding strategies to the correct use and interpretation of dental terminology. COREQUISITE: 31508306 Dental Asst Clin, 31508304 Dent/Gen Anat, 31508305 Appl Dent Radio, 31508307 Dental Prof, 10508101 Dental Hlth Sfty, 10508113 Dental Mtls and CONDITION: 305082 Dental Asst adm requirements met

DENTAL HEALTH SAFETY...prepares dental auxiliary students to respond proactively to dental emergencies, control infection, prevent disease, adhere to OSHA Standards, and safely manage hazardous materials. Students also take patient vital signs and collect patient medical/dental histories. CPR certification is a prerequisite; students will be required to show proof of certification before beginning the course. CONDITION: 305082 Dental Asst admission requirements met

DENTAL MATERIALS...prepares dental auxiliary students to handle and prepare dental materials such as liners, bases, cements, amalgam, resin restorative materials, gypsum products, and impression materials. They also learn to take alginate impressions on manikins and clean removable appliances. COREQUISITE: 10508101 Dental Health Safety and CONDITION: 305082 Dental Assistant admission requirements met

Program Number 10-104-8
Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

Where creativity and technology meet! Digital marketing is an essential set of 21st century business tools. Students in our program gain knowledge and skills vital to the success of every company. From search engine optimization and digital advertising to connecting to audiences with social media, our graduates are ready to help future employers enhance their web presence and win in a digital market.

PROGRAM OUTCOMES

- Develop digital marketing strategies to anticipate and satisfy market needs.
- Create digital marketing content for products, services, images, and ideas.
- Integrate tools and technology for digital marketing initiatives.
- Analyze the effectiveness of marketing outcomes.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10102110	Introduction to Business	3
10103161	PowerPoint - Level 1	1
10804123	Math with Business Applications	3
10104102	Marketing, Principles of	3
10104169	Internet Marketing Foundations	3
10801195	Written Communication	3
		16
Term 2		
10104177	Content and Copywriting	2
10104173	Web Analytics	2
10104125	Social Media Strategy	3
10104176	Digital Advertising	3
10104127	Visual Branded Content	3
10809195	Economics	3
		16
Term 3		
10103121	Excel - Level 1	1
10104136	Retail Marketing & E-Commerce	3
10104178	Video for Promotion	2
10801198	Speech OR 10801196 Oral/Interpersonal Communication	3
10105128	Personal Branding	2
10809198	Introduction to Psychology	3
		14
Term 4		
10104134	PR and Media	3
10104104	Selling Strategies	3
10104126	Internship-Marketing	1
10152106	Integrated Web Concepts	4
10104175	Advanced Marketing Concepts	3
		14
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ADVANCED MARKETING CONCEPTS...provides the experience of selecting and researching a company, brand, or business, creating an institutional and event promotion campaign and buying efficient media in order to influence a data-defined market segment. The markets may be local, national, or global. Includes a simulation that will test the students' budget and media buying decisions. PREREQUISITES: 10104125 Social Media Strategy and 10104176 Digital Advertising

CONTENT AND COPYWRITING...explores content marketing strategies and their effectiveness; such as creation, curation, and repurposing. You will learn to write compelling copy for a variety of audiences and marketing uses, develop a business personality, tone, and voice, and get the right message to the right people through the right media. Includes optimizing headlines, taglines, call-to-actions, infographics, emoji's, hashtags, and copy for effectiveness by using keywords, semantics, credibility, and the correct word choices. PREREQUISITES: 10104102 Principles of Marketing and 10104169 Internet Marketing Foundations

DIGITAL ADVERTISING...explores the world of advertising on the Internet through display, text, pay-per-click, mobile, email and text messages. You will learn how to initiate, manage and evaluate digital advertising effectively and efficiently using the Google AdWords platform. PREREQUISITES: 10104102 Principles of Marketing and 10104169 Internet Marketing Foundations

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

INTEGRATED WEB CONCEPTS...introduces students in the Web and Software Developer, Graphic and Web Design, and Marketing programs to working within interdisciplinary teams. Through the building of all aspects of an application, each team will select and utilize design thinking processes and US/UI tools, prototype potential design solutions, ask for, give, and receive directive feedback, and effectively communicate and persuasively present ideas to an interdisciplinary audience. PREREQUISITES: 10104136 Retail Marketing and 101043 Mktg requirements met or 10152109 Object-Oriented Program 1, 10152123 Mobile Device Dev 1 and 101527 IT Web and Soft Dev requirements met or 10201119 Web Dev Advanced and 102012 Graphic and Web Design requirements met

INTERNET MARKETING FOUNDATIONS...explores how businesses use web sites, blogs, mobile apps, and search engine optimization (SEO) to market their business. You will learn basic web design fundamentals, how to use web content management systems, web-based tool connectivity, and use analytics to measure success.

INTERNSHIP-MARKETING...requires students to complete 72 hours(1 credit) of performing work in a business/industrial service setting related to their program outcomes. In addition, students will develop an academic portfolio which reflects upon the program outcomes, core abilities, career goal, educational goal, and course summary of learning. Students will meet with their program instructor to explain their portfolio and complete the technical skills attainment documentation. PREREQUISITE: 10104136 Retail Marketing and Ecommerce

INTRODUCTION TO BUSINESS...provides an introduction to the world of business from both the organizational and managerial viewpoint. It examines areas of business including the business environment, business formation, planning, operations, accounting, marketing, human resource management, and building effective teams.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

PERSONAL BRANDING...focuses on the importance of developing a strong brand identity for yourself as a professional. As a prospective employee, you are constantly selling yourself from how you talk, walk, dress, your facial expressions, and your body language; people are always forming impressions of you. In this course, you will develop a professional resume, cover letter, practice interview skills, and learn the role of social media in career development.

POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects.

PR AND MEDIA...introduces students to Public Relations principles and the PESO media model. Issues and crisis management, building media relationships, creating press releases, media kits, and on-message communication through traditional and digital channels are emphasized. PREREQUISITE: 10104125 Social Media Strategy and 10104177 Content and Copywriting

PRINCIPLES OF MARKETING...introduces the student to the consumer decision process model, the bases used to segment a market, basic concepts about goods, services, and ideas, the nature of supply chain and distribution, integrated marketing communications, and the stages of the product life cycle and their impact on the marketing mix. COREQUISITE: 10104104 Selling Strategies or CONDITION: 101023 Business Management enrollment requirements met

RETAIL MARKETING AND ECOMMERCE...teaches how to determine if that is the case and where it is best to sell – stand alone or an online marketplace. You will learn about the steps to set up an e-commerce web site including shopping carts, payment gateways, and converting order processing into a shopping cart process. This class will also discuss some of the laws and regulations to consider and explore for domestic and global e-commerce. PREREQUISITE: 10104102 Principles of Marketing and 10104173 Web Analytics

SELLING STRATEGIES...prepares the student to understand the business to consumer selling process, the technological advancement in selling, and the importance of customer relationship management. PREREQUISITE: 10104102 Prin of Marketing

SOCIAL MEDIA STRATEGY...explores current and up-and-coming online platforms, applications, and tracking methods for social media and determine how they are revolutionizing the marketing landscape. You will set up social media accounts, learn basic terminology, and incorporate best practices into marketing strategies. You will learn which platforms fit best with an organization's strategic goals, how to integrate content across them, interpret the analytics, and tailor them to maximize results. PREREQUISITE: 10104170 Marketing Tourism and Hospitality or 10104102 Principles of Marketing and 10104169 Internet Marketing Foundations

SPEECH...explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

VIDEO FOR PROMOTION...covers fundamental techniques of video editing, sound editing, live video and creatively implementing video as a storytelling medium. Students will explore current video trends and best practices per social channels and integrate these techniques into a social media campaign. Additional topics will include YouTube channel creation, advertising, and best practices. PREREQUISITES: 10104125 Social Media Strategy and 10104127 Visual Branded Content.

VISUAL BRANDED CONTENT...teaches creating visual marketing content for social media, email campaigns, print, and more using various design software platforms. Special emphasis on understanding and following brand standards as well as literacy of file types, considerations for designing for print, and production tips. PREREQUISITE: 10104102 Principles of Marketing

WEB ANALYTICS...teaches marketing analytics software, how it works, how to set goals and then measure the effectiveness of the web tools in meeting those goals. Emphasis on proficiency with Google Analytics platform. PREREQUISITE: 10104169 Internet Marketing Foundations

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 31-104-5
Technical Diploma • Two Terms

ABOUT THE PROGRAM

Master the fundamentals of digital marketing with this tech-driven embedded marketing program. This one-year diploma focuses on modern business skills: optimize websites for search, managing social media accounts, creating branded graphics and content, and more! Modern marketers will get the technical skills they need to promote products, services, and organizations with relevant, digital tools. A perfect first step for those new to the marketing field and those who want to update their skills.

PROGRAM OUTCOMES

- Develop strategies to anticipate and satisfy market needs.
- Promote products, services, images, and/or ideas to achieve a desired outcome.
- Utilize tools and technology for digital marketing initiatives.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule your First Time Program Counseling/Registration Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study and discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Adobe software is provided through the college at the college. You can purchase Adobe for a reduced rate for personal use.

CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1		
10102110	Introduction to Business	3
10103161	PowerPoint - Level 1	1
10804123	Math with Business Applications	3
10104102	Marketing, Principles of	3
10104169	Internet Marketing Foundations	3
10801195	Written Communication	3
		16
Term 2		
10104177	Content and Copywriting	2
10104173	Web Analytics	2
10104125	Social Media Strategy	3
10104176	Digital Advertising	3
10104127	Visual Branded Content	3
10809195	Economics	3
		16
		TOTAL 32

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

CONTENT AND COPYWRITING...explores content marketing strategies and their effectiveness; such as creation, curation, and repurposing. You will learn to write compelling copy for a variety of audiences and marketing uses, develop a business personality, tone, and voice, and get the right message to the right people through the right media. Includes optimizing headlines, taglines, call-to-actions, infographics, emojis, hashtags, and copy for effectiveness by using keywords, semantics, credibility, and the correct word choices. PREREQUISITES: 10104102 Principles of Marketing and 10104169 Internet Marketing Foundations

DIGITAL ADVERTISING...explores the world of advertising on the Internet through display, text, pay-per-click, mobile, email and text messages. You will learn how to initiate, manage and evaluate digital advertising effectively and efficiently using the Google AdWords platform. PREREQUISITES: 10104102 Principles of Marketing and 10104169 Internet Marketing Foundations

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

INTERNET MARKETING FOUNDATIONS...explores how businesses use web sites, blogs, mobile apps, and search engine optimization (SEO) to market their business. You will learn basic web design fundamentals, how to use web content management systems, web-based tool connectivity, and use analytics to measure success.

INTRODUCTION TO BUSINESS...provides an introduction to the world of business from both the organizational and managerial viewpoint. It examines areas of business including the business environment, business formation, planning, operations, accounting, marketing, human resource management, and building effective teams.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects.

PRINCIPLES OF MARKETING...introduces the student to the consumer decision process model, the bases used to segment a market, basic concepts about goods, services, and ideas, the nature of supply chain and distribution, integrated marketing communications, and the stages of the product life cycle and their impact on the marketing mix.

SOCIAL MEDIA STRATEGY...explores current and up-and-coming online platforms, applications, and tracking methods for social media and determine how they are revolutionizing the marketing landscape. You will set up social media accounts, learn basic terminology, and incorporate best practices into marketing strategies. You will learn which platforms fit best with an organization's strategic goals, how to integrate content across them, interpret the analytics, and tailor them to maximize results. PREREQUISITE: 10104170 Marketing Tourism and Hospitality or 10104102 Principles of Marketing

VISUAL BRANDED CONTENT...teaches creating visual marketing content for social media, email campaigns, print, and more using various design software platforms. Special emphasis on understanding and following brand standards as well as literacy of file types, considerations for designing for print, and production tips. PREREQUISITE: 10104102 Principles of Marketing

WEB ANALYTICS...teaches marketing analytics software, how it works, how to set goals and then measure the effectiveness of the web tools in meeting those goals. Emphasis on proficiency with Google Analytics platform. PREREQUISITE: 10104169 Internet Marketing Foundations

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

The Early Childhood Education program prepares students to work as teacher-caregivers in early childhood settings. It combines hands-on fieldwork in area centers with related academic work at the college. Graduates become responsible for the care and education of children in the birth-to-eight-years age range. They create and maintain safe and healthy play environments, guide behavior, plan and implement learning activities, and work cooperatively with staff and parents.

PROGRAM OUTCOMES

- Apply child development theory to practice
- Cultivate relationships with children, family and the community
- Assess child growth and development
- Use best practices in teaching and learning
- Demonstrate professionalism
- Integrate health, safety and nutrition practices

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire. This will also include a discussion and given paperwork to complete fingerprint-based background check request form a semester prior to enrolling in Introductory Practicum.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.
- Submit Infant/Child CPR/AED certification to program staff.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.
- Fingerprint-based background check current fee of \$39 (subject to change)

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

*ECE: Health, Safety & Nutrition is a prerequisite to Introductory Practicum. To keep a student on track to graduation, this course is offered summer, fall and spring terms. In addition, Introductory Practicum is offered fall and spring terms. Intermediate, Preschool and Advanced Practicums are offered summer, fall and spring. Please meet with your LTC program counselor to plan the best path for you.

Introductory Practicum students are required to attend all course reflections to receive required trainings (36 hours of lecture + 72 hours of field experience).

Intermediate Practicum, Preschool Practicum and Advanced Practicum students are required to attend all course reflection forums as well as scheduled field experience hours for each practicum course (36 hours of lecture + 72 hours of field experience). Students successfully completing year one of the associate degree program are able to graduate with a Child Care Services technical diploma. See counselor for details.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10307148	ECE: Foundations of Early Childhood Education	3
10307151	ECE: Infant & Toddler Development	3
10307174	ECE: Introductory Practicum*	3
10307110	ECE: Social Studies, Art & Music	3
10801195	Written Communications	3
		15
Term 2		
10307179	ECE: Child Development	3
10307188	ECE: Guiding Children's Behavior	3
10307177	ECE: Intermediate Practicum	3
10307108	ECE: Early Language & Literacy	3
10307167	ECE: Health, Safety, and Nutrition	3
10809172	Introduction to Diversity Studies	3
		18
Term 3		
10307112	ECE: STEM	3
10307195	ECE: Family and Community Relationships	3
10307175	ECE: Preschool Practicum	3
10804107	College Mathematics	3
10809196	Introduction to Sociology	3
		15
Term 4		
10307187	ECE: Children with Differing Abilities	3
10307199	ECE: Advanced Practicum	3
10801198	Speech	3
10809198	Introduction to Psychology	3
		12

TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

COLLEGE MATHEMATICS...is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic and algebra; 2) geometry and trigonometry; and 3) probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators. **PREREQUISITE:** 10834109 Pre-Algebra or Math placement assessment equivalent

ECE: ADVANCED PRACTICUM...demonstrate competence in supporting child development through observation, assessment and implementation of teaching strategies as you work in and learn about and apply the course competencies in an actual early childhood setting. You will demonstrate a high level of skill in fostering relationships with children, families and early childhood professionals, and use skills learned in a lead teacher role to develop a career plan to transition from student to early childhood education professional. **PREREQUISITE:** 10307175 ECE: Preschool Practicum and 10307177 ECE: Intermediate Practicum and **CONDITION:** 103071 Early Childhood Education admission requirements met

ECE: CHILD DEVELOPMENT...examines child development within the context of the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children ages three through five; analyze development of children ages five through eight; relate child development research findings to teaching practice; analyze the role of heredity and the environment; examine the role of brain development in early learning (ages 3-8); examine developmental and environmental assessment strategies for children ages 3-8.

ECE: CHILDREN WITH DIFFERING ABILITIES...focuses on the child with differing abilities in an early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; promote inclusive programs for young children; apply legal and ethical requirements including, but not limited to, ADA and IDEA; examine the consultation process to embed intervention in natural based settings; differentiate between typical and exceptional development; analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/or behavioral/emotional disorders; identify community and professional resources; interpret an individual educational plan (IEP/IFSP) for children with developmental differences; adapt curriculum to meet the needs of children with developmental differences; examine strategies for cultivating partnerships with families who have children with developmental differences.

ECE: EARLY LANGUAGE AND LITERACY...explores strategies to encourage the development of early language and literacy knowledge and skill building in children birth to 8 years of age. Learners will investigate the components of literacy including; literacy and a source of enjoyment, vocabulary and oral language, phonological awareness, knowledge of print, letters and words, comprehension and an understanding of books and other texts. Theories and philosophies regarding children's language and literacy development will be addressed. Dual language learning will be examined within the context of developmentally appropriate practices. Assessment tools for early language and literacy acquisition will be reviewed.

ECE: FAMILY AND COMMUNITY RELATIONSHIPS...examine the role of relationships with family and community in early childhood education. Course competencies include: implement strategies that support diversity, cultural responsiveness, and anti-bias perspectives when working with families and community; analyze contemporary family patterns and trends; identify strategies to strengthen and support families; explore effective communication strategies; discover strategies for developing respectful and reciprocal relationships with families; analyze strategies to promote family engagement in early childhood education programs; explore a variety of formats for meeting with families in their contexts; advocate for children and families; and explore community resources that provide a range of services for children and families.

ECE: FOUNDATIONS OF EARLY CHILDHOOD EDUCATION...introduces you to the early childhood profession. Course competencies include: explore the concepts of diversity, cultural responsiveness, and anti-bias as it relates to early childhood education, investigate the history of early childhood education, examine regulatory requirements for early childhood education programs in WI, summarize types of early childhood education settings, identify the components of a quality early childhood education program, summarize responsibilities of early childhood education professionals, explore early childhood curriculum models and examine the critical role of play as it relates to developmentally appropriate practice.

ECE: GUIDING CHILDREN'S BEHAVIOR...examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze techniques for and effects of strong relationship-building with children and families; identify positive and proactive guidance principles and techniques to support children; analyze environmental influences on child behavior; identify strategies that support children's active engagement in the learning environment; identify strategies that proactively teach emotional literacy and regulation techniques; identify strategies that proactively teach friendship skills; identify strategies that proactively teach children calming, relaxation, and problem-solving techniques; utilize observation and assessment techniques to assess and interpret behavior; create a behavior support plan based on a functional behavior assessment; create a guidance philosophy. This course meets the requirements of the "24 hour Wisconsin" Pyramid Model training.

ECE: HEALTH, SAFETY AND NUTRITION...examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; examine governmental regulations and professional standards as they apply to health, safety, and nutrition; plan a safe early childhood environment; plan a healthy early childhood environment; plan nutritionally sound menus; examine child abuse and neglect issues and mandates; describe Sudden Infant Death Syndrome (SIDS) risk reduction strategies; describe strategies to recognize and prevent the occurrence of abusive head trauma including Shaken Baby Syndrome (SBS); incorporate health, safety, and nutrition concepts into the children's curriculum.

ECE: INFANT AND TODDLER DEVELOPMENT...will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze development of infants & toddlers (conception to 36 months); correlate prenatal and postnatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine culturally and developmentally appropriate environments for infants and toddlers, examine the role of brain development in early learning (conception through 36 months); examine caregiving routines as curriculum; and examine developmental & environmental assessment strategies for infants and toddlers.

ECE: INTERMEDIATE PRACTICUM...will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for children. **PREREQUISITE:** 10307174 ECE: Introductory Practicum and **CONDITION:** 103071 Early Childhood Education or 313071 Child Care Services program admissions requirements met

ECE: INTRODUCTORY PRACTICUM...will learn about and apply the course competencies in an actual early childhood setting. You will explore the standards for quality early childhood education, demonstrate professional behaviors, and meet the requirements for training in the Wisconsin Model Early Learning Standards. Fingerprint-based background check completed with result of "Final Eligibility" is required. **CONDITION:** 103071 Early Childhood Education adm reqs met or 313071 Child Care Services adm requirements met

ECE: PRESCHOOL PRACTICUM...apply as capstone course in The Registry Preschool Credential. You will be placed or working in an early childhood setting with 3-5 yr old children and create a portfolio that prepares you for The Registry commission. You will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for preschoolers. **PREREQUISITE:** 10307174 ECE: Introductory Practicum and **CONDITION:** 103071 Early Childhood Education or 313071 Child Care Services program admissions reqs met

ECE: SOCIAL STUDIES, ART, AND MUSIC...will focus on beginning level curriculum development in the specific integrated content areas of social studies, art, music, & movement (SSAMM).

ECE: STEM...will focus on beginning level curriculum development in the specific integrated content areas of science, technology, engineering and mathematics.

INTRODUCTION TO DIVERSITY STUDIES...introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. **COREQUISITE:** 10838105 Intro Rdg & Study Skills or Reading plcmnt assessment equiv

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. **PREREQUISITE:** Reading placement assessment equivalent or **COREQUISITE:** 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. **COREQUISITE:** 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

SPEECH...explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. **COREQUISITE:** 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, & editing. Through a variety of writing assignments, student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. **PREREQ:** 10831103 Intro to College Wrtg or Writing placement assessment equivalent and **COREQ:** 10838105 Intro to Rdg & Study Skills or Rdg placement asmt equiv

Program Number 10-620-1
Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

Change is constant. Change is rapid. In the world of manufacturing technology change brings more complex systems of assembly, control measurement, and material processing of manufactured products. If you're good at problem solving, like working with automated manufacturing equipment, and you're looking forward to work that continuously challenges you to keep growing your knowledge and skills—consider an always-evolving career in electro-mechanical technology.

PROGRAM OUTCOMES

- Perform work safely.
- Troubleshoot electrical and mechanical systems and devices.
- Repair electrical and mechanical systems.
- Communicate technical information.
- Integrate electrical and mechanical systems and devices.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10620122	Industrial Wiring	2
10620103	Fluid Power 1	2
10620169	Robotic Mechanical Maintenance	1
10620105	DC Fundamentals	2
10804113	College Technical Math 1A OR 10804198 Calculus 1** (4 cr)	3
10462107	Tools and Measurement	1
10620124	Introduction to Programming Logic	1
10801195	Written Communications	3
		15
Term 2		
10620104	Fluid Power 2	3
10620138	Programmable Controllers - Allen Bradley*	3
10620141	Industrial Controls and Motors	3
10620110	AC Fundamentals	2
10806154	General Physics 1	4
10801196	Oral/Interpersonal Communication	3
		18
Term 3		
10620130	Mechanical Drive Systems	3
10620140	Programmable Controllers - Allen Bradley Advanced*	2
10620147	Electronic Devices/Transducers	2
10620164	Electromechanical Systems	2
10620168	Robotics Introduction*	2
10620193	NEC Codes*	1
10620194	Touch Screen Applications*	2
10620198	Industrial Networks*	2
		16
Term 4		
10620171	Robotics Advanced*	2
10620135	Electrical Robotic Maintenance	1
10620195	Industrial Troubleshooting	1
10620196	Industrial Applications	4
10620197	Analog Controls	2
10620199	Integration of Manufacturing	2
10809196	Introduction to Sociology OR 10809195 Economics (3 cr)	3
10809198	Introduction to Psychology	3
		18
		TOTAL 67

*Class qualifies for continuing education units (CEUs) for electricians.

**Students who plan to also achieve a Bachelor's degree are encouraged to take this transferable course.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AC FUNDAMENTALS...prepares the student to analyze electrical circuits using AC math, analyze AC waveforms, measure and analyze AC power, analyze capacitors and inductors in DC and AC circuits, analyze AC circuits containing reactance and calculate resonance, apply the elements and properties of basic measuring circuits, and describe transformer characteristics. PREREQUISITE: 10620105 DC Fund or 10660105 DC Fund

ANALOG CONTROLS...introduces instrumentation used for process control. The student will test, calibrate, install, and commission transmitters in varied processes. PREREQUISITE: 10620110 AC Fundamentals, 10620141 Ind Cntrl and Motors, 10620140 PCLs Advanced, 10620194 Touch Screen Apps, 10620147 Elec Devices/Transducers

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtn Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

DC FUNDAMENTALS...prepares the student to convert values to scientific and engineering notations; calculate math quantities; describe basic atomic theory; identify basic electrical terms; use established symbols standards; describe DC voltage characteristics and current sources and electrical resistance; measure and analyze electrical quantities in series and parallel circuits; and desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1 or 10804198 Calculus 1 or 10804118 Interm Algebra with Apps

ELECTRICAL ROBOTIC MAINTENANCE...investigates error codes using the Fanuc A size cabinet with a R30iB controller. Students will identify the cause of the various codes and be trained in the repair. Students will also be trained in motor / gear replacement and robot mastering. PREREQUISITES: 10620169 Robotic Mechanical Maintenance, 10620122 Industrial Wiring and 10620168 Robotics Introduction

ELECTROMECHANICAL SYSTEMS...prepares student to communicate with, tune, run, and troubleshoot Allen-Bradley servos; utilize electrical control of hydraulic systems, explore PID control of motor speed; and investigate open and closed loop control systems. PREREQUISITES: 10620104 Fluid Power 2 and 10620110 AC Fund or 10660110 AC Fund

ELECTRONIC DEVICES/TRANSDUCERS...prepares student to relate numbering systems with their functions in Electrical Ladder Diagrams and Data Transmission; gain an understanding of temperature and temperature sensing devices, weighing systems, ultrasonic and radar level detection, measuring flow, and pressure. Student will develop the ability to explain the operation of transducers that measure process variables and the transmitters that interface to industrial control systems. Transmitters will be analyzed, configured and calibrated to properly indicate the physical characteristic being measured and provide the information to control systems. PREREQUISITES: 10660110 AC Fund

FLUID POWER 1...prepares the learner to identify hydraulic and pneumatic component symbols; adjust a pressure relief valve; analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits; analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. COREQUISITES: 10804115 College Technical Math 1 or 10804113 College Tech Math 1A or 10804198 Calculus 1 or 10804118 Interm Algebra with Apps

FLUID POWER 2...enhances the learner's ability to read schematics containing fluid power component symbols; assemble systems using schematics; analyze system's operation using a schematic; evaluate the general characteristics and terms of fluids under pressure, fluid conditioning, conductors, reservoirs, accumulators, pressure control; and troubleshoot malfunctioning pressurized systems. PREREQUISITE: 10620103 Fluid Power 1 or 10620155 Industrial Maintenance Hydraulics and Pneumatics

GENERAL PHYSICS 1...presents the applications and theory of basic physics principles. This course emphasizes problem-solving, laboratory investigation, and applications. Topics include unit conversions and analysis, vectors, translational and rotational kinematics, translational and rotational dynamics, heat and temperature, and harmonic motion and waves. PREREQUISITE: 10804113 College Tech Math 1A, 10804115 College Tech Math 1, or 10804118 Intermediate Algebra, or Math placement assessment equivalent.

INDUSTRIAL APPLICATIONS...prepares the learner to configure, install, troubleshoot and maintain automation equipment in a "real world" setting. This course will include writing and configuring automation equipment, wiring and configuring industrial networks, wiring, programming and troubleshooting PLCs and touchscreens. These practices will be applied to create and maintain a manufacturing process. This course is highly computer based. PREREQUISITE: 10620140 Prog Cntrl AB Adv, 10620104 Fluid Power 2, 10620194 Touch Screen Appl, 10620168 Robotics Intro, 10620193 NEC Codes, 10620198 Indust Networks and COREQUISITE: 10620195 Industrial Troubleshooting

INDUSTRIAL CONTROLS AND MOTORS...prepares the learner to select control devices by function and operation; illustrate electrical circuits using symbols, diagrams, and abbreviations; explain the operation of magnetic solenoids and apply motor control techniques and introduces the student to three-phase power motor circuits for industrial applications. PREREQUISITE: 10620122 Industrial Wiring and COREQUISITE: 10620110 AC Fundamentals or PREREQUISITE: 10660110 AC Fundamentals

INDUSTRIAL NETWORKS...prepares the learner to configure, install and troubleshoot industrial communication networks. This course is highly computer based. COREQUISITES: 10620140 Programmable Controls AB Advanced. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

INDUSTRIAL TROUBLESHOOTING...prepares the learner to conduct effective machine control troubleshooting techniques with an understanding of preventive maintenance methods designed to minimize motor and controls issues between preventive maintenance measures. PREREQUISITE: 10620141 Industrial Controls and Motors

INDUSTRIAL WIRING...prepares the learner to follow safety procedures; maintain a safe and healthy work environment; construct electrical circuits; measure electrical quantities using a VOM and/or DVM; analyze measured values using electrical circuit laws; construct typical industrial control circuits; and analyze typical industrial control circuits.

INTEGRATION OF MANUFACTURING...provides the student with a detailed examination of automated processes and devices that are integrated together in a manufacturing environment. PREREQUISITE: 10620140 PCLs Advanced, 10620194 Touch Screen Apps, 10620147 Elec Devices/Transducers, 10620141 Ind Cntrl and Motors, 10620168 Robotics Intro and COREQUISITE: 10620198 Ind Networks

INTRODUCTION TO PROGRAMMING LOGIC...introduces student to concepts in basic digital programming, programming logic, electronic components, and Digital & Analog I/O.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. Directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQ: Rdg plcmnt asmnt equiv or COREQ: 10838105 Intro to Rdg & Study Skls

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

MECHANICAL DRIVE SYSTEMS...prepares the learner to use tools and fasteners safely; identify belt and chain drive components; install and adjust belt and chain drives; apply bearing and lubrication information; perform coupling alignment using straight edge, feeler gauge, and dial indicator and laser methods; identify various gear drives; calculate gear ratios; and analyze first-, second-, and third-class levers.

NEC CODES...introduces the student to National Electric Codes NFPA 70. Prepares the learner to apply NFPA 70 to motor and control installations and repairs. PREREQUISITE: 10620141 Industrial Controls and Motors. This class qualifies for 24 hours of Continuing Education Units (CEUs) for Electricians.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY...prepares student to understand basic PLC structure & terminology; learn to create & troubleshoot basic PLC programs using the RSLOGIX 500 software & the RSLINX communication software; become familiar with communicating with programming SLC-500 PLCs. Course is highly computer based.

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY ADVANCED...prepares the student to develop applications utilizing subroutine instructions, analog modules; gain a basic understanding of creating and troubleshooting programs using the ControlLogix, RSLOGIX5000 software. This course is highly computer based. PREREQUISITE: 10620138 Prog Cntrl/AB. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

ROBOTIC MECHANICAL MAINTENANCE...introduces the students to the robot teach pendant and robot jogging. Students will be taught to replace servo motors, recalibrate the robot and back up robot software and programs.

ROBOTICS ADVANCED...introduces students to adv robot programming commands to include use of Fanuc vision on Fanuc Robots. PREREQ: 10620168 Robotics Introduction. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

ROBOTICS INTRODUCTION...introduces the student to robotic axes, movement control, navigating the teach pendant, robotic frames, basic programming commands such as conditional branching, wait and call instructions. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

TOOLS AND MEASUREMENT...prepares the learner to use hand tools, precision measuring instruments, and torque tools.

TOUCH SCREEN APPLICATIONS...prepares the student to create, edit, and troubleshoot screens, objects and I/O related to the FactoryTalkME application. Students will create, edit and communicate with Allen-Bradley PLC programs for real-time control utilizing the touchscreen applications. This course is highly computer based. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-462-2

Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

Times are changing in the field of maintenance. Facilities are running with both manual and automated equipment and both need to be maintained and repaired. If you like to troubleshoot, work with your hands, and have an interest in math and electrical and mechanical processes, a career in maintenance is for you. Your expertise and knowledge is needed in today's modern, automated facilities.

PROGRAM OUTCOMES

- Demonstrate safe work procedures.
- Install industrial equipment and systems.
- Maintain industrial equipment and systems.
- Troubleshoot industrial equipment and systems.
- Repair industrial equipment and systems.
- Communicate technical information.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Students need to supply their own safety glasses and welding gloves.

RELATED PROGRAMS

- Electro-Mechanical Automation Technology
- Millwright Apprenticeship
- Industrial Electrician Apprenticeship
- Maintenance Technician Apprenticeship

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10804113	College Technical Math 1A OR 10804198 Calculus 1*	3
10462109	Maintenance Introduction	1
10462111	Maintenance Print Reading	2
10462107	Tools and Measurement	1
10620122	Industrial Wiring	2
10420194	Machine Tool Introduction	2
10442100	Welding Introduction	1
10457103	Fabrication Introduction	1
10462115	Layout and Rigging	1
		14
Term 2		
10462123	Pumps, Fluid/Air Handling	2
10620155	Hydraulics and Pneumatics	3
10420103	Lathes 1	1
10420105	Mills 1	1
10462125	Bearings and Lubrication	3
10462119	Power Transmission	2
10462121	Troubleshooting and Machine Repair	3
10801196	Oral/Interpersonal Communication	3
		18
Term 3		
10620169	Robotic Mechanical Maintenance	1
10620124	Introduction to Programming Logic	1
10620168	Robotics Introduction	2
10620105	DC Fundamentals	2
10809198	Introduction to Psychology	3
10801195	Written Communication	3
		12
Term 4		
10620135	Electrical Robotic Maintenance	1
10620110	AC Fundamentals	2
10620104	Fluid Power 2	3
10620138	Programmable Controllers - Allen Bradley	3
10620141	Industrial Controls and Motors	3
10620147	Electronic Devices/Transducers	2
10809195	Economics	3
		17
		TOTAL 61

*Calculus 1 is designed for students planning to transition to a 4-year college following LTC program completion.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AC FUNDAMENTALS...prepares the student to analyze electrical circuits using AC math, analyze AC waveforms, measure and analyze AC power, analyze capacitors and inductors in DC and AC circuits, analyze AC circuits containing reactance and calculate resonance, apply the elements and properties of basic measuring circuits, and describe transformer characteristics. PREREQUISITE: 10620105 DC Fundamentals or 10660105 DC Fundamentals

BEARINGS AND LUBRICATION...prepares the learner to properly identify, remove, install, and maintain both plain and rolling element bearings used with either a radial or axial load, including ball, cylindrical roller, tapered roller, linear, and thrust bearings; use manufacturers' resources for proper usage and life of bearings; and look at proper types, properties, and application methods of lubrication. PREREQUISITES: 10804113 College Tech Math 1A and 10462109 Maintenance Introduction or 31462309 Industrial Maintenance Introduction

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtnc Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

DC FUNDAMENTALS...prepares the student to convert values to scientific and engineering notations; calculate math quantities; describe basic atomic theory; identify basic electrical terms; use established symbols standards; describe DC voltage characteristics and current sources and electrical resistance; measure and analyze electrical quantities in series and parallel circuits; and desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro Reading & Study Skills or Reading placement assessment equiv or CONDITION: 610062 Agribusiness/Financial Basic program adms met

ELECTRICAL ROBOTIC MAINTENANCE...investigates error codes using the Fanuc A size cabinet with a R30iB controller. Students will identify the cause of the various codes and be trained in the repair. Students will also be trained in motor / gear replacement and robot mastering. PREEQUISITES: 10620169 Robotic Mechanical Maintenance, 10620122 Industrial Wiring and 10620168 Robotics Introduction

ELECTRONIC DEVICES/TRANSDUCERS...prepares the student to relate numbering systems with their functions in Electrical Ladder Diagrams and Data Transmission; gain an understanding of temperature and temperature sensing devices, weighing systems, ultrasonic and radar level detection, measuring flow, and pressure. The student will develop the ability to explain the operation of transducers that measure process variables and the transmitters that interface to industrial control systems. Transmitters will be analyzed, configured and calibrated to properly indicate the physical characteristic being measured and provide the information to control systems. PREREQUISITES: 10660110 AC Fundamentals

FABRICATION INTRODUCTION...introduces the learner to various types of structural steel, sheet metal, and pipe, and prepares the learner to perform fabrication from assembly prints, including cutting, welding, bending, straightening, and repair. COREQUISITE: 10442100 Welding Introduction or PREREQUISITES: 31442346 IM Intro to Welding or 31442300 Welding Intro and COREQUISITE: 10462109 Maintenance Intro or PREREQUISITE: Industrial Maintenance Intro

FLUID POWER 2...enhances the learner's ability to read schematics containing fluid power component symbols; assemble systems using schematics; analyze system's operation using a schematic; evaluate the general characteristics and terms of fluids under pressure, fluid conditioning, conductors, reservoirs, accumulators, pressure control; and troubleshoot malfunctioning pressurized systems. PREREQUISITE: 10620103 Fluid Power 1 or 10620155 Industrial Maintenance Hydraulics and Pneumatics

HYDRAULICS AND PNEUMATICS...prepares the learner to identify hydraulic and pneumatic component symbols and terms, adjust a pressure relief valve, analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits, analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. PREREQUISITES: 10462109 Maintenance Intro or 31462309 Industrial Maintenance Intro and 10804113 College Tech Math 1A

INDUSTRIAL CONTROLS AND MOTORS...prepares the learner to select control devices by function and operation; illustrate electrical circuits using symbols, diagrams, and abbreviations; explain the operation of magnetic solenoids and apply motor control techniques and introduces the student to three-phase power motor circuits for industrial applications. PREREQUISITE: 10620122 Industrial Wiring and COREQUISITE: 10620110 AC Fundamentals or PREREQUISITE: 10660110 AC Fundamentals

INDUSTRIAL WIRING...prepares the learner to follow safety procedures; maintain a safe and healthy work environment; construct electrical circuits; measure electrical quantities using a VOM and/or DVM; analyze measured values using electrical circuit laws; construct typical industrial control circuits; and analyze typical industrial control circuits.

INTRODUCTION TO PROGRAMMING LOGIC...introduces the student to concepts in basic digital programming, programming logic, electronic components, and Digital & Analog I/O.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

LATHES 1...introduces the student to the characteristics and attributes of turning tools: follow engine lathe safety rules, identify engine lathe components, perform facing and center drilling operations, perform turning operations. COREQUISITE: 10462107 Tools and Measurement or PREREQUISITE: 31462325 Maintenance Tools and Measurement and PREREQUISITE: 10420194 Machine Tool Intro or 31420394 IM Machine Tool Intro

LAYOUT AND RIGGING...prepares the learner to perform layout skills for industrial maintenance to include machine layout, proper rigging, installation, and leveling with emphasis on baseline layout, machine rigging and installation, machine leveling, and alignment procedures. Participants will obtain lift truck operation certification upon completion. COREQUISITE: 10462109 Maintenance Intro or PREREQUISITE: 31462309 Ind Mtnc Intro and COREQUISITE: 10804113 College Tech Math 1A and COREQUISITE: 10462111 Maintenance Print Reading or PREREQUISITE: 31462388 IM Print Reading

MACHINE TOOL INTRODUCTION...prepares the learner with the skills to identify basic types of machining processes, follow standard shop safety rules, use semi-precision and precision measuring tools, perform workpiece layout procedures, identify metal composition and classification, follow cutoff machine safety rules, operate vertical and horizontal cutoff machines, follow sensitive drill press safety rules, identify drill press components, interpret attributes of hole-producing tools, and operate a sensitive drill press.

MAINTENANCE INTRODUCTION...prepares the learner to apply basic safety, mechanics, force, friction, work, and energy; learn terminology related to maintenance; introduction to threaded and non-threaded fasteners and concrete anchoring; learn to use precision measuring tools; introduction to single-phase and three-phase motor wiring. PREREQUISITE: 31462325 Maintenance Tools and Measurement or COREQUISITE: 10462107 Tools and Measurement

MAINTENANCE PRINT READING...prepares the learner to read prints; make isometric sketches; interpret orthographic projection drawings, to include sections, surface finishes, and tolerancing. The course when delivered in the evening is self-paced, open-entry/exit, and designed for individualized student needs.

MILLS 1...prepares the learner to identify vertical milling machine components, select cutting tools and workholding device(s), apply safety rules, set the vertical milling machine, and mill square surfaces. COREQUISITE: 10420103 Lathes 1 or PREREQUISITE: 31420395 IM Machine Tool Lathes and Mills

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

POWER TRANSMISSION...introduces the learner to belt, chain, and gear drives used in industrial maintenance applications, including v-belts, flat belts, timing belts, conveyor chains, roller chains, bevel gears, worm gears, helical gears, spur gears, couplings, and alignment with emphasis on identification, installation, repair, and maintenance. COREQUISITE: 10462119 Bearings and Lubrication

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY...prepares the student to understand basic PLC structure and terminology; learn to create and troubleshoot basic PLC programs using the RSLOGIX 500 software and the RSLINX communication software; become familiar with communicating with programming SLC-500 PLCs. This course is highly computer based. This class qualifies for 64 hours of Continuing Education Units (CEUs) for Electricians. This class qualifies for 64 hours of Continuing Education Units (CEUs) for Electricians.

PUMPS, FLUID/AIR HANDLING...prepares the learner to identify, install, repair, and maintain common pumps and plumbing applications, including centrifugal pumps, diaphragm pumps, packing and seals, tubing, and installing hose and piping used with fluid and air handling. PREREQUISITES: 10462115 Layout and Rigging or 31462302 IM Layout and Rigging and COREQUISITE: 10620155 Hydraulics and Pneumatics

ROBOTIC MECHANICAL MAINTENANCE...introduces the students to the robot teach pendant and robot jogging. Students will be taught to replace servo motors, recalibrate the robot and back up robot software and programs.

ROBOTICS INTRODUCTION...introduces the student to robotic axes, movement control, navigating the teach pendant, robotic frames, basic programming commands such as conditional branching, wait and call instructions. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

TOOLS AND MEASUREMENT...prepares the learner to use hand tools, precision measuring instruments, and torque tools.

TROUBLESHOOTING AND MACHINE REPAIR...prepares the learner to perform essential troubleshooting, repair, and preventive maintenance of various machine tools and installations used in industrial maintenance and to integrate the skills learned in the other maintenance courses to perform complete repair of machine tools. COREQ: 10462119 Power Transmission and 10462123 Pumps, Fluid/Air Handling and PREREQ: 10620122 Ind Wiring

WELDING INTRODUCTION...introduces the learner to the world of welding, weld shop safety practices, welding terminology, and welding machine setup to industry standards. Learners will be introduced to the three major welding processes: SMAW, GMAW, and GTAW and will build skills welding with each process in the flat, and horizontal positions while using the common welding joints found in industry. The learner will process material using the two major hand held cutting processes - the Oxyfuel and PAC cutting processes

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQ: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro Rdg & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

Injuries, trauma, sudden illness—medical emergencies can happen at any time, in any place. Survival often depends on the initial care the injured or severely ill person receives at the scene. If you are calm under pressure, compassionate, good at problem solving, and have the desire to help people in need, a career as an Emergency Medical Technician (EMT) may be an excellent choice for you.

PROGRAM OUTCOMES

- Prepare for incident response and EMS operations.
- Integrate pathophysiological principles and assessment findings to provide appropriate patient care.
- Demonstrate EMT skills aligned with established standards and procedures for a variety of patient encounters.
- Communicate effectively with others.
- Demonstrate professional behavior.
- Meet state competencies listed for EMT certification.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule your First Time Program Counseling/Registration Session with your assigned program counselor to plan your schedule, complete Background Review form and discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

Lakeshore Technical College's Emergency Medical Technician program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examination, or licensure for other states.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
30531307	Emergency Medical Technician Part 1 Lecture	1
30531309	Emergency Medical Technician Part 1 Lab	1
10531105	Emergency Medical Technician Part 2 Lecture	3
10531106	Emergency Medical Technician Part 2 Lab	1

TOTAL 6

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

EMERGENCY MEDICAL TECHNICIAN PART 1 LAB...is the skills lab portion of the EMT Part I course content. Students will practice and be evaluated on the various EMT skills that apply to their EMT Part I lecture topics. Upon successful completion of EMT Part I lecture and lab classes, candidates will be eligible to participate in the National Registry exams for Wisconsin EMR certification. Students that are already certified as WI EMRs may be eligible for Credit for Prior Learning in lieu of taking this course. CONDITION: 305313 EMT or 315311 EMT-Paramedic prog requirements met

EMERGENCY MEDICAL TECHNICIAN PART 1 LECTURE...is designed for future EMTs & Emergency Medical Responders includes: basic human anatomy, performing a patient assessment, traumatic injury management, airway management, and basic cardiac resuscitation. Upon successful completion of EMT Part I lecture & lab classes, candidates will be eligible to participate in the National Registry exams for Wisconsin EMR certification. Students that are certified as WI EMRs may be eligible for Credit Learning in lieu of taking this course. CONDITION: 305313 EMT or 315311 EMT-Paramedic program requirements met

EMERGENCY MEDICAL TECHNICIAN PART 2 LAB...is the skills lab portion of the EMT Part 2 course content. Students will practice and be evaluated on the various EMT skills that apply to their EMT Part 2 lecture topics. Upon successful completion of EMT Part 2 Lecture and Lab classes, candidates will be eligible to participate in the National Registry of EMTs Emergency Medical Technician exams for Wisconsin EMT licensure. PREREQUISITE: 30531301 EMT Part 1 or COREQUISITE: 30531309 EMT Part 1 Lab and CONDITION: 305313 EMT or 315311 EMT-Paramedic program requirements met

EMERGENCY MEDICAL TECHNICIAN PART 2 LECTURE...advances on the foundational concepts of Part 1 to include pharmacology, pathophysiology, operating an ambulance, and medication administration. Students will also complete a clinical rotation in a hospital Emergency Department. Upon successful completion of EMT Part 2 Lecture and Lab classes, candidates will be eligible to participate in the National Registry of EMTs Emergency Medical Technician exams for Wisconsin EMT licensure. PREREQUISITE: 30531301 EMT Part 1 or COREQUISITE: 30531307 EMT Part 1 Lecture and CONDITION: 305313 EMT or 315311 EMT-Paramedic program requirements met

Program Number 31-531-1
Technical Diploma • Three Terms
ABOUT THE PROGRAM

Life can bring about unfortunate events of medical or traumatic emergency; a Paramedic is a highly trained and skilled medical professional ready to assist those in need. Paramedics integrate Advanced Life Support treatment measures into the challenging emergency healthcare environment. The Technical Diploma EMT-Paramedic is an entry level educated Paramedic meeting the minimum national educational standards.

PROGRAM OUTCOMES

- Prepare for incident response and EMS operations.
- Integrate pathophysiological principles and assessment findings for a variety of patient encounters.
- Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters.
- Communicate effectively with others.
- Demonstrate professional behavior.
- Meet state and national competency requirements for paramedic credentialing.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned advisor to discuss motor vehicle record, plan your first semester schedule, review your entire plan of study, and discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

The Lakeshore Technical College Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). 25400 US Highway 19 N., Suite 158, Clearwater, FL 33756. Phone: 727-210-2350. Web: www.caahep.org.

Lakeshore Technical College's EMT-Paramedic program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examination, or licensure for other states.

RELATED PROGRAMS

- Paramedic Technician Associate Degree
- Fire Medic

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
30531307	EMT Part 1 Lecture	1
30531309	EMT Part 1 Lab	1
10531105	EMT Part 2 Lecture	3
10531106	EMT Part 2 Lab	1
		6
Spring		
10531911	EMS Fundamentals	2
10531912	Paramedic Medical Principles	4
10531913	Advanced Patient Assessment Principles	3
10531914	Advanced Prehospital Pharmacology	3
10531915	Paramedic Respiratory Management	2
10531916	Paramedic Cardiology 1	1
10531926	Paramedic Essentials 1	1
10531930	Paramedic Clinical 1	1
		17
Summer		
10531918	Advanced Emergency Resuscitation	1
10531920	Paramedic Trauma	3
10531922	EMS Operations	1
10531927	Paramedic Essentials 2	1
10531928	Paramedic Clinical 2	2
10531932	Paramedic Cardiology 2	3
		11
Fall		
10531919	Paramedic Medical Emergencies	4
10531921	Special Patient Populations	3
10531923	Paramedic Capstone	1
10531929	Paramedic Field Clinical	2
10531931	Paramedic Internship	1
10531933	Paramedic Essentials 3	1
		12
		TOTAL 46

To contact CoAEMSP:
 8301 Lakeview Parkway, Suite 111-312
 Rowlett, TX 75088
 214-703-8445 Fax 214-703-8992
www.coaemsp.org

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ADVANCED EMERGENCY RESUSCITATION...provides ACLS and PALS knowledge and skills preparing the student in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri-arrest with intervention to prevent respiratory and/or cardiac arrest if possible. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531916 Paramedic Cardiology

ADVANCED PATIENT ASSESSMENT PRINCIPLES...provides knowledge of scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531912 Paramedic Medical Principles

ADVANCED PREHOSPITAL PHARMACOLOGY...provides student with comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the health of the patient. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531913 Advanced Patient Assessment Principles

EMERGENCY MEDICAL TECHNICIAN PART 1 LAB...is the skills lab portion of the EMT Part I course content. Students will practice and be evaluated on the various EMT skills that apply to their EMT Part I lecture topics. Upon successful completion of EMT Part I lecture and lab classes, candidates will be eligible to participate in the National Registry exams for WI EMR certification. Students that are already certified as WI EMRs may be eligible for Credit for Prior Learning in lieu of taking this course. CONDITION: 305313 EMT or 315311 EMT-Paramedic program requirements met

EMERGENCY MEDICAL TECHNICIAN PART 1 LECTURE...is designed for future EMTs & Emergency Medical Responders includes: basic human anatomy, performing a patient assessment, traumatic injury management, airway management, and basic cardiac resuscitation. Upon successful completion of EMT Part I lecture & lab classes, candidates will be eligible to participate in the National Registry exams for Wisconsin EMR certification. Students that are certified as WI EMRs may be eligible for Credit Learning in lieu of taking this course. CONDITION: 305313 EMT or 315311 EMT-Paramedic program requirements met

EMERGENCY MEDICAL TECHNICIAN PART 2 LAB...is the skills lab portion of the EMT Part 2 course content. Students will practice and be evaluated on the various EMT skills that apply to their EMT Part 2 lecture topics. Upon successful completion of EMT Part 2 Lecture and Lab classes, candidates will be eligible to participate in the National Registry of EMTs Emergency Medical Technician exams for Wisconsin EMT licensure. PREREQUISITE: 30531301 EMT Part 1 or COREQUISITE: 30531309 EMT Part 1 Lab and CONDITION: 305313 EMT or 315311 EMT-Paramedic prog reqs met

EMERGENCY MEDICAL TECHNICIAN PART 2 LECTURE...advances on the foundational concepts of Part 1 to include pharmacology, pathophysiology, operating an ambulance, and medication administration. Students will also complete a clinical rotation in a hospital Emergency Department. Upon successful completion of EMT Part 2 Lecture and Lab classes, candidates will be eligible to participate in the National Registry of EMTs Emergency Medical Technician exams for Wisconsin EMT licensure. PREREQUISITE: 30531301 EMT Part 1 or COREQUISITE: 30531307 EMT Part 1 Lecture & CONDITION: 305313 EMT or 315311 EMT-Paramedic program reqs met

EMS FUNDAMENTALS...provides comprehensive knowledge of EMS systems, safety, well-being, legal issues and ethical issues with intended outcome of improving EMS personnel, patients and the community. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program reqs met and PREREQUISITES: 10531102 EMT Basic or 30531301 EMT Part 1 or EMT WI License

EMS OPERATIONS...provides the knowledge of operational roles and responsibilities to ensure patient, public and EMS personnel safety. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531918 Advanced Emergency Resuscitation

MEDICAL EMERGENCIES...provides student the skills to integrate assessment findings with principles of anatomy, physiology, epidemiology, & pathophysiology to formulate a field impression and implement a treatment plan for an acutely injured patient. CONDITION: 105311 Paramedic Tech or 315311 EMT Paramedic or 105312 Fire Medic prog reqs met and COREQUISITE: 10531918 Adv Emergency Resuscitation

PARAMEDIC CAPSTONE...provides the final opportunity to incorporate knowledge and skills through labs and scenario-based practice and evaluations prior to taking the NREMT written and practical exams. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531922 EMS Operations

PARAMEDIC CARDIOLOGY 1...provides the principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and a plan for a patient with a cardiovascular complaint. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531915 Paramedic Respiratory Management

PARAMEDIC CARDIOLOGY 2...continues the paramedic's knowledge of cardiology. Incorporates basic and advanced electrocardiogram rhythm interpretation as well as introduces students to Advanced Cardiovascular Life Support (ACLS).

PARAMEDIC CLINICAL 1...allows paramedics their first experiences providing advanced level skills and assessments on patients in a healthcare setting. Students will be assigned to an area hospital to begin their clinical training and meeting their assigned clinical competencies. Activities may include rotations within hospital emergency departments, operating rooms, intensive care units, and/or rotations with lab or respiratory staff. COREQUISITE: 10531911 EMS Fundamentals and CONDITION: 15311 Paramedic Technician or 105312 Fire Medic or 315311 EMT Paramedic program admission requirements met

PARAMEDIC CLINICAL 2...provides student with the opportunity to enhance their learning through the skills practice in a health care environment experience with actual patients under the supervision of approved preceptors or high-fidelity human patient simulator. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic Program Requirements Met and COREQUISITE: 10531930 Paramedic Clinical 1

PARAMEDIC ESSENTIALS 1...reinforces student learning through practice of paramedicine in a controlled supervised environment utilizing hands on skills performed on simulated live patients and high-fidelity manikins and anatomy models. The student will apply assessment and skill knowledge while demonstrating paramedic level skills in a variety of scenarios and environments.

PARAMEDIC ESSENTIALS 2...reinforces student learning through practice of paramedicine in a controlled supervised environment utilizing hands on skills performed on simulated live patients and high-fidelity manikins and anatomy models. The student will evaluate patient presentations in short scenarios, formulate and reassess treatment plans while performing skills need to carry out patient treatments. Students will participate in learning and demonstrate first responder health and wellbeing during this section. CONDITION: 105311 Paramedic Technician or 105312 Fire Medic or 315311 EMT Paramedic program admission requirements met

PARAMEDIC ESSENTIALS 3...provides a continued growth in patient assessment, treatment plans and skills working toward the mastery of paramedic level patient care. The focus of this sections will include complete patient care, team management, responder health and wellbeing, and daily operations. Students will demonstrate mastery of knowledge and skills in classroom activities and extended scenarios.

PARAMEDIC FIELD CLINICAL...provides student with the opportunity to enhance their learning through the practice in the prehospital environment with actual patients under the supervision of approved preceptors. Students will be assigned to an area Paramedic ambulance service provider to incorporate their previously acquired capabilities into prehospital patient care. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic Program Requirements Met and COREQUISITE: 10531918 Advanced Emergency Resuscitation

PARAMEDIC INTERNSHIP...demonstrates to paramedic students their team leadership capabilities while assessing, formulating treatments plans, and delegating tasks to their EMS team members. Students will be assigned to an area paramedic ambulance service to complete requirements during this capstone field internship.

PARAMEDIC MEDICAL PRINCIPLES...provides the knowledge of anatomy, physiology and pathophysiology of major human systems while also introducing the students to shock, immunology and bleeding. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531911 EMS Fundamentals

PARAMEDIC RESPIRATORY MANAGEMENT...provides specific knowledge pertaining to the respiratory system and to ensure the student is prepared to formulate a field impression and implement a comprehensive treatment plan for a respiratory complaint. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531914 Advanced Prehospital Pharmacology

PARAMEDIC TRAUMA...provides the student the skills to integrate assessment findings with principles of anatomy, physiology, epidemiology and pathophysiology to formulate a field impression and implement a treatment plan for an acutely injured patient. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met

SPECIAL PATIENT POPULATIONS...provides the student the skills to integrate assessment findings with principles of anatomy, physiology, epidemiology and pathophysiology to formulate a field impression and implement a treatment plan for patient with special needs. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531920 Paramedic Trauma

Program Number 10-481-3
Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

Energy expenses make up a part of every business' bottom line. Employers are seeking those skilled in monitoring energy consumption with the ability to detect and evaluate energy efficiency opportunities. Graduates of the Energy Management Technology associate degree program are equipped to lead business' energy management initiatives. Energy managers work within a variety of business sectors: utility companies; energy equipment companies; government agencies; and heating, ventilating, air conditioning and refrigeration contractors. Graduates may also find careers as energy auditors, energy management consultants, or energy program coordinators.

PROGRAM OUTCOMES

- Troubleshoot, upgrade and maintain the Energy Management Systems (EMS); perform data recovery and backup duties.
- Enhance energy management software and prepare program documentation and flow charts.
- Read and comprehend mechanical blueprints and control drawings.
- Respond to calls for heating, ventilating, air conditioning, and exterior lighting service independently; and determine whether to dispatch appropriate staff or to resolve problems remotely via the energy management system.
- Assist in the writing of specifications for additional energy management systems.
- Write technical proposals for energy projects.
- Provide training to campus users and facilities operations staff.
- Service equipment and systems.
- Recommend building/site solutions to optimize performance.
- Evaluate building performance and energy use.
- Evaluate renewable, fossil and other energy resources in context of sustainability, environment, society and economics.

ADMISSION TO DO'S

- Work with NWTC Admissions Specialist to:
 - Submit application and \$30 fee to NWTC.
 - Complete the online Student Success Questionnaire.
- Meet with NWTC program advisor to discuss program details.
- Meet with LTC program counselor to discuss program details.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

This program is shared with Northeast Wisconsin Technical College (NWTC) in Green Bay. LTC students follow NWTC's admission process; however, they are able to attend 28 credits at the LTC Cleveland campus. This includes 18 credits in Terms 1 and 2, and 11 credits in Terms 3 and 4. The remainder of the courses are held at NWTC's Green Bay campus.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

NWTC transfer programs are offered through collaborative agreements with four-year college and university partners. Visit nwtc.edu/academics/transfer-opportunities.

CONTACT

NWTC:
 Cindy Kothbauer, Program Advisor
 920.498.6311 • cynthia.kothbauer@nwtc.edu

LTC:
 Alison Driscoll, Program Counselor
 920.693.1610 • alison.driscoll@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10890101	College 101 <i>(Held at NWTC)</i>	1
10620105	DC Fundamentals	2
10804113	College Tech Math 1A	3
10806154	General Physics 1	4
10480101	Energy Intro-Renew & Sustain <i>(Held at NWTC)</i>	4
10481114	Intro to Energy Management <i>(Held at NWTC)</i>	3
		17
Term 2		
10103121	Excel - Level 1	1
10620110	AC Fundamentals	2
10620138	Programmable Controllers - Allen Bradley	3
10801195	Written Communication	3
10804114	College Tech Math 1B <i>(Held at NWTC)</i>	2
10196187	Project Management <i>(Held at NWTC)</i>	1
10481116	Building Automation Systems (BAS) Networking <i>(Held at NWTC)</i>	3
10605157	Power Electronics 1: Drives <i>(Held at NWTC)</i>	1
		16
Term 3		
10620164	Electromechanical Systems	2
10809172	Introduction to Diversity Studies	3
10403100	Blueprint Reading Intro <i>(Held at NWTC)</i>	1
10481109	Commercial HVACR Analysis <i>(Held at NWTC)</i>	3
10481111	Energy Control Strategies <i>(Held at NWTC)</i>	3
10481115	Lighting Fundamentals <i>(Held at NWTC)</i>	3
10620220	Pumps: Intro to Fluid Moving Devices <i>(Held at NWTC)</i>	1
		16
Term 4		
10801196	Oral/Interpersonal Communication	3
10809198	Introduction to Psychology	3
10481107	Building Energy Simulation <i>(Held at NWTC)</i>	3
10481108	Commercial Energy Analysis <i>(Held at NWTC)</i>	3
10481110	Energy Accounting <i>(Held at NWTC)</i>	2
10481113	Energy Investment Analysis <i>(Held at NWTC)</i>	3
		17
		TOTAL 66

Classes meet at LTC, unless noted to be held at NWTC.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AC FUNDAMENTALS...prepares the student to analyze electrical circuits using AC math, analyze AC waveforms, measure and analyze AC power, analyze capacitors and inductors in DC and AC circuits, analyze AC circuits containing reactance and calculate resonance, apply the elements and properties of basic measuring circuits, and describe transformer characteristics. PREREQUISITES: 10660105 DC Fundamentals

BLUEPRINT READING INTRO...develops the knowledge, skills, process, and understanding of site plans, footings and foundations, floor plans, elevations, below-grade piping, above-grade piping, isometric piping diagrams, schedules and details, electrical floor plans, lighting, ventilating, and air conditioning. Course Typically Offered: Fall

BUILDING AUTOMATION SYSTEM (BAS) NETWORKING...presents the fundamental concepts of data transmission in various media types. Topics include network fundamentals, standards, OSI model, IP protocol, network signal transmission, media, protocols, physical topologies, logical topologies, hardware, typical BAS networks, and typical BAS subnetworks.

BUILDING ENERGY SIMULATION...covers the variety of computer programs available for analyzing the energy performance of commercial buildings including BIN methodology, hourly simulations, and an overview of current programs on the market such as RETScreen and eQuest. PREREQUISITES: 10481109 Commercial HVACR Systems Analysis; 10481111 Energy Control Strategies; 10481115 Lighting Fund

COLLEGE 101...provides an overview of various renewable energy technologies and sustainable design practices and their current applications. Emphasis will be placed on policies, renewable energy production, green products, and jobs. Course Typically Offered: Fall/Spring

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtnc Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

COLLEGE TECHNICAL MATHEMATICS 1B...is a continuation of College Technical Math 1A. Topics include: measurement systems; computational geometry; right and oblique triangle trigonometry; and trigonometric functions on the unit circle. Emphasis will be on the application of skills to technical problems. PREREQUISITE: 10804196 College Tech Math 1A or 10804113 College Tech Math 1A or Math placement assessment equivalent or COREQUISITE: 10804118 Intermediate Algebra w Apps

COMMERCIAL ENERGY ANALYSIS...emphasis is on the analysis of energy use in commercial buildings including utility bill analysis, audit data, identifying energy efficiency measures, energy savings and investment calculations, audit report writing. PREREQUISITES: 10481109 Commercial HVACR Systems Analysis, 10481111 Energy Control Strategies, 10481115 Lighting Fundamentals - See more at: <https://classcart.nwtc.edu/Classes/Details?courseId=637#sthash.CM5sAh93.dpuf>

COMMERCIAL HVACR ANALYSIS...identifies commercial HVAC system types and the general energy use impact of each type. Calculations of system equipment efficiencies will be used to determine EER, SEER, AFUE, COP, combination and seasonal efficiency in boilers, balance point partial efficiency, BIN analysis. PREREQUISITE: 10481114 Intro to Energy Management

DC FUNDAMENTALS...prepares the student to convert values to scientific and engineering notations; calculate math quantities; describe basic atomic theory; identify basic electrical terms; use established symbols standards; describe DC voltage characteristics and current sources and electrical resistance; measure and analyze electrical quantities in series and parallel circuits; and desolder/solder single lead components. COREQUISITES: 10804115 College Technical Math 1 or 10804113 College Tech Math 1A and 10804114 College Tech Math 1B

ELECTROMECHANICAL SYSTEMS...prepares the student to communicate with, tune, run, and troubleshoot Allen-Bradley servos; utilize electrical control of hydraulic systems, explore PID control of motor speed; and investigate open and closed loop control systems. PREREQUISITES: Fluid Power 2 and 10660110 AC Fundamentals

ENERGY ACCOUNTING...reviews energy units, data gathering for energy accounting utility rates and schedules, energy data organization, adjusted baselines, cost avoidance, load factor, data analysis, data presentation, use of utility energy accounting software. PREREQUISITES: 10481109 Commercial HVACR Systems Analysis; 10481111 Energy Control Strategies, 10481115 Lighting Fundamentals

ENERGY CONTROL STRATEGIES...includes building system control concepts and devices; such as electric, pneumatic, and digital controls, emphasis is placed on identifying and understanding control strategies related to energy using systems and methods to estimate energy savings. PREREQUISITE: 10481114 Intro to Energy Management. Course Typically Offered: Fall

ENERGY-INTRO RENEW & SUSTAIN...provides an overview of various renewable energy technologies and sustainable design practices and their current applications. Emphasis will be placed on policies, renewable energy production, green products, and jobs. Course Typically Offered: Fall/Spring

ENERGY INVESTMENT ANALYSIS...emphasizes simple payback and life-cycle cost analysis, time value of money, cash flow equivalence, cost-benefit analysis, tax credits, depreciation, inflation and/or escalating fuel costs on energy investments and cost estimating. PREREQUISITES: 10481109 Commercial HVACR Systems Analysis, 10481111 Energy Control Strategies, 10481115 Lighting Fundamentals

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

GENERAL PHYSICS 1...presents the applications and theory of basic physics principles. This course emphasizes problem-solving, laboratory investigation, and applications. Topics include unit conversions and analysis, vectors, translational and rotational kinematics, translational and rotational dynamics, heat and temperature, and harmonic motion and waves. PREREQUISITE: 10804113 College Tech Math 1A, 10804115 College Tech Math 1, or 10804118 Intermediate Algebra, or Math placement assessment equivalent

INTRO TO ENERGY MANAGEMENT...introduces the basic concepts of energy, utility systems, and utility rate structures; defines the need for energy management as an integral part of society at all levels. The course will present the various opportunities available to energy management students. Course Typically Offered: Fall

INTRODUCTION TO DIVERSITY STUDIES...introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

LIGHTING FUNDAMENTALS...emphasizes light sources, luminaries, lighting controls, manufacturer lamp and ballast specifications, lighting power density, lighting-HVAC interactions, retrofit opportunities, cost savings analysis and lighting codes/regulations. Students will critically evaluate lighting systems, luminaries and associated components. Understand and perform various types of lighting calculations. PREREQUISITE: 10481114 Intro to Energy Mngmnt. Course Typically Offered: Fall

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

POWER ELECTRONICS 1: DRIVES...the device characteristics and applications of thyristors, power transistors, and switching devices.

PROJECT MANAGEMENT...the role of project management, developing a project proposal, use of relevant software, working with project teams, sequencing tasks, charting progress, dealing with variations, budgets and resources, implementation, and assessment.

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY...prepares the student to understand basic PLC structure and terminology; learn to create and troubleshoot basic PLC programs using the RSLOGIX 500 software and the RSLINX communication software; become familiar with communicating with programming SLC-500 PLCs. This course is highly computer based.

PUMPS: INTRO TO FLUID MOVING DEVICES...provides the opportunity for the learner to develop the knowledge, skills, and understanding of pumps, the different classifications of pumps, the inner workings, general maintenance and pumping theory.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-506-2

Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

This associate degree program is designed to meet the need for environmental engineering technicians in Northeast Wisconsin. As a program grad, you're equipped with skills to analyze and test water, wastewater, air, and solid waste to ensure environmental protection and compliance while maintaining community health and safety. Typical careers include environmental engineering technician, water and waste water treatment plant and system operator, water resource specialist, environmental lab technician, environment compliance officer, water quality sampler, quality control inspector, and recycling coordinator. Program students have the option to be certified in 40 hour HAZWOPER WDNW Wastewater, Water, and/or Landfill Operator with completion of coursework and independent testing. With additional education, you may receive a BS in Environmental Engineering Technology.

PROGRAM OUTCOMES

- Create environmental reports in accordance with applicable standards.
- Perform safe work practices.
- Examine the effects of pollution.
- Evaluate environmental hazards.
- Utilize problem solving skills for DNR certification.

ADMISSION TO DO'S

- Work with NWTC Admissions Specialist to:
 - Submit application and \$30 fee to NWTC.
 - Complete the online Student Success Questionnaire.
- Meet with NWTC program advisor to discuss program details.
- Meet with LTC program counselor to discuss program details.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

This program is shared with Northeast Wisconsin Technical College (NWTC) in Green Bay. LTC students follow NWTC's admission process; however, they are able to attend 20 credits at the LTC Cleveland campus and the remainder of the credits (45) at NWTC Green Bay.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

CONTACT

NWTC:

Stephanie Willson-Wellhouse, Academic Advisor
 920.498.6386 • stephanie.wilsonwellhouse@nwtc.edu

LTC:

Alison Driscoll, Program Counselor
 920.693.1610 • alison.driscoll@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10890101	College 101 (<i>Held at NWTC</i>)	1
10506146	Intro to Environmental Science (<i>Held at NWTC</i>)	3
10506147	Environmental Biology (<i>Held at NWTC</i>)	4
10103121	Excel - Level 1	1
10804113	College Technical Math 1A	3
10806134	General Chemistry	4
		16
Term 2		
10506168	Intro to GIS (<i>Held at NWTC</i>)	2
10506148	Environmental Chemical Analysis (<i>Held at NWTC</i>)	4
10607236	AutoCAD & Civil 3D (<i>Held at NWTC</i>)	3
10506161	Hydraulics and Hydrology (<i>Held at NWTC</i>)	3
10804114	College Tech Math 1B (<i>Held at NWTC</i>)	2
10801195	Written Communications	3
		17
Term 3		
10620220	Pumps: Fluid Moving Devices (<i>Held at NWTC</i>)	1
10506175	Wastewater Treatment-Liquid (<i>Held at NWTC</i>)	3
10506176	Wastewater Treatment-Solids & Adv (<i>Held at NWTC</i>)	3
10506169	Environmental Engineering Internship (<i>Held at NWTC</i>) OR 10481114 Intro to Energy Mgmt (3 cr) OR 10093350 Nutrient Mgmt Planning/Compliance (3 cr)	3
10801196	Oral/Interpersonal Communications	3
10809198	Introduction to Psychology	3
		16
Term 4		
10506152	Industrial Safety & Emergency Response (<i>Held at NWTC</i>)	3
10506163	Solid & Hazardous Waste (<i>Held at NWTC</i>)	2
10506164	Air Pollution Control Systems (<i>Held at NWTC</i>)	2
10506166	Ground Water & Distribution (<i>Held at NWTC</i>)	3
10506167	Surface Water & Distribution (<i>Held at NWTC</i>)	3
10809172	Introduction to Diversity Studies	3
		16
		TOTAL 65

Term 1 & 2: NWTC classes are held on Tuesdays & Thursdays
 Term 3 & 4: NWTC classes are held on Mondays & Wednesdays

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AIR POLLUTION CONTROL SYSTEMS...identifies air quality problems, federal & state regulatory mechanisms, and types of emission control technology currently available. Monitoring emissions and ambient air quality are addressed. Course Typically Offered: Spring

AUTOCAD AND CIVIL 3D...covers AutoCAD working with templates, creating and manipulating layers; basic drawing, editing, and inquiry commands; blocks and attributes and plotting. Learners will also develop the ability to use AutoCAD Civil 3D in working with survey data, points and surfaces; site design features including parcels, alignments, profiles, grading, quantities and managing data. PREREQUISITE: acceptance to the Civil Engineering Technology program or Environmental Engineering Technology program

COLLEGE 101...students will utilize digital tools and resources to assess, explore, practice, apply, and evaluate both employability and learning skills. By establishing NWTC cultural values as hallmarks of success in academic, career, and personal settings the course encourages reflective, personalized development of a growth mindset and emphasizes the importance of making wise choices. To maximize the return on investment, students should take this course in their first semester as it identifies key expectations (hidden rules) of higher learning and professional employment.

COLLEGE TECHNICAL MATH 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w/Apps or 10804107 College Mathematics or 31457318 Ind Mtn Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

COLLEGE TECHNICAL MATH 1B...is a continuation of College Technical Math 1A. Topics include: measurement systems; computational geometry; right and oblique triangle trigonometry; and trigonometric functions on the unit circle. Emphasis will be on the application of skills to technical problems. PREREQUISITE: 10804196 College Tech Math 1A or 10804113 College Tech Math 1A or Math placement assessment equivalent or COREQUISITE: 10804118 Intermediate Algebra with Applications

ENVIRONMENTAL BIOLOGY...examines environmental problems from scientific, ethical, economic and sociological perspectives. Emphasis is placed on protection of the human environment with discussion of environmental issues and environmentally related public health concerns. PREREQUISITE: accepted into Environmental Engineering program or preprogram. Course Typically Offered: Fall

ENVIRONMENTAL CHEMICAL ANALYSIS...engages students in performing laboratory techniques to determine the suitability of supply sources and purification processes in the water and wastewater industries. PREREQUISITES: 10806134, General Chemistry with a "C" or better; 10804118, Intern Algebra w/Apps with a "C" or better. Course Typically Offered: Spring

ENVIRONMENTAL ENGINEERING INTERNSHIP...provides supervised on-the-job training in the application of theory, skills, and techniques in the Environmental Engineering profession. The internship earns three associate degree credits when 180 hours of work experience has been completed. Minimum instructor approval required.

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

GENERAL CHEMISTRY...covers fundamentals of chemistry. Topics include the metric system, problem-solving, periodic relationships, chemical reactions, chemical equilibrium, properties of water; acids, bases, and salts; and gas laws. PREREQ: 10804113 Col Tech Math 1A, 10804109 Alg-Gen Chem, 10804195 or 10804115 Col Tech Math 1, 10804107 Col Math, 10804118 Intrm Alg w/Apps, or 10834110 Elem Alg or Math plcmnt assmnt equiv & COREQ: 10838105 Intro Rdg & Stdy Sk or Rdg plcmnt assmnt equiv

GROUND WATER & DISTRIBUTION...introduces learner to the physical, chemical, & biological principles of operation of groundwater and distribution systems. The basic unit processes, control parameters, and mathematical problem-solving related to groundwater facilities & distribution systems are introduced. Laboratory procedures and practices involved with operation of water analysis & treatment. PREREQS: 10506148 Env Chem Analysis; 10804118 Intern Algebra w/Apps. Course Typically Offered: Spring

HYDRAULICS AND HYDROLOGY...instructs the learner in hydrostatic pressure, continuity of flow, conservation of energy, flow in pipes under pressure, open channel flow, sewer design, rainfall, urban and agricultural runoff. PREREQUISITE: 10804113, College Technical Math 1A with a "C" or better

INDUSTRIAL SAFETY & EMERGENCY RESPONSE...emphasizes state and federal regulations related to worker safety, industrial hygiene, and response to emergency situations. Emphasis is placed on response to releases of hazardous materials. Course Typically Offered: Fall

INTRO TO ENERGY MANAGEMENT...introduces the basic concepts of energy, utility systems, and utility rate structures; defines the need for energy management as an integral part of society at all levels. The course will present the various opportunities available to energy management students.

INTRO TO ENVIRONMENTAL SCIENCE...is an introduction to the basic principles of environmental science including ecology, energy, resources, waste management, air, water, and soil pollution. Course Typically Offered: Fall

INTRO TO GIS...instructs learner in the terminology, software operation and interface, the creation and analysis of digital maps, and explores the data behind the maps in Geographic Information Systems. GIS is used to visualize real-world features, obtain information, and communicate the information to others. Course Typically Offered: Fall

INTRODUCTION TO DIVERSITY STUDIES...introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

NUTRIENT MANAGEMENT PLANNING AND COMPLIANCE...prepares student to be proficient in basic soil fertility and fertilizers with an emphasis on manure. This includes a basic understanding of crop fertility requirements and soil pH impacts. Soil lab analysis and field mapping will be integrated through the use of SNAP Plus as an industry standard in nutrient management planning software. Students will be prepared to complete the CCA certified crop advisor exam allowing them to write nutrient management plans. PREREQUISITE: 10090302 Basic Soils

ORAL/INTERPERSONAL COMMUNICATIONS...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PUMPS: INTRO TO FLUID MOVING DEVICES...provides the opportunity for the learner to develop the knowledge, skills, and understanding of pumps, the different classifications of pumps, the inner workings, general maintenance and pumping theory. Course Typically Offered: Fall

SOLID AND HAZARDOUS WASTE...identifies the hierarchy of and regulations related to solid and hazardous waste, the waste stream, pollution prevention and disposal strategies. Learn detection techniques and proper transporting and handling methods. Course Typically Offered: Spring

SURFACE WATER & DISTRIBUTION...physical, chemical, and biological principles of operation of surface water treatment and distribution systems. The basic unit processes, control parameters, and mathematical problem-solving related to surface water treatment facilities and distribution systems are introduced, as well as the laboratory procedures and practices involved with operation of water analysis and treatment. PREREQUISITES: 10506148 Environmental Chem Analysis; 10804118 Intern Algebra w/Apps. Course Typically Offered: Spring

WASTEWATER TREATMENT-LIQUID...provides the learner with the physical, chemical, and biological principles associated with treating liquid flow streams in municipal and industrial wastewater treatment facilities. The basic unit processes, control parameters, hydraulics and mathematical problem-solving related to collection systems and treatment facilities are introduced. Laboratory procedures and practices involved with operation of liquid treatment processes. PREREQUISITE: 10506148 Environmental Chem Analysis

WASTEWATER TREATMENT-SOLIDS AND ADVANCED...provides the learner with the physical, chemical, and biological principles associated with advanced treatment of liquid flow streams and treatment of residual solids in municipal and industrial wastewater treatment facilities. The basic unit processes, control parameters, hydraulics and mathematical problem-solving related to advanced liquid and solids treatment facilities are introduced. Laboratory procedures and practices involved with operation of advanced liquid and solids treatment processes. PREREQUISITE: 10506175 Wastewater Treatment-Liquid

WRITTEN COMMUNICATIONS...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-531-2
Associate Degree in Applied Science • Four Terms
ABOUT THE PROGRAM

A Firefighter Paramedic (Fire Medic) protects life and property through fire suppression, rescue, prevention, and emergency medical treatment capabilities. Graduates are highly trained in the modern firefighting techniques and Paramedic skills necessary to make them successful in the dynamic emergency services environment.

PROGRAM OUTCOMES

- Perform essential firefighting and paramedic skills for life safety, incident stabilization, and property conservation.
- Create and execute the objectives of an incident action plan for the diverse emergency incident to be encountered.
- Use effective interpersonal communication skills in emergency and nonemergency environments.
- Apply the critical skills of fire prevention, fire investigation, fire inspection, and public education to minimize the loss of life and property.
- Operate fire service equipment and apparatus effectively and efficiently.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned advisor to discuss motor vehicle record, discuss EMT license requirements, plan your first semester schedule, review your entire plan of study, and discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- The Lakeshore Technical College Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). 25400 US Highway 19 N., Suite 158, Clearwater, FL 33756. Phone: 727-210-2350. Web: www.caahep.org.
- Students will be required to acquire a Wisconsin Commercial Driver's Instructional Permit during the Fire Apparatus Engineer course.
- Lakeshore Technical College's Paramedic Technician program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examination, or licensure for other states.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Spring Start)		
10503145	Firefighting Principles 1	2
10503146	Firefighting Principles 2	2
10503913	Company Level Inspections	1
10801195	Written Communication	3
10809198	Introduction to Psychology	3
10801196	Oral/Interpersonal Communication	3
		14
Term 2		
10503107	Fire Apparatus Engineer	3
10503144	Advanced Firefighting Concepts	2
10503914	Fire Rescue Scenarios	1
10806189	Basic Anatomy	3
10809166	Introduction to Ethics	3
		12
Term 3		
10531911	EMS Fundamentals	2
10531912	Paramedic Medical Principles	4
10531913	Advanced Patient Assessment Principles	3
10531914	Advanced Prehospital Pharmacology	3
10531915	Paramedic Respiratory Management	2
10531916	Paramedic Cardiology 1	1
10531926	Paramedic Essentials 1	1
10531930	Paramedic Clinical 1	1
		17
Term 4 (Summer)		
10531918	Advanced Emergency Resuscitation	1
10531922	EMS Operations	1
10531920	Paramedic Trauma	3
10531928	Paramedic Clinical 2	2
10531927	Paramedic Essentials 2	1
10531932	Paramedic Cardiology 2	3
		11
Term 5		
10531919	Medical Emergencies	4
10531921	Special Patient Populations	3
10531923	Paramedic Capstone	1
10531929	Paramedic Field Clinical	2
10531931	Paramedic Internship	1
10531933	Paramedic Essentials 3	1
		12
		TOTAL 66

Term 1 (Spring Start)

Catalog No.	Class Title	Credit(s)
10503145	Firefighting Principles 1	2
10503146	Firefighting Principles 2	2
10503913	Company Level Inspections	1
10801195	Written Communication	3
10809198	Introduction to Psychology	3
10801196	Oral/Interpersonal Communication	3
		14

Term 2

10503107	Fire Apparatus Engineer	3
10503144	Advanced Firefighting Concepts	2
10503914	Fire Rescue Scenarios	1
10806189	Basic Anatomy	3
10809166	Introduction to Ethics	3
		12

Term 3

10531911	EMS Fundamentals	2
10531912	Paramedic Medical Principles	4
10531913	Advanced Patient Assessment Principles	3
10531914	Advanced Prehospital Pharmacology	3
10531915	Paramedic Respiratory Management	2
10531916	Paramedic Cardiology 1	1
10531926	Paramedic Essentials 1	1
10531930	Paramedic Clinical 1	1
		17

Term 4 (Summer)

10531918	Advanced Emergency Resuscitation	1
10531922	EMS Operations	1
10531920	Paramedic Trauma	3
10531928	Paramedic Clinical 2	2
10531927	Paramedic Essentials 2	1
10531932	Paramedic Cardiology 2	3
		11

Term 5

10531919	Medical Emergencies	4
10531921	Special Patient Populations	3
10531923	Paramedic Capstone	1
10531929	Paramedic Field Clinical	2
10531931	Paramedic Internship	1
10531933	Paramedic Essentials 3	1
		12

TOTAL 66

To contact CoAEMSP:
 8301 Lakeview Parkway, Suite 111-312
 Rowlett, TX 75088
 214-703-8445 Fax 214-703-8992
www.coaemsp.org

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ADVANCED EMERGENCY RESUSCITATION...provides ACLS and PALS knowledge and skills preparing the student in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri-arrest with intervention to prevent respiratory and/or cardiac arrest if possible. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531916 Paramedic Cardiology

ADVANCED FIREFIGHTING CONCEPTS...advances previously learned concepts to build a stronger foundation while exposing the learner to new concepts such as vehicle extrication, technical rescue, flammable liquids fire suppression, and team leadership/management. This course meets the requirements of NFPA 1001 for the Firefighter II level. PREREQUISITE: 10503142 Firefighting Principles

ADVANCED PATIENT ASSESSMENT PRINCIPLES...provides knowledge of scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. CONDITION: 105311 Paramedic Tech or 315311 EMT Paramedic or 105312 Fire Medic program reqs met and COREQUISITE: 10531912 Paramedic Medical Principles

ADVANCED PREHOSPITAL PHARMACOLOGY...provides student with comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the health of the patient. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program reqs met and COREQUISITE: 10531913 Adv Patient Assessment Principles

BASIC ANATOMY...examines concepts of anatomy and physiology as they relate to health careers. Learners correlate anatomical and physiological terminology to all body systems. COREQUISITE: 10838105 Intro Rdg & Study Skills or Reading placement assessment equiv

COMPANY LEVEL INSPECTIONS...familiarizes the students with state and local regulations and national codes relating to fire prevention. The course presents the necessary information for performing company level fire inspections.

EMS FUNDAMENTALS...provides comprehensive knowledge of EMS systems, safety, well-being, legal issues and ethical issues with intended outcome of improving EMS personnel, patients and the community. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and PREREQUISITES: 10531102 EMT Basic or 30531301 EMT Part 1 or EMT WI License

EMS OPERATIONS...provides knowledge of operational roles and responsibilities to ensure patient, public & EMS personnel safety. CONDITION: 105311 Paramedic Tech or 315311 EMT Paramedic or 105312 Fire Medic prog reqs met and COREQ: 10531918 Adv Emerg Resuscitation

FIRE APPARATUS ENGINEER...prepares firefighters to drive & operate fire department emergency apparatus. The course presents theories of hydraulics applied to the fire service, with emphasis on mathematics, and formulas used in operating fire apparatus pumps. Students receive lecture and practical training on maintenance, driving, operating on-board pumps and equipment, and apparatus testing. Course content meets the NFPA 1002 requirement for fire department pumper driver/operator. COURSE REQUIRES STUDENTS TO HAVE A CDL INSTRUCTIONAL PERMIT BY THE 3RD WEEK OF CLASS. PREREQ: 10503142 Firefighting Principles

FIRE RESCUE SCENARIOS...reinforces student learning through practice of firefighting skills in a controlled environment utilizing simulation and realistic fire-rescue scenarios with the guidance of instructors. COREQUISITES: 10503144 Advanced Firefighting Concepts and 10503107 Fire Apparatus Engineer

FIREFIGHTER PRINCIPLES PART 1...builds the foundation for a successful firefighting career. Topics presented will include personal protective equipment, firefighter safety, search and rescue, forcible entry, hoselines, awareness of hazardous materials, nozzles, salvage and overhaul, ground ladders, and entry level interior and exterior firefighting. Students successfully completing this course will meet the Wisconsin requirements for an entry level firefighter. CONDITION: 105312 Fire Medic enrollment requirements met

FIREFIGHTER PRINCIPLES PART 2...advances on the foundations presented in Part 1. Students will acquire the remaining job performance requirements to meet National Firefighter level I qualifications. Topics will include: history of the fire service, ropes and knots, advanced forcible entry, size up and response priorities, fireground communications, hazardous materials operations, and preparation for the Firefighter Level I examination process. COREQUISITE: 10503145 FF Principles Part 1

INTRODUCTION TO ETHICS: THEORY AND APPLICATION...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. COREQ: 10838105 Intro Rdg & Study Skills or Rdg plcmnt assessment equiv

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQ: Rdg plcmnt assessment equiv or COREQUISITE: 10838105 Intro Rdg & Study Skills

MEDICAL EMERGENCIES...provides the student the skills to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a treatment plan for an acutely injured patient. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531918 Advanced Emergency Resuscitation

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PARAMEDIC CAPSTONE...provides the final opportunity to incorporate knowledge and skills through labs and scenario-based practice and evaluations prior to taking the NREMT written and practical exams. CONDITION: 105311 Paramedic Tech or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531922 EMS Operations

PARAMEDIC CARDIOLOGY 1...provides the principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and a plan for a patient with a cardiovascular complaint. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531915 Paramedic Respiratory Management

PARAMEDIC CARDIOLOGY 2...continues the paramedic's knowledge of cardiology. Incorporates basic and advanced electrocardiogram rhythm interpretation as well as introduces students to Advanced Cardiovascular Life Support (ACLS).

PARAMEDIC CLINICAL 1...allows paramedics their first experiences providing advanced level skills and assessments on patients in a healthcare setting. Students will be assigned to an area hospital to begin their clinical training and meeting their assigned clinical competencies. Activities may include rotations within hospital emergency departments, operating rooms, intensive care units, and/or rotations with lab or respiratory staff. COREQUISITE: 10531911 EMS Fundamentals and CONDITION: 15311 Paramedic Technician or 105312 Fire Medic or 315311 EMT Paramedic program admission requirements met

PARAMEDIC CLINICAL 2...provides student with the opportunity to enhance their learning through the skills practice in a health care environment experience with actual patients under the supervision of approved preceptors or high-fidelity human patient simulator. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic Program Requirements Met and COREQUISITE: 10531930 Paramedic Clinical 1

PARAMEDIC ESSENTIALS 1...reinforces student learning through practice of paramedicine in a controlled supervised environment utilizing hands on skills performed on simulated live patients and high-fidelity manikins and anatomy models. The student will apply assessment and skill knowledge while demonstrating paramedic level skills in a variety of scenarios and environments.

PARAMEDIC ESSENTIALS 2...reinforces student learning through practice of paramedicine in a controlled supervised environment utilizing hands on skills performed on simulated live patients and high-fidelity manikins and anatomy models. The student will evaluate patient presentations in short scenarios, formulate and reassess treatment plans while performing skills need to carry out patient treatments. Students will participate in learning and demonstrate first responder health and wellbeing during this section. CONDITION: 105311 Paramedic Tech or 105312 Fire Medic or 315311 EMT Paramedic program admission reqs met

PARAMEDIC ESSENTIALS 3...provides a continued growth in patient assessment, treatment plans and skills working toward the mastery of paramedic level patient care. The focus of this sections will include complete patient care, team management, responder health and wellbeing, and daily operations. Students will demonstrate mastery of knowledge and skills in classroom activities and extended scenarios.

PARAMEDIC FIELD CLINICAL...provides student with the opportunity to enhance their learning through the practice in the prehospital environment with actual patients under the supervision of approved preceptors. Students will be assigned to an area Paramedic ambulance service provider to incorporate their previously acquired capabilities into prehospital patient care. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531918 Advanced Emergency Resuscitation

PARAMEDIC INTERNSHIP...demonstrates to paramedic students their team leadership capabilities while assessing, formulating treatments plans, and delegating tasks to their EMS team members. Students will be assigned to an area paramedic ambulance service to complete requirements during this capstone field internship.

PARAMEDIC MEDICAL PRINCIPLES...provides the knowledge of anatomy, physiology and pathophysiology of major human systems while also introducing the students to shock, immunology and bleeding. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531911 EMS Fundamentals

PARAMEDIC RESPIRATORY MANAGEMENT...provides specific knowledge pertaining to the respiratory system and to ensure the student is prepared to formulate a field impression and implement a comprehensive treatment plan for a respiratory complaint. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531914 Advanced Prehospital Pharmacology

PARAMEDIC TRAUMA...provides the student the skills to integrate assessment findings with principles of anatomy, physiology, epidemiology and pathophysiology to formulate a field impression and implement a treatment plan for an acutely injured patient. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program reqs met

SPECIAL PATIENT POPULATIONS...provides the student the skills to integrate assessment findings with principles of anatomy, physiology, epidemiology and pathophysiology to formulate a field impression and implement a treatment plan for patient with special needs. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531920 Paramedic Trauma

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

Have you been told you have creative and visualization skills? Do you enjoy analyzing design decisions and often think it could have been done better? If you are attracted to the design elements of color, type, shape, illustration, and layout, then creating web sites and print-ready design solutions can be a very satisfying career choice. Graphic and web designers often thrive on competition and creative license; however, they must constantly adapt to the best solutions for the client. This field can draw out your creative talents and expand your business and marketing expertise. A minimum keyboarding skill of 25 wpm is recommended.

PROGRAM OUTCOMES

- Apply the principles of design to develop strategic marketing and communication products and services.
- Demonstrate proficiency in the use of design software, tools, and technology.
- Implement creative solutions from concept through completion using a formal process.
- Apply effective legal and ethical business practices and project management skills.
- Communicate artwork rationale in formal and informal settings.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTES

- Students are required to purchase specific Adobe Creative Cloud software. A student discount price is available at adobe.com.
- Students will be required to purchase hosting and domain registration in Term 3. The approximate cost is \$50.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10201101	Design Fundamentals	3
10201108	Photoshop	3
10201109	Illustration	3
10801195	Written Communication	3
10809198	Introduction to Psychology	3
		15
Term 2		
10103121	Excel - Level 1	1
10103191	Word - Level 1	1
10152196	Web Development 1	3
10201110	InDesign	3
10201114	Typography	2
10201115	Digital Photography	2
10804123	Math with Business Applications OR	3
10806112	Principles of Sustainability	3
		15
Term 3		
10152122	Multimedia Concepts	3
10201117	Career Essentials	2
10201118	Advancements in Web and Development	2
10201173	Website Development Advanced	3
10801196	Oral/Interpersonal Communication	3
10809196	Introduction to Sociology	3
		16
Term 4		
10152106	Integrated Web Concepts	4
10201103	Advanced Computer Graphics	3
10201105	Internship for Graphics and Web Design	1
10201113	Publication Design	3
10809195	Economics	3
		14
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

ADVANCED COMPUTER GRAPHICS...provides the learner with enhanced knowledge and skill in the use of design, illustration, and page layout software through the creation of a variety of design projects. Emphasis is on original, strong images and type integration, as well as preparing files for press. Students must participate in the spring portfolio show. PREREQ: 10201101 Design Fund, 10201110 InDesign, 10201173 or 10152118 or 10201119 Website Dev Advanced and COREQ: 10152106 Integrated Web Concepts and 10201113 Publication Design and CONDITION: 102012 Graphic and Web Design admission requirements met

ADVANCEMENTS IN WEB AND DEVELOPMENT...building on the competencies from Web Development 1, this course introduces students to additional web-related topics such as usability, web analytics, and search engine optimization. PREREQUISITE: 10152196 Web Development 1

CAREER ESSENTIALS...will teach students how to create effective career documents for a job search such as Graphic and Web Designer including resume, business card, and cover letter. Students will also learn how to set up a freelance business, how to find jobs as a freelancer, and the basics of owning their own business. Students will analyze their design strengths and gather portfolio artifacts that showcase their skills in the Graphic and Web Design field. COREQUISITE: 10201173 Web Development Advanced or 10201119 Web Development Advanced

DESIGN FUNDAMENTALS...introduces the learner to the elements of art (line, texture, color, shape and value.) Students will investigate how these elements can be manipulated using various principles of design to achieve different effects. Basic color theory, historic eras, and emerging trends will be covered.

DIGITAL PHOTOGRAPHY...will help the individual understand photographic principles and file manipulation. Through in-class discussions, audio visuals, camera demonstrations, and in-the-field shooting sessions, the individual will learn shooting and lighting techniques designed to capture a better image. Printing, cropping, retouching and file management will also be covered. PREREQUISITE: 10201108 Photoshop

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

ILLUSTRATION...prepares the learner to use Adobe's standard vector graphics software to create digital art. The course will cover the basics of computer illustration and its use in print and web media. Students will work with objects, the pen, brushes, text, color, special effects, symbols, and gradients as they create portfolio-quality art.

INDESIGN...prepares the learner to use a professional page layout program. Learners will develop brochures, mailers, business documents and newsletters by implementing text layout techniques, using multiple master pages, managing styles, using text adjustment tools, working with libraries, and managing long documents for print production. Projects developed will be used to build the students' portfolio. PREREQUISITE: 10201101 Design Fundamentals and 10201108 Photoshop

INTEGRATED WEB CONCEPTS...introduces students in the Web and Software Developer, Graphic and Web Design, and Marketing programs to working within interdisciplinary teams. Through the building of all aspects of an application, each team will select and utilize design thinking processes and US/UI tools, prototype potential design solutions, ask for, give, and receive directive feedback, and effectively communicate and persuasively present ideas to an interdisciplinary audience. PREREQUISITE: 10104136 Retail Marketing and 101043Mktg req met or 10152109 Object-Oriented Program 1, 10152123 Mobile Device Dev 1 and 101527 IT Web and Soft Dev req met or 10201173 or 10201119 Web Dev Advanced and 102012 Graphic and Web Design req met

INTERNSHIP FOR GRAPHIC AND WEB DESIGN...requires students to complete 72 hours of performing work in a business/industrial service setting related to their program objectives. Students are responsible for seeking and obtaining the internship workstation position. Course requirements include maintaining a log of work activities, identifying and receiving approval from the job supervisor and instructor, and completing a work-related project. The field study may be substituted based on instruction decision. Students meet periodically at LTC. COREQUISITE: 10201113 Publication Design and CONDITION: Verification of eligibility by the Internship Coordinator

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

MULTIMEDIA CONCEPTS...will teach students how to create various multimedia elements including video, audio, and basic animation. PREREQUISITE: 10152196 Web Development 1

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

PHOTOSHOP...introduces the learner to using Adobe Photoshop to edit, enhance, and combine digital images which are prepared for print and web media. Topics will include photo correction, masks, channels, page backgrounds, brushes and optimizes images for web use.

PUBLICATION DESIGN...will focus on creating and designing print material using desktop publishing software. A variety of documents, including brochures, annual reports, flyers, magazine articles, and multipage documents are created. Integrating Microsoft Office products with Adobe products are explored. The emphasis is on design and preparing files for print. PREREQUISITE: 10201110 InDesign, 10201108 Photoshop, 10201109 Illustration

TYPOGRAPHY...introduces the learner to the fundamentals of Typography. Emphasis is on the structure and form of type and how it is used in contemporary graphic design. Projects explore the history of type, and the creation of design using type elements. COREQUISITE: 10201110 InDesign and CONDITION: 102012 Graphic and Web Design admission requirements met

WEB DEVELOPMENT 1...introduces the students to web page design principles and proceeds to teach students how to create their own visually appealing designs for the web. Students will have hands-on experience using current versions of Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) to code and format accessible, valid, and optimized websites. Websites will be published live on the web using FTP. Students also explore recent trends in web design and development.

WEBSITE DEVELOPMENT ADVANCED...builds on student knowledge of web design software. Student knowledge is extended beyond basic page design to include web page interaction and dynamic page building. Students will have hands-on experience developing complex web pages. PREREQUISITE: 10152196 Web Development 1

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

This field is where healthcare meets the cutting edge of technology! Health Information Technicians are specialists in great demand! The HIM professionals can expect to be in high demand as the health sector expands into the century. In fact, the Bureau of Labor Statistics cites health information technology as one of the fastest growing occupations in the U.S. Health Information Technicians contribute to the quality of care by collecting, analyzing, and reporting health care data. This requires knowledge of disease, treatments, computer systems, and organizational skills.

PROGRAM OUTCOMES

- Manage health data.
- Apply coding and reimbursement systems.
- Model professional behaviors and ethics.
- Maintain electronic applications to manage health information.
- Apply organizational management techniques.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Read the program handbook and submit the signed signature page.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.

APPROXIMATE COSTS

• \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Lakeshore Technical College's Health Information Management Associate degree program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIM).

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10501101	Medical Terminology	3
10103191	Word - Level 1	1
10501107	Digital Literacy for Healthcare	2
10530182	Human Diseases for Health Professions	3
10530162	Foundations of HIM	3
10806189	Basic Anatomy OR 108061889OL Basic Anatomy (3 cr) OR 10806177 General Anatomy & Physiology (4 cr)	3
		15
Term 2		
10801195	Written Communication	3
10530164	Intro to Health Informatics	3
10809172	Introduction to Diversity Studies	3
10103121	Excel - Level 1	1
10530178	Healthcare Law and Ethics	2
10530197	ICD Diagnosis Coding	3
10103101	Access - Level 1	1
		16
Term 3		
10530184	CPT Coding	3
10809198	Introduction to Psychology	3
10530199	ICD Procedure Coding	2
10530191	HIM/Coding Practicum 1	2
10801196	Oral/Interpersonal Communication	3
10809196	Introduction to Sociology	3
		16
Term 4		
10530159	Healthcare Revenue Management	3
10530193	Healthcare Quality Management	2
10530177	Healthcare Stats & Research	2
10530194	HIM Organizational Resources	2
10530165	Intermediate Coding	3
10530192	HIM Practicum 2	2
		14
		TOTAL 61

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ACCESS - LEVEL 1...introduces students to the process of creating a database, building and populating a table, establishing table relationships, and creating queries, forms, and reports.

BASIC ANATOMY...examines concepts of anatomy & physiology as they relate to health careers. Learners correlate anatomical and physiological terminology to all body systems. COREQ: 10838105 Intro Rdg & Study Skills or Rdg plcmnt assessment equiv

CPT CODING...prepares learners to assign CPT codes, supported by medical documentation, with entry-level proficiency. Learners apply CPT instructional notations, conventions, rules, and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation. COREQ: 10530182 Human Dis for Hlth Prof and 10530159 Healthcare Revenue Mgmt and PREREQUISITE: 10501101 Med Term and 10530162 Found of HIM and CONDITION: 315302 Medical Coding Spec or 105304 Health Information Mgmt program requirements met

DIGITAL LITERACY FOR HEALTHCARE...focuses on the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined.

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

FOUNDATIONS OF HIM...introduces learners to the healthcare delivery system, and the external forces that influence healthcare delivery. Sets an understanding for the expectations and standards related to professional ethics, confidentiality and security of health information. Differentiates the use and structure of healthcare data elements, data standards, and the relationships between them. Prepares learners to collect and maintain health data to ensure a complete and accurate health record. COREQUISITE: 10501107 Digital Literacy for Healthcare

HEALTHCARE LAW & ETHICS...examines regulations for the content, use, confidentiality, disclosure, and retention of health information. An overview of the legal system and ethical issues are addressed. PREREQUISITE: 10530162 Fndtns of HIM

HEALTHCARE QUALITY MANAGEMENT...explores the programs and processes used to manage and improve healthcare quality. Addresses regulatory requirements as related to performance measurement, assessment, and improvement, required monitoring activities, risk management and patient safety, utilization management, and medical staff credentialing. Emphasizes the use of critical thinking and data analysis skills in the management and reporting of data. PREREQUISITE: 10530162 Foundations of HIM

HEALTHCARE REVENUE MANAGEMENT...prepares learners to compare and contrast health care payers, illustrate the reimbursement cycle, and to comply with regulations related to fraud and abuse. Learners assign payment classifications with entry level proficiency using computerized encoding and grouping software. PREREQUISITE: 10530162 Foundations of HIM and COREQUISITES: 10530184 CPT Coding, 10530197 ICD Diagnosis Coding, and 10530199 ICD Procedure Coding

HEALTHCARE STATS & RESEARCH...explores the management of medical data for statistical purposes. Focuses on descriptive statistics, including definitions, collection, calculation, compilation, and display of numerical data. Vital statistics, registries, and research are examined. PREREQUISITE: 10103121 Excel - Level 1 and 10530162 Foundations of HIM

HIM ORGANIZATIONAL RESOURCES...examines the principles of management to include planning, organizing, human resource management, directing, and controlling as related to the health information department. PREREQUISITE: 10530162 Foundations of HIM

HIM PRACTICUM 2...applies previously acquired skills and knowledge and discussion of clinical situations. Prepares for the certification examination and pre-graduation activities. This is the second of a two-semester sequence of supervised technical and managerial/clinical experiences in health care facilities. PREREQUISITE: 10530191 HIM/Coding Practicum 1 and 10530162 Foundations of HIM and CONDITION: 105304 Health Information Management program requirements met

HIM/CODING PRACTICUM 1...applies previously acquired skills and knowledge by means of clinical experiences in the technical procedures of health record systems and discussion of clinical situations. PREREQ: 10530162 Found of HIM, COREQS: 10530165 Intermediate Coding, 10530197 ICD Diagnosis Coding, 10530199 ICD Procedure Coding, 10530184 CPT Coding, CONDITION: 315302 Medical Coding Spec or 105304 Health Information Management program requirements met

HUMAN DISEASE FOR HEALTH PROFESSIONS...prepares learners to interpret clinical documentation they will encounter in a variety of healthcare settings. Emphasis placed on understanding the common disorders and diseases of each body system to include the etiology (cause), signs & symptoms, diagnostic tests and results, and medical treatments & surgical procedures. COREQUISITES: 10501101 Med Term

ICD DIAGNOSIS CODING...prepares students to assign ICD diagnosis codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation. PREREQUISITE: 10501101 Medical Terminology and 10530162 Found of HIM and COREQUISITES: 10530182 Human Diseases for the Health Professions and 10530159 Healthcare Revenue Management or 10501102 Health Ins and Reimbursement

ICD PROCEDURE CODING...prepares students to assign ICD procedure codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation. PREREQUISITE: 10501101 Medical Terminology and 10530162 Found of HIM and COREQUISITES: 10530182 Human Diseases for the Health Professions and 10530159 Healthcare Revenue Management or 10501102 Health Ins and Reimbursement

INTERMEDIATE CODING...prepares students to assign ICD and CPT/HCPCS codes supported by medical documentation and official coding guidance to support appropriate reimbursement. Students participate in CDI activities, including preparation of appropriate physician queries in accordance with compliance guidelines. PREREQ: 10501101 Medical Terminology and 10530162 Found of HIM and COREQUISITES: 10530197 ICD Diagnosis Coding, 10530199 ICD Procedure Coding and 10530184 CPT Coding, 10530159 Healthcare Revenue Mgmt or 10501102 Health Ins and Reimb

INTRO TO HEALTH INFORMATICS...emphasizes the role of information technology in healthcare through an investigation of the electronic health record (EHR), business, and health information software applications. Learners will develop skills to assist in enterprise information management and database architecture design and implementation. PREREQUISITES: 10530162 Foundations of HIM and 10501107 Digital Literacy for Healthcare

INTRODUCTION TO DIVERSITY STUDIES...introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

MEDICAL TERMINOLOGY...focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

WORD - LEVEL 1...introduces student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-825-18

Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

There is a growing societal and market-based demand for sustainably grown, specialty and local small farm produced food, goods and services. Success in ownership or management in horticulture, market gardening, or small farming requires a knowledge of plants, soil, greenhouses, machines, accounting, marketing, and working with people. The Horticulture & Small Farm Management ITS provides a firm grounding in plant production, care, and science, which is complemented by both agricultural production and a farm business management education. Maximize your opportunities to create a successful life as a small, specialty or alternative agriculture farm operator through hands-on learning, applied theory, visiting successful operations, and guided experience.

PROGRAM OUTCOMES

- Understand plants, soils, and their care.
- Create a cropping plan to produce throughout the season.
- Develop a business plan.
- Become familiar with a wide variety of crops.
- Investigate growing in the greenhouse, hoop house, and field, in both summer and winter.
- Apply leadership, management, and teambuilding.
- Experience cutting-edge tools as well as problem solving to make-do.
- Apply marketing principles and relationship-building skills.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Ensure enrolled in or graduate of Horticulture Technician program.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$138.90 per credit tuition (WI resident) plus \$8.33 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Advisor about how to apply for aid.

SPECIAL NOTE

Terms 1 and 2 of this curriculum completes the Horticulture Technician technical diploma. Terms 3 and 4 include select courses from other curriculums that provide knowledge and skills for this emphasis. Terms 3 and 4 have the option for several online courses as well as in-person options.

CONTACT

Don Geiger, Program Counselor
920.693.1378 • donald.geiger@gotoltc.edu

Catalog No.	Proposed Courses	Credit(s)
Term 1		
10001110	Horticulture Introduction	3
10001112	Plants in Summer and Fall	3
10001115	Culinary Plants - Fall	1
10001148	Plant Communities of Wisconsin	3
10001172	Landscape Maintenance	3
10001113	Landscape Installation	3
		16
Term 2		
10001132	Plants in Winter and Spring	3
10001116	Culinary Plants - Spring	1
10001120	Greenhouse & Nursery Production	3
10001121	Landscape Design Studio	3
10001123	Site & Soil Analysis	3
10001149	Sustainable Landscape & Water Mgmt	3
		16
Term 3		
10001174	Horticulture Internship 1	1
10006135	Ag Business Accounting	3
10196189	Team Building & Problem Solving	3
10809198	Introduction to Psychology	3
10804123	Math with Business Applications OR 10806112 Principles of Sustainability	3
10801196	Oral/Interpersonal Communications	3
		16
Term 4		
10001175	Horticulture Internship 2	1
10104102	Principles of Marketing	3
10006122	Principles of Crop Production OR 10006114 Intro to Animal Science	3
10809195	Economics OR 10809196 Introduction to Sociology	3
10801195	Written Communications	3
		13
		TOTAL 61

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AGRICULTURE BUSINESS ACCOUNTING...provides the learner with a study of accounting systems and methods appropriate for farms and agricultural businesses including the application of basic information-recording skills to allow for the construction of financial statements and filing of income tax forms. Students will produce and analyze financial statements and apply managerial accounting concepts by utilizing relevant financial software.

CULINARY PLANTS - FALL...introduces students to fall culinary plant production through the maintenance of summer vegetables in the field and raised beds, and through fall plantings. Garden cleanup, soil enhancing practices, and hoop house production will be explored; planting of winter crops will be conducted. Season-extension techniques, vegetable-storage techniques, and harvesting crops for winter forcing will be practiced with familiar and exotic crops.

CULINARY PLANTS - SPRING...introduces students to winter vegetable production, planning for the summer season, and spring work in the greenhouse, garden, and hoop house. Students will produce crops for harvest in the heated greenhouse, force winter vegetables, develop a planting plan, harvest vegetables from the unheated hoop house, and learn about different production methods (organic vs sustainable vs conventional).

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro Reading & Study Skills or Reading placement assessment equiv or CONDITION: 610062 Agribusiness/Financial Basic prog adms met

GREENHOUSE AND NURSERY PRODUCTION...provides the student with the knowledge and skills for horticultural production. Students implement efficient, cost-effective, and sustainable methods of horticultural production in the greenhouse, in a variety of other horticulture-related structures, as well as in field scenarios.

HORTICULTURE INTERNSHIP 1...Provides a broad variety of specific occupational experiences in the horticultural industry. Students work with faculty to develop an internship plan and identify, coordinate, and evaluate learning experiences appropriate to the field of study and major career focus of the student.

HORTICULTURE INTERNSHIP 2...provides a broad variety of specific occupational experiences in the horticultural industry. Students work with faculty to develop an internship plan and identify, coordinate, and evaluate learning experiences appropriate to the field of study and major career focus of the student.

HORTICULTURE INTRODUCTION...engages learner through instructor-led interactive research and presentation while exploring plant growth, development, and ecology; plant classification; plant health care; horticultural crops and production; the horticulture industry and related careers; and principles of design and design implementation.

INTRODUCTION TO ANIMAL SCIENCE...provides animal science fundamentals including animal health, animal environments, anatomy and physiology, genetics and reproduction, animal feedstuffs, and animal-related safety.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

LANDSCAPE DESIGN STUDIO...provides learner with strategies to develop and apply a structured approach to designing landscape space. Fundamentals of design process are applied including basic site analysis, plan development & detailing, proper plant selection, landscape graphic conventions, and client interactions. Both manual drafting & CAD software are used for design communications. Property lines, topography, site planning, hardscapes, planting plans, and section view graphics are covered.

LANDSCAPE INSTALLATION...investigates and implements landscape construction techniques including the proper and safe use of landscape tools, plan reading and interpretation, site management, proper planting, and the installation of landscape features. Potential projects include landscape plantings, mixed material patios, retaining walls, water features, sustainable landscape elements, rain gardens, roof gardens, wooden structures, etc. Course will also introduce basic estimating and contracting standards.

LANDSCAPE MAINTENANCE...assists the learner in identification and implementation of appropriate cultural practices while dealing with challenges in the landscape, including pruning techniques, insect/disease/abiotic problems; pesticides; turf issues; and resolving situations in the field. Course includes production, installation, maintenance, and harvest of edible and ornamental plants.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

ORAL/INTERPERSONAL COMMUNICATIONS...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PLANT COMMUNITIES OF WISCONSIN...enables the student to experience the diversity of the native plant communities throughout the Lakeshore region of Wisconsin and beyond. This course will involve extensive plant and plant community identification and analysis in the field, as well as native plant community design, restoration and preservation best practices.

PLANTS IN SUMMER AND FALL...explores ornamental and weedy, woody, and herbaceous plant identification, biology and culture/management through outdoor and indoor applied activities. The course activities focus on plants encountered in interior and outdoor landscaping as well as ornamental and food production in eastern Wisconsin and the Midwest. This is the fall and summer focused course of a two-course series that complements Plants in Winter and Spring.

PLANTS IN WINTER AND SPRING...explores ornamental and weedy, woody, and herbaceous plant identification, biology and culture/management through outdoor and indoor applied activities. Course activities focus on plants encountered in interior and outdoor landscaping as well as ornamental and food production in eastern Wisconsin and the Midwest. This is the winter and spring focused course of a two-course series that complements Plants in Summer and Fall.

PRINCIPLES OF CROP PRODUCTION...provides knowledge of crop and soil nutrient management, including use of both commercial fertilizers and manure. Course topics include purchase or lease options for land, agronomy consulting programs, tillage and conservation plans, soil nutrient plans, cropping plans, managing nutrient waste, crop harvest and storage and production records. PREREQUISITE: 10006116 Intro to Soil Science or 10001123 Site & Soil Analysis or 1009105 Dairy Feeding Management

PRINCIPLES OF MARKETING...introduces student to the consumer decision process model, the bases used to segment a market, basic concepts about goods, services, and ideas, the nature of supply chain and distribution, integrated marketing communications, and the stages of the product life cycle and their impact on the marketing mix

SITE AND SOIL ANALYSIS...guides students through site analysis with evaluation of physical, biological, water, and cultural resources to determine landscape development potentials and sensitivities. Analyzes interactions of plants with soil dynamics and examines physical, chemical, biological and management characteristics of both healthy and resilient as well as degraded but renewable soils.

SUSTAINABLE LANDSCAPE AND WATER MANAGEMENT...approaches sustainable landscape management from a practical goal-based outlook and implements management and supervisory strategies for "triple bottom-line" sustainability (Environment, Economic, and Social). Special attention will be paid to green infrastructure and integrated management practices for Sustainable Landscapes and Stormwater Management. Project based management opportunities will enable students to practice and employ best management practices.

TEAM BUILDING & PROBLEM SOLVING...applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, a systematic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, and evaluation.

WRITTEN COMMUNICATIONS...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro Rdg & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

Horticulture Business Management is an excellent career choice for people who love plants and want to make a good living working with them. Plant growing and care skills are an excellent complement to horticultural plant marketing and sales, plant business management and potentially horticultural business ownership. The plant growing industry is always in need of capable managers. The Horticulture Business Management ITS program is designed to give students a strong background both in the principles of plant growth, production and care, as well as how to communicate with employees, coworkers and customers. Marketing, business structures promoting profitability, common business practices and small business norms are addressed to help assure the plant knowledge gained in the program can be put to practical use in your future horticulture based profession.

PROGRAM OUTCOMES

- Communicate as a horticulture professional.
- Analyze growing media.
- Diagnose plant health.
- Apply the principles of plant science.
- Understand how horticulture sales relate to consumer environments.
- Gain business management skills.
- Develop team building and people management skills.
- Expand your ability to propose practical and sustainable solutions to plant based business.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Ensure enrolled in or graduate of Horticulture Technician program.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$138.90 per credit tuition (WI resident) plus \$8.33 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Advisor about how to apply for aid.

SPECIAL NOTE

Terms 1 and 2 of this curriculum completes the Horticulture Technician technical diploma. Terms 3 and 4 include select courses from other curriculums that provide knowledge and skills for this emphasis. Terms 3 and 4 have the option for several online courses as well as in-person options.

CONTACT

Don Geiger, Program Counselor
 920.693.1378 • donald.geiger@gotoltc.edu

Catalog No.	Proposed Courses	Credit(s)
Term 1		
10001110	Horticulture Introduction	3
10001112	Plants in Summer and Fall	3
10001115	Culinary Plants - Fall	1
10001148	Plant Communities of Wisconsin	3
10001172	Landscape Maintenance	3
10001113	Landscape Installation	3
		16
Term 2		
10001132	Plants in Winter and Spring	3
10001116	Culinary Plants - Spring	1
10001120	Greenhouse & Nursery Production	3
10001121	Landscape Design Studio	3
10001123	Site & Soil Analysis	3
10001149	Sustainable Landscape & Water Mgmt	3
		16
Term 3		
10001174	Horticulture Internship 1	1
10196189	Teambuilding and Problem-Solving	3
10102110	Introduction to Business	3
10809198	Introduction to Psychology	3
10804123	Math with Business Applications OR 10806112 Principles of Sustainability	3
10801196	Oral/Interpersonal Communications	3
		16
Term 4		
10001175	Horticulture Internship 2	1
10196193	Human Resource Management OR 10101131 Business Accounting	3
10104102	Principles of Marketing	3
10809195	Economics OR 10809196 Introduction to Sociology	3
10801195	Written Communications	3
		13
		TOTAL 61

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

CULINARY PLANTS - FALL...introduces students to fall culinary plant production through the maintenance of summer vegetables in the field and raised beds, and through fall plantings. Garden cleanup, soil enhancing practices, and hoop house production will be explored; planting of winter crops will be conducted. Season-extension techniques, vegetable-storage techniques, and harvesting crops for winter forcing will be practiced with familiar and exotic crops.

CULINARY PLANTS - SPRING...introduces students to winter vegetable production, planning for the summer season, and spring work in the greenhouse, garden, and hoop house. Students will produce crops for harvest in the heated greenhouse, force winter vegetables, develop a planting plan, harvest vegetables from the unheated hoop house, and learn about different production methods (organic versus sustainable versus conventional).

ECONOMICS...provides participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro Reading & Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Fin Basic program admissions met

GREENHOUSE AND NURSERY PRODUCTION...provides the student with the knowledge and skills for horticultural production. Students implement efficient, cost-effective, and sustainable methods of horticultural production in the greenhouse, in a variety of other horticulture-related structures, as well as in field scenarios.

HORTICULTURE INTERNSHIP 1...Provides a broad variety of specific occupational experiences in the horticultural industry. Students work with faculty to develop an internship plan and identify, coordinate, and evaluate learning experiences appropriate to the field of study and major career focus of the student.

HORTICULTURE INTERNSHIP 2...provides a broad variety of specific occupational experiences in the horticultural industry. Students work with faculty to develop an internship plan and identify, coordinate, and evaluate learning experiences appropriate to the field of study and major career focus of the student.

HORTICULTURE INTRODUCTION...engages the learner through instructor-led interactive research and presentation while exploring plant growth, development, and ecology; plant classification; plant health care; horticultural crops and production; the horticulture industry and related careers; and principles of design and design implementation.

HUMAN RESOURCE MANAGEMENT...applies the skills/tools necessary to effectively value and apply employees' abilities and needs to organization goals. Learners will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies/procedures, training, performance management, employee counseling/development, and effective use of compensation and benefit strategies.

INTRODUCTION TO BUSINESS...provides an introduction to the world of business from both the organizational and managerial viewpoint. It examines areas of business including the business environment, business formation, planning, operations, accounting, marketing, human resource management, and building effective teams.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

LANDSCAPE DESIGN STUDIO...provides the learner with strategies to develop and apply a structured approach to designing landscape space. Fundamentals of the design process are applied including basic site analysis, plan development and detailing, proper plant selection, landscape graphic conventions, and client interactions. Both manual drafting and CAD software are used for design communications. Property lines, topography, site planning, hardscapes, planting plans, and section view graphics are covered.

LANDSCAPE INSTALLATION...investigates and implements landscape construction techniques including the proper and safe use of landscape tools, plan reading and interpretation, site management, proper planting, and the installation of landscape features. Potential projects include landscape plantings, mixed material patios, retaining walls, water features, sustainable landscape elements, rain gardens, roof gardens, wooden structures, etc. The course will also introduce basic estimating and contracting standards.

LANDSCAPE MAINTENANCE...assists the learner in identification and implementation of appropriate cultural practices while dealing with challenges in the landscape, including pruning techniques, insect/disease/abiotic problems; pesticides; turf issues; and resolving situations in the field. Course includes production, installation, maintenance, and harvest of edible and ornamental plants.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

ORAL/INTERPERSONAL COMMUNICATIONS...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PLANT COMMUNITIES OF WISCONSIN...enables the student to experience the diversity of the native plant communities throughout the Lakeshore region of Wisconsin and beyond. This course will involve extensive plant and plant community identification and analysis in the field, as well as native plant community design, restoration and preservation best practices.

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Program Number 31-001-1 Technical Diploma • Two Terms

ABOUT THE PROGRAM

Horticulture technicians can make a living in a wide variety of ways. You may work in the disciplines of plant propagation and production for a greenhouse or tree nursery - nurturing plants to be used in landscaping, food production, or sold in retail garden centers. You may also work on landscape maintenance or landscape construction crews for landscape contractors, lawn care service companies, botanical gardens, municipal park departments, golf courses, and natural resource management agencies. Work duties are typically out of doors and very hands-on. The work of a horticulture technician is truly a "green" career.

PROGRAM OUTCOMES

- Analyze growing media.
- Diagnose plant health.
- Communicate as a horticulture professional.
- Apply design principles.
- Provide horticulture maintenance.
- Apply the principles of plant science.
- Propagate and grow horticulture plants.
- Justify the selection of appropriate plants.
- Determine nutritional requirements of turf grasses and ornamentals.
- Analyze soil and its influence on plant life.
- Implement a landscape construction design plan.
- Use carpentry and masonry hand and power tools.
- Safely operate landscape equipment.
- Install irrigation equipment.
- Diagnose and treat pest problems on ornamental plants.
- Prepare for Wisconsin Pesticide Certification.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
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APPROXIMATE COSTS

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FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CREDENTIALS AVAILABLE TO PROGRAM STUDENTS

- WI Commercial Pesticide Applicator - Turf & Landscape
- WI Commercial Pesticide Applicator - Greenhouse & Nursery
- BAHCO Pruner
- BAHCO Lopper
- NALP Horticulture Technician Exam Preparation

SPECIAL NOTES

Upon completion of the Horticulture Technician program, students are given the additional option of completing an associate degree to pursue their chosen area of specialization (below). Internships are included for each of these specialities.

- Horticulture & Small Farm Management Associate Degree (ITS)
- Horticulture Business Management Associate Degree (ITS)
- Landscape Design Associate Degree (ITS)

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10001110	Horticulture Introduction	3
10001112	Plants in Summer and Fall	3
10001115	Culinary Plants - Fall	1
10001148	Plant Communities of Wisconsin	3
10001172	Landscape Maintenance	3
10001113	Landscape Installation	3
		16
Term 2		
10001132	Plants in Winter and Spring	3
10001116	Culinary Plants - Spring	1
10001120	Greenhouse and Nursery Production	3
10001121	Landscape Design Studio	3
10001123	Site and Soil Analysis	3
10001149	Sustainable Landscape & Water Mgmt	3
		16
		TOTAL 32

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PROGRAM OUTCOMES

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- Determine nutritional requirements of turf grasses and ornamentals.
- Analyze soil and its influence on plant life.
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SPECIAL NOTES

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- Landscape Design Associate Degree (ITS)

CONTACT

LTC Admissions Advisor
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Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10001110	Horticulture Introduction	3
10001112	Plants in Summer and Fall	3
10001113	Landscape Installation	3
		9
Term 2 (Spring 2022)		
10001132	Plants in Winter and Spring	3
10001123	Site and Soil Analysis	3
10001116	Culinary Plants - Spring	1
		7
Term 3 (Fall 2022)		
10001172	Landscape Maintenance	3
10001148	Plant Communities of Wisconsin	3
10001115	Culinary Plants - Fall	1
		7
Term 4 (Spring 2023)		
10001120	Greenhouse and Nursery Production	3
10001121	Landscape Design Studio	3
10001149	Sustainable Landscape & Stormwater Management	3
		9
		TOTAL 32

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HORTICULTURE INTRODUCTION...engages the learner through instructor-led interactive research and presentation while exploring plant growth, development, and ecology; plant classification; plant health care; horticultural crops and production; the horticulture industry and related careers; and principles of design and design implementation.

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ABOUT THE PROGRAM

The associate degree in Hospitality Management prepares individuals for a management career in the hospitality industry. Coursework emphasizes theory and application of skills needed for mid-management and supervisory level of employment in food and lodging facilities. Hospitality management skills are also applicable to a variety of other hospitality operations which include conference centers, sports and entertainment facilities, front office managers, food and beverage operations, and other careers.

PROGRAM OUTCOMES

- Plan the operations within a hospitality organization.
- Organize hospitality resources to achieve the goals of the organization.
- Direct individuals and/or processes to meet organizational goals.
- Control hospitality processes/procedures.

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- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$138.90 per credit tuition (WI resident) plus \$8.33 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10103121	Excel - Level 1	1
10103191	Word - Level 1	1
10104109	Customer Service Techniques	2
10109112	Sanitation for Food Service	1
10109121	Introduction to Hotel/Hospitality Management	3
10801195	Written Communication OR 10801136 English Composition	3
10804123	Math with Business Applications	3
		14
Term 2		
10104128	Leadership and Professionalism	3
10104170	Marketing Tourism and Hospitality	3
10109108	Dining Room and Beverage Service	2
10196191	Supervision	3
10109116	Food and Beverage Practicum	2
10801198	Speech OR 10801196 Oral/Interpersonal Communication	3
		16
(Summer)		
10109144	*Hospitality Internship	3
		3
Term 3		
10104125	Social Media Strategy	3
10109111	Housekeeping Management	2
10109113	Food and Beverage Operations	2
10109151	Hospitality Event Planning	2
10109158	Hospitality Cost Controls	3
10809172	Introduction to Diversity Studies OR 10809196 Introduction to Sociology	3
		15
Term 4		
10101102	Hospitality Accounting	3
10109110	Front Office Procedures and Management	2
10109115	Hospitality Law	3
10109150	Housekeeping Practicum	1
10809198	Introduction to Psychology	3
		12
		TOTAL 60

* Verification of current First Aide/CPR card or proof of having taken 42531416CA class

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

CUSTOMER SERVICE TECHNIQUES...assesses participants' skills in customer relations, judgment and business development and provides training in connecting with customers, healing customer relationships, and dealing with customer needs. Course includes opportunity to earn nationally recognized AHLEI certification through additional final exam.

DINING ROOM AND BEVERAGE SERVICE...introduces learners to dining room and beverage service including wine, spirits, beer, mixology, and non-alcoholic drinks. Helps learners refine their customer service and meal delivery skills through the study and application of proper, customer-oriented dining room service environments including etiquette, dining room safety, set-up, American and French table service, and menu knowledge skills. Concepts include histories of table service, psychology of the customer, and service sequence.

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

FOOD AND BEVERAGE OPERATIONS...introduces and applies principles of menu planning, food preparation, laws and sale of alcoholic beverages. Emphasis is on operation of a professional food and beverage facility. Course includes opportunity to earn nationally recognized AHLEI certification through additional final exam.

FOOD AND BEVERAGE PRACTICUM...prepares the learner for relevant experience working in the food & beverage industry, and incorporating classroom theory. Students work in an approved restaurant through which they can acquire a log of real-life experiences related to techniques in food & beverage. Activities may include day and evening requirements. CO-REQUISITE: 10109108 Dining Room and Beverage.

FRONT OFFICE PROCEDURES AND MANAGEMENT...emphasizes front office techniques and management principles for the organization and operation of the lodging facility. The human and public relations responsibilities of the front office as well as routine procedures are an integral part of the course. Course includes opportunity to earn nationally recognized AHLEI certification through additional final exam.

HOSPITALITY ACCOUNTING...provides students with an understanding of the basic structure of accounting in the hospitality area and how to interpret and understand financial statements to learn some internal controls. Students will learn some bottom-up cost control and some budgeting. The student will recognize the differences in hotel/hospitality accounting and emphasis is placed on analysis and interpretation as well as recording, classifying, and summarizing processes. PREREQUISITE: 10109158 Hospitality Cost Controls

HOSPITALITY COST CONTROLS...applies concepts of controlling costs with emphasis on cost-to-sales relationship. Students calculate the costs of goods, selling price and relative percentages, forecast sales, conduct yield analysis and calculate break-even periods.

HOSPITALITY EVENT PLANNING...prepares the learner to manage preplanning activities and execution of events in the hospitality industry, coordinate equipment and facility setup, communicate with outside vendors/suppliers, and conduct follow-up activities. Each student will be required to participate in planning a real-life event and/or assisting an organization through a service learning experience.

HOSPITALITY INTERNSHIP...provides on-the-job field experience. Requires students to complete 216 hours of performing work in hospitality industry. Students are responsible for seeking and obtaining the internship position with instructor approval. CONDITION: Verification of eligibility by the instructor, Completion for all credit for prior learning(CPL) assessments, Verification of current First Aide/CPR card or proof of having taken 42531416CA class

HOSPITALITY LAW...will apply legal practices in hospitality environments including analysis of the impact of U.S. employment laws, the global economy, vendor/supplier contract negotiations, reacting to legal charges, documenting the hiring/firing process, dealing with harassment issues, privacy issues, and summarizing legal issues facing hospitality/culinary employees. Students will demonstrate TSA through submission of student portfolio. COREQUISITE: 10109121 Introduction to Hotel/Hospitality Mng

HOUSEKEEPING MANAGEMENT...this course investigates the functions of the housekeeping department and the role of managers in operating the department. Students are introduced to requirements for guest satisfaction including room and facility appeal, order, and cleanliness. Course includes opportunity to earn nationally recognized AHLEI certification through additional final exam.

HOUSEKEEPING PRACTICUM...prepares the learner for relevant experience working in the housekeeping department, and incorporating classroom theory. Students work in the housekeeping department of the participating organization through which they can acquire a log of real-life experiences related to techniques in housekeeping. Activities may include day and evening requirements. COREQUISITE: 10109111 Housekeeping Management

INTRODUCTION TO DIVERSITY STUDIES...introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO HOTEL/HOSPITALITY MANAGEMENT...will trace the development of the hotel/motel industry from early inns to modern high-rise and commercial hotels and highway motels. The organization of the hotel, including food and beverage operations, is discussed.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

LEADERSHIP AND PROFESSIONALISM...prepares the student to accept a leadership role in their chosen occupation and provides opportunities to demonstrate business etiquette and professionalism in a variety of settings.

MARKETING TOURISM AND HOSPITALITY...introduces the student to various aspects of tourism, the development and classification of hotel businesses, the hotel and rooms division operation, the duties and responsibilities of the key food and beverage executives, the history and development of the restaurant business, noncommercial food service segments, beverage management and liquor liability, recreation and leisure, the history of gaming entertainment, and the different types of meetings, conventions, and expositions.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

SANITATION FOR FOOD SERVICE...provides face to face food safety training, testing and materials to food service managers. The Serv Safe Manager certification test is included and a passing score earns the Serv Safe Food Protection Manager Certification.

SOCIAL MEDIA STRATEGY...explores current and up-and-coming online platforms, applications, and tracking methods for social media and determine how they are revolutionizing the marketing landscape. You will set up social media accounts, learn basic terminology, and incorporate best practices into marketing strategies. You will learn which platforms fit best with an organization's strategic goals, how to integrate content across them, interpret the analytics, and tailor them to maximize results. PREREQUISITE: 10104170 Marketing Tourism and Hospitality or 10104102 Principles of Marketing and 10104169 Internet Marketing Foundations

SPEECH...explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

SUPERVISION...allows the learner to apply the skills and tools necessary to perform the functions of a frontline leader. Students learn the application of strategies and transition to a contemporary supervisory role including day-to-day operations, controlling, staffing, leadership, problem-solving, team skills, motivation, and training.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-109-2
Associate Degree in Applied Science • Five Terms

ABOUT THE PROGRAM

The associate degree in Hospitality Management prepares individuals for a management career in the hospitality industry. Coursework emphasizes theory and application of skills needed for mid-management and supervisory level of employment in food and lodging facilities. Hospitality management skills are also applicable to a variety of other hospitality operations which include conference centers, sports and entertainment facilities, front office managers, food and beverage operations, and other careers.

PROGRAM OUTCOMES

- Plan the operations within a hospitality organization.
- Organize hospitality resources to achieve the goals of the organization.
- Direct individuals and/or processes to meet organizational goals.
- Control hospitality processes/procedures.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

- \$138.90 per credit tuition (WI resident) plus \$8.33 per credit student activity fee. \$10 per credit online, iFlex or hybrid fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10104109	Customer Service Techniques	2
10109112	Sanitation for Food Service	1
10109121	Introduction to Hotel/Hospitality Management	3
10801195	Written Communication OR 10801136 English Composition	3
		9
Term 2 (Spring 2022)		
10104170	Marketing Tourism and Hospitality	3
10109108	Dining Room and Beverage Service	2
10109116	Food and Beverage Practicum	2
		7
Term 3 (Summer 2022)		
10801198	Speech OR 10801196 Oral/Interpersonal Communication	3
10103191	Word - Level 1	1
10804123	Math with Business Applications	3
		7
Term 4 (Fall 2022)		
10109111	Housekeeping Management	2
10109113	Food and Beverage Operations	2
10109151	Hospitality Event Planning	2
10809172	Introduction to Diversity Studies OR 10809196 Introduction to Sociology	3
		9
Term 5 (Spring 2023)		
10104128	Leadership and Professionalism	3
10109110	Front Office Procedures and Management	2
10109150	Housekeeping Practicum	1
10196191	Supervision	3
10103121	Excel - Level 1	1
		10
Term 6 (Summer 2023)		
10809198	Introduction to Psychology	3
10109144	Hospitality Internship*	3
		6
Term 7 (Fall 2023)		
10109158	Hospitality Cost Controls	3
10104125	Social Media Strategy	3
		6
Term 8 (Spring 2024)		
10101102	Hospitality Accounting	3
10109115	Hospitality Law	3
		6
		TOTAL 60

* Verification of current First Aide/CPR card or proof of having taken 42531416CA class

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.



CUSTOMER SERVICE TECHNIQUES...assesses participants' skills in customer relations, judgment and business development and provides training in connecting with customers, healing customer relationships, and dealing with customer needs. Course includes opportunity to earn nationally recognized AHLEI certification through additional final exam.

DINING ROOM AND BEVERAGE SERVICE...introduces learners to dining room and beverage service including wine, spirits, beer, mixology, and non-alcoholic drinks. Helps learners refine their customer service and meal delivery skills through the study and application of proper, customer-oriented dining room service environments including etiquette, dining room safety, set-up, American and French table service, and menu knowledge skills. Concepts include histories of table service, psychology of the customer, and service sequence.

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

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FOOD AND BEVERAGE PRACTICUM...prepares the learner for relevant experience working in the food & beverage industry, and incorporating classroom theory. Students work in an approved restaurant through which they can acquire a log of real-life experiences related to techniques in food & beverage. Activities may include day and evening requirements. CO-REQUISITE: 10109108 Dining Room and Beverage.

FRONT OFFICE PROCEDURES AND MANAGEMENT...emphasizes front office techniques and management principles for the organization and operation of the lodging facility. The human and public relations responsibilities of the front office as well as routine procedures are an integral part of the course. Course includes opportunity to earn nationally recognized AHLEI certification through additional final exam.

HOSPITALITY ACCOUNTING...provides students with an understanding of the basic structure of accounting in the hospitality area and how to interpret and understand financial statements to learn some internal controls. Students will learn some bottom-up cost control and some budgeting. The student will recognize the differences in hotel/hospitality accounting and emphasis is placed on analysis and interpretation as well as recording, classifying, and summarizing processes. PREREQUISITE: 10109158 Hospitality Cost Controls

HOSPITALITY COST CONTROLS...applies concepts of controlling costs with emphasis on cost-to-sales relationship. Students calculate the costs of goods, selling price and relative percentages, forecast sales, conduct yield analysis and calculate break-even periods.

HOSPITALITY EVENT PLANNING...prepares the learner to manage preplanning activities and execution of events in the hospitality industry, coordinate equipment and facility setup, communicate with outside vendors/suppliers, and conduct follow-up activities. Each student will be required to participate in planning a real-life event and/or assisting an organization through a service learning experience.

HOSPITALITY INTERNSHIP...provides on-the-job field experience. Requires students to complete 216 hours of performing work in hospitality industry. Students are responsible for seeking and obtaining the internship position with instructor approval. CONDITION: Verification of eligibility by the instructor, Completion for all credit for prior learning(CPL) assessments, Verification of current First Aide/CPR card or proof of having taken 42531416CA class

HOSPITALITY LAW...will apply legal practices in hospitality environments including analysis of the impact of U.S. employment laws, the global economy, vendor/supplier contract negotiations, reacting to legal charges, documenting the hiring/firing process, dealing with harassment issues, privacy issues, and summarizing legal issues facing hospitality/culinary employees. Students will demonstrate TSA through submission of student portfolio. COREQUISITE: 10109121 Introduction to Hotel/Hospitality Mng

HOUSEKEEPING MANAGEMENT...this course investigates the functions of the housekeeping department and the role of managers in operating the department. Students are introduced to requirements for guest satisfaction including room and facility appeal, order, and cleanliness. Course includes opportunity to earn nationally recognized AHLEI certification through additional final exam.

HOUSEKEEPING PRACTICUM...prepares the learner for relevant experience working in the housekeeping department, and incorporating classroom theory. Students work in the housekeeping department of the participating organization through which they can acquire a log of real-life experiences related to techniques in housekeeping. Activities may include day and evening requirements. COREQUISITE: 10109111 Housekeeping Management

INTRODUCTION TO DIVERSITY STUDIES...introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO HOTEL/HOSPITALITY MANAGEMENT...will trace the development of the hotel/motel industry from early inns to modern high-rise and commercial hotels and highway motels. The organization of the hotel, including food and beverage operations, is discussed.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

LEADERSHIP AND PROFESSIONALISM...prepares the student to accept a leadership role in their chosen occupation and provides opportunities to demonstrate business etiquette and professionalism in a variety of settings.

MARKETING TOURISM AND HOSPITALITY...introduces the student to various aspects of tourism, the development and classification of hotel businesses, the hotel and rooms division operation, the duties and responsibilities of the key food and beverage executives, the history and development of the restaurant business, noncommercial food service segments, beverage management and liquor liability, recreation and leisure, the history of gaming entertainment, and the different types of meetings, conventions, and expositions.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

SANITATION FOR FOOD SERVICE...provides face to face food safety training, testing and materials to food service managers. The Serv Safe Manager certification test is included and a passing score earns the Serv Safe Food Protection Manager Certification.

SOCIAL MEDIA STRATEGY...explores current and up-and-coming online platforms, applications, and tracking methods for social media and determine how they are revolutionizing the marketing landscape. You will set up social media accounts, learn basic terminology, and incorporate best practices into marketing strategies. You will learn which platforms fit best with an organization's strategic goals, how to integrate content across them, interpret the analytics, and tailor them to maximize results. PREREQUISITE: 10104170 Marketing Tourism and Hospitality or 10104102 Principles of Marketing and 10104169 Internet Marketing Foundations

SPEECH...explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

SUPERVISION...allows the learner to apply the skills and tools necessary to perform the functions of a frontline leader. Students learn the application of strategies and transition to a contemporary supervisory role including day-to-day operations, controlling, staffing, leadership, problem-solving, team skills, motivation, and training. Word - Level 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 61-109-1
Certificate • 8 credits

ABOUT THE PROGRAM

This certificate prepares the student to work in entry-level positions in hospitality and other customer service positions. This certificate serves as an introduction to the hospitality career pathway and can lead to further career opportunities in hospitality management. Students will learn about the hospitality industry and its management, customer relations and interpersonal skills, and they will learn to demonstrate the standards expected of leaders and professionals in the industry.

PROGRAM OUTCOMES

- Demonstrate the principles of hospitality management.
- Provide exemplary customer service.
- Demonstrate professionalism and managerial and leadership skills in a diverse hospitality environment.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.

APPROXIMATE COSTS

- \$138.90 per credit tuition (WI resident) plus \$8.33 per credit student activity fee. \$10 per credit online, iFlex or hybrid fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

This certificate ladders into the Hospitality Management Associate Degree. There are further opportunities in this Career Pathway to move into a 4-year bachelor degree program with local institutions.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
COURSES		
10109121	Introduction to Hotel/Hospitality Management	3
10104109	Customer Service Techniques	2
10104128	Leadership and Professionalism	3

TOTAL 8

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.



CUSTOMER SERVICE TECHNIQUES...assesses participants' skills in customer relations, judgment and business development and provides training in connecting with customers, healing customer relationships, and dealing with customer needs. Course includes opportunity to earn nationally recognized AHLEI certification through additional final exam.

INTRODUCTION TO HOTEL/HOSPITALITY MANAGEMENT...will trace the development of the hotel/motel industry from early inns to modern high-rise and commercial hotels and highway motels. The organization of the hotel, including food and beverage operations, is discussed.

LEADERSHIP AND PROFESSIONALISM...prepares the student to accept a leadership role in their chosen occupation and provides opportunities to demonstrate business etiquette and professionalism in a variety of settings.

ABOUT THE PROGRAM

The High School Equivalency Diploma (HSED) PI 5.09 is competency based and serves the adult learner 18 1/2 years or older. This program is designed to award a high school equivalency diploma through the 5.09 option to those individuals who master the required competencies. The competencies are covered through a series of courses and are assessed through a variety of means. This is an alternative to traditional GED testing.

ADMISSION TO DO'S

- Attend an orientation session at either LTC Sheboygan or LTC Manitowoc.
 - To register at LTC Sheboygan call 920.208.5888.
 - To register at LTC Manitowoc call 920.683.2846.
- Complete an assessment of skill level using the Test for Adult Basic Education (TABE) during the orientation.
- Students are strongly encouraged to provide an official high school transcript.

APPROXIMATE COSTS

- State Administrative Fee \$15.00
- Wisconsin State Civics Exam \$10.00

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

Obtaining one's HSED can allow workers to obtain or retain employment. With this credential, students can also transition into college-level work and begin a college career.

SPECIAL NOTE

Courses are available in a morning or evening schedule that allows a student to complete in as few as 12 months. To complete the HSED 5.09 program, students are required to pass the Wisconsin State Civics Exam.

Catalog No.	Class Title
74860740C1	Computer Basics 1
74860750C1	Computer Basics 2
76851782	5.09 Communication Skills 2
76854770	Pre-College Math 5.09
76854775	Pre-Algebra 5.09
76856780	Science 5.09
76857780	Health 5.09
76858788	5.09 Communication Skills 1
76859780	Social Studies 5.09
76859781	Civics 5.09
76862711C1	Career Awareness
76862712E1	Employability Skills
76851770	Keyboarding Beginning

Curriculum requirements are subject to change. Class start dates vary.

5.09 COMMUNICATION SKILLS 1...emphasizes development of Communication skills. Learners will create an oral presentation and written documents by applying listening skills, developing interpersonal skills, communicating ideas orally, and participating in group projects. Learners will comprehend and react critically to a range of written materials and apply the mechanics of writing.

5.09 COMMUNICATION SKILLS 2...emphasizes continued development of communication skills. Learners will communicate effectively using current technology, using a variety of informational resources, developing vocabulary strategies, and processing written material effectively. Learners will produce original written materials using a variety of strategies.

CAREER AWARENESS...provides the participant with the skills to develop a career plan of action; review current occupational trends; identify career and financial resources; assess their values, interest, and abilities as they relate to career decision making; identify interest areas in relation to career cluster; match personal characteristics with occupations; and establish short-term and long-term career goals.

CIVICS 5.09...emphasizes the concepts of government and citizenship. Learners will understand the functions of state, county, and local governments, principles of U.S. constitutional government, the role of the consumer and the government, political parties and interest groups, and the rights and responsibilities of U.S. citizenship.

COMPUTER BASICS 1...is designed for the adult learner to become familiar and comfortable working on a computer. Learners will understand computer terminology, and develop academic and workplace computer skills. This course also prepares the learner to keyboard and format business memorandums, business letters, business reports and tabbed columns.

COMPUTER BASICS 2...is designed for adult learners to strengthen computer skills needed to be successful in an academic setting. Learners will use presentation software, access course materials in a Learning Management System, create tables and multicolumn documents, use SmartArt, create and modify styles and create and use templates and building blocks. Emphasis is placed on proofreading and editing skills.

EMPLOYABILITY SKILLS...enhances the participant's ability to successfully seek and obtain employment by analyzing the changing job market; formulating a career objective matching their values, interests and skills; evaluating methods for finding employment; creating a resume to match their job objective; composing a letter of application; completing a job application; and preparing for a job interview.

HEALTH 5.09...emphasizes concepts of health and wellness as well as human growth and development.

KEYBOARDING BEGINNING...prepares the student to use good keyboarding techniques, keyboard the alphabetic keys by touch, keyboard numeric and symbol keys, and keyboard with speed and accuracy.

PRE-ALGEBRA 5.09...emphasizes radical numbers, basic geometry and measurement, basic statistics and probability, graphs, simple scientific notation, and solving simple algebraic equations. Learners will use basic measurement tools and use calculators in problem solving. Learners will apply math concepts in real-world context including financial literacy, consumer applications, and Manufacturing trades applications.

PRE-COLLEGE MATH 5.09...emphasizes the four basic operations using whole numbers, fractions, decimals, percents, and integers in calculations and situational problems. Learners will solve problems using ratios and proportions, exponents, and the order of operations. Learners will apply math concepts in real-world context including financial literacy, consumer applications, and manufacturing trades applications.

SCIENCE 5.09...emphasizes and explores the basic scientific processes using multiple content applications from the life and physical sciences, including physics, chemistry, and environmental science. Learners will integrate science skills based on their personal interests and career goals.

SOCIAL STUDIES 5.09...emphasizes building knowledge in the areas of United States History, World History, Economics, and Geographic regions of the world.

Program Number 10-116-1
Associate Degree in Applied Science • Varies

ABOUT THE PROGRAM

If you enjoy structuring and administering programs and policies designed to help employees be productive and safe in the workplace, then human resource administration is a good career for you. Knowing the laws, regulations, and internal policies of an organization and administering them humanely and fairly is the human resource administrator's responsibility. This growing and dynamic field has excellent future career growth potential.

PROGRAM OUTCOMES

- Create an organizational workforce plan.
- Develop training programs.
- Examine organizational total rewards programs.
- Incorporate employment law into business practices.
- Facilitate effective employee relations.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This program is also offered in an online delivery format. Contact an advisor for details.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10103191	Word - Level 1	1
10103121	Excel - Level 1	1
10196193	Human Resource Management	3
10116105	Recruitment and Retention of Employees	3
10116127	HR Technology	2
10449114	Safety in the Workplace	3
10801195	Written Communication	3
		16
Term 2		
10101106	Payroll Applications	2
10196191	Supervision	3
10116125	Human Resource Employment Law	3
10116103	Training for Organizations	3
10809198	Introduction to Psychology	3
10103161	PowerPoint - Level 1	1
		15
Term 3		
10804123	Math with Business Applications	3
10116129	Professional Career Search Techniques	1
10116102	Compensation & Benefits Administration	3
10116107	Labor Relations and Negotiations	2
10809195	Economics	3
10801196	Oral/Interpersonal Communication OR	3
	10801198 Speech (3 cr)	
		15
Term 4		
10116124	Strategic Performance Management	3
10101155	Accounting for Professionals	3
10809172	Introduction to Diversity Studies	3
10116168	Organizational Development	2
10116106	Internship--Human Resources OR	3
	10138101 Intro to Global Business OR	
	10116128 HR Studies	
		14
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQUISITE: 10804123 Math w Business Applications or CONDITION: 101101 Paralegal program requirements met

COMPENSATION AND BENEFITS ADMINISTRATION...applies the skills and tools necessary to design, implement and manage a compensation and benefits program as a tool for recruitment, retention and performance management of employees.

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

HR TECHNOLOGY...introduces the learner to the ever-increasing use of technology in the human resource function with special attention paid to mobile computing, social media, human resource information and management systems, cloud computing, and surveying mechanisms.

HUMAN RESOURCE MANAGEMENT...applies the skills/tools necessary to effectively value and apply employees' abilities and needs to organization goals. Learners will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies/procedures, training, performance management, employee counseling/development, and effective use of compensation and benefit strategies.

HUMAN RESOURCES EMPLOYMENT LAW...applies the skills/tools necessary to effectively value and apply employees' abilities and needs to organization goals. Learners will demonstrate the legal application of the HR role as it impacts EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies/procedures, training, performance management, employee counseling/development, and effective use of compensation and benefit strategies.

INTERNSHIP-HUMAN RESOURCES...requires students to complete 72 to 216 hours (1 to 3 credits) of performing work in a business/industrial service setting related to their Human Resource program objectives. Students are responsible for seeking and obtaining the internship workstation position. Course requirements include maintaining a log of work activities, identifying and receiving approval from the job supervisor and instructor, and completing a work-related project. Students meet periodically at LTC. PREREQUISITE: 10116129 Prof Career Search Techniques and CONDITION: Verification of eligibility by instructor/coordinator of Human Resource program (student must have at least 30 credits of Human Resource program courses)

INTRODUCTION TO DIVERSITY STUDIES...introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

LABOR RELATIONS AND NEGOTIATIONS...introduces the participant to the history of the labor movement and includes the legal collective bargaining processes while applying the learned skills with case studies, a mock negotiation of a realistic collective bargaining contract, and the simulation of a grievance arbitration.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

ORGANIZATIONAL DEVELOPMENT...describes what organizations do and how managers contribute to the success of organizational activities and structures. This course will walk through the role of a HR Business Partner in a changing organization. Students will learn models, the process, research and application of change management and organization development principles. This course will also teach how organizational development ties with employee development and retention by introducing strategies to provide employees with the opportunity to learn and grow in their careers.

PAYROLL APPLICATIONS...introduces students to federal and state payroll laws; calculations for gross and net income; prepare payroll deductions; and maintain payroll records.

POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects.

PROFESSIONAL CAREER SEARCH TECHNIQUES...focuses on the process of researching and pursuing professional career opportunities. Students will develop resume and cover letter documentation to accurately reflect personal, academic, and professional accomplishments and the connection that these elements have to various positions with employers. Interviewing skills will be a significant aspect of this experience with a focus on interviews for potential internship opportunities.

RECRUITMENT & RETENTION OF EMPLOYEES...applies and skills and tools necessary to hire and retain qualified employees. Legal issues, testing, screening, interviewing, selecting and negotiating techniques will be demonstrated and assessed for each learner.

SAFETY IN THE WORKPLACE...applies skills and tools necessary to provide a safe and secure work environment. Learner will demonstrate the application of safety awareness, federal/state/local compliance, incident investigation and documentation, human relations techniques, safety orientation, inspections, and risk analysis, issues of workplace violence, substance abuse, and health hazards, first aid and CPR, fire and electrical safety, emergency preparedness, and liaison with external agencies.

STRATEGIC PERFORMANCE MANAGEMENT...prepares the student to consolidate, analyze, and display data at varying levels of detail in order to make human capital decisions in the workplace. Provides students information they need to enhance employee competencies, establish development plans, evaluate performance, and identify succession scenarios. PREREQUISITE: 196193 Human Resource Management and CONDITION: Verification of eligibility by instructor/coordinator of Human Resource program (student must have at least 30 credits of Human Resource program courses)

SUPERVISION...allows the learner to apply the skills and tools necessary to perform the functions of a frontline leader. Students learn the application of strategies and transition to a contemporary supervisory role including day-to-day operations, controlling, staffing, leadership, problem-solving, team skills, motivation, and training.

TRAINING FOR ORGANIZATIONS...applies the skills and tools necessary to implement the training cycle of assessment, design, implementation and evaluation. Each learner will develop and present a complete training project based upon adult learning theory and instructional design techniques.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-116-1
Associate Degree in Applied Science
ABOUT THE PROGRAM

If you enjoy structuring and administering programs and policies designed to help employees be productive and safe in the workplace, then human resource administration is a good career for you. Knowing the laws, regulations, and internal policies of an organization and administering them humanely and fairly is the human resource administrator's responsibility. This growing and dynamic field has excellent future career growth potential.

PROGRAM OUTCOMES

- Create an organizational workforce plan.
- Develop training programs.
- Examine organizational total rewards programs.
- Incorporate employment law into business practices.
- Facilitate effective employee relations.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This program is also offered in an online delivery format. Contact an advisor for details.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10103191	Word - Level 1	1
10103121	Excel - Level 1	1
10196193	Human Resource Management	3
10449114	Safety in the Workplace	3
		8
Term 2 (Spring 2022)		
10101106	Payroll Applications	2
10196191	Supervision	3
10809198	Introduction to Psychology	3
		8
Term 3 (Summer 2022)		
10801195	Written Communication	3
10116103	Training for Organizations	3
		6
Term 4 (Fall 2022)		
10116105	Recruitment and Retention of Employees	3
10116127	HR Technology	2
10116129	Professional Career Search Techniques	1
		6
Term 5 (Spring 2023)		
10804123	Math with Business Applications	3
10116125	Human Resource Employment Law	3
10809172	Introduction to Diversity Studies	3
		9
Term 6 (Summer 2023)		
10801196	Oral/Interpersonal Communication OR 10801198 Speech (3 cr)	3
10103161	PowerPoint - Level 1	1
		4
Term 7 (Fall 2023)		
10116107	Labor Relations and Negotiations	2
10116102	Compensation & Benefits Administration	3
10101155	Accounting for Professionals	3
		8
Term 8 (Spring 2024)		
10116124	Strategic Performance Management	3
10116106	Internship--Human Resources OR 10138101 Intro to Global Business OR 10116128 HR Studies	3
10116168	Organizational Development	2
		8
Term 9 (Summer 2024)		
10809195	Economics	3
		3
		TOTAL 60

ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQUISITE: 10804123 Math w Business Applications or CONDITION: 101101 Paralegal program requirements met

COMPENSATION AND BENEFITS ADMINISTRATION...applies the skills and tools necessary to design, implement and manage a compensation and benefits program as a tool for recruitment, retention and performance management of employees.

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EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

HR TECHNOLOGY...introduces the learner to the ever-increasing use of technology in the human resource function with special attention paid to mobile computing, social media, human resource information and management systems, cloud computing, and surveying mechanisms.

HUMAN RESOURCE MANAGEMENT...applies the skills/tools necessary to effectively value and apply employees' abilities and needs to organization goals. Learners will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies/procedures, training, performance management, employee counseling/development, and effective use of compensation and benefit strategies.

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POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects.

PROFESSIONAL CAREER SEARCH TECHNIQUES...focuses on the process of researching and pursuing professional career opportunities. Students will develop resume and cover letter documentation to accurately reflect personal, academic, and professional accomplishments and the connection that these elements have to various positions with employers. Interviewing skills will be a significant aspect of this experience with a focus on interviews for potential internship opportunities.

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STRATEGIC PERFORMANCE MANAGEMENT...prepares the student to consolidate, analyze, and display data at varying levels of detail in order to make human capital decisions in the workplace. Provides students information they need to enhance employee competencies, establish development plans, evaluate performance, and identify succession scenarios. PREREQUISITE: 196193 Human Resource Management and CONDITION: Verification of eligibility by instructor/coordinator of Human Resource program (student must have at least 30 credits of Human Resource program courses)

SUPERVISION...allows the learner to apply the skills and tools necessary to perform the functions of a frontline leader. Students learn the application of strategies and transition to a contemporary supervisory role including day-to-day operations, controlling, staffing, leadership, problem-solving, team skills, motivation, and training.

TRAINING FOR ORGANIZATIONS...applies the skills and tools necessary to implement the training cycle of assessment, design, implementation and evaluation. Each learner will develop and present a complete training project based upon adult learning theory and instructional design techniques.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 31-116-1
Technical Diploma • Two Terms

ABOUT THE PROGRAM

This technical diploma, Human Resources Assistant, provides you with a range of entry level and intermediate skills that are needed to perform basic human resources job functions. The credential 'ladders' up to the full two-year Associate Degree, Human Resource Administration. If you enjoy assisting in structuring and administering programs and policies designed to help employees be productive and safe in the workplace, then human resources assistant is a good career for you. The technical degree holder will assist in recruitment, apply basic workplace safety and legal principles to a variety of employment situations, conduct basic payroll functions, assist in and facilitate employee training and development programs, and serve as a customer service representative for a human resources department. This growing and dynamic field has excellent future career growth potential.

PROGRAM OUTCOMES

- Create an organizational workforce plan.
- Develop training programs.
- Examine organizational total rewards programs.
- Incorporate employment law into business practices.
- Facilitate effective employee relations.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This program is also offered in an online delivery format. Contact your program advisor for details.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10103191	Word - Level 1	1
10103121	Excel - Level 1	1
10196193	Human Resource Management	3
10116105	Recruitment and Retention of Employees	3
10116127	HR Technology	2
10449114	Safety in the Workplace	3
10801195	Written Communication	3
		16
Term 2		
10101106	Payroll Applications	2
10196191	Supervision	3
10116125	Human Resource Employment Law	3
10116103	Training for Organizations	3
10809198	Introduction to Psychology	3
10103161	PowerPoint - Level 1	1
		15
		TOTAL 31

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

HR TECHNOLOGY...introduces the learner to the ever-increasing use of technology in the human resource function with special attention paid to mobile computing, social media, human resource information and management systems, cloud computing, and surveying mechanisms.

HUMAN RESOURCE MANAGEMENT...applies the skills/tools necessary to effectively value and apply employees' abilities and needs to organization goals. Learners will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies/procedures, training, performance management, employee counseling/development, and effective use of compensation and benefit strategies.

HUMAN RESOURCES EMPLOYMENT LAW...applies the skills/tools necessary to effectively value and apply employees' abilities and needs to organization goals. Learners will demonstrate the legal application of the HR role as it impacts EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies/procedures, training, performance management, employee counseling/development, and effective use of compensation and benefit strategies.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

PAYROLL APPLICATIONS...introduces students to federal and state payroll laws; calculations for gross and net income; prepare payroll deductions; and maintain payroll records.

POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects. This course is offered in a self-paced format.

RECRUITMENT & RETENTION OF EMPLOYEES...applies and skills and tools necessary to hire and retain qualified employees. Legal issues, testing, screening, interviewing, selecting and negotiating techniques will be demonstrated and assessed for each learner.

SAFETY IN THE WORKPLACE...applies the skills and tools necessary to provide a safe and secure work environment. Each learner will demonstrate the application of safety awareness, federal/state/local compliance, incident investigation and documentation, human relations techniques, safety orientation, inspections, and risk analysis, issues of workplace violence, substance abuse, and health hazards, first aid and CPR, fire and electrical safety, emergency preparedness, and liaison with external agencies.

SUPERVISION...allows the learner to apply the skills and tools necessary to perform the functions of a frontline leader. Students learn the application of strategies and transition to a contemporary supervisory role including day-to-day operations, controlling, staffing, leadership, problem-solving, team skills, motivation, and training.

TRAINING FOR ORGANIZATIONS...applies the skills and tools necessary to implement the training cycle of assessment, design, implementation and evaluation. Each learner will develop and present a complete training project based upon adult learning theory and instructional design techniques.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro Rdg & Study Skills or Reading placement assessment equivalent

Program Number 31-601-2
Technical Diploma • Two Terms

ABOUT THE PROGRAM

The HVAC & Building Trades Fundamentals Embedded Technical Diploma is a great first step for an entry-level position in the Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR) fields. This training prepares individuals to install residential and light commercial HVACR systems used for the environmental control of buildings and product processes. It also provides instruction in construction trades fundamentals.

PROGRAM OUTCOMES

- Install HVACR (heating, ventilating, air conditioning, refrigeration) systems.
- Troubleshoot HVACR (heating, ventilating, air conditioning, refrigeration) systems.
- Perform HVACR (heating, ventilating, air conditioning, refrigeration) performance tests.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10410101	Intro To Construction	2
10413105	Basic Electricity for Construction Trades	2
10410102	Blueprint Reading for Building Construction	2
10804113	College Tech Math 1A	3
10442100	Welding Introduction	1
10410103	OSHA 30 for Construction	2
10601110	Mechanical Service Applications	3
		15
Term 2		
10620105	DC Fundamentals	2
10601121	HVACR Heating Systems	2
10601122	HVACR Air Conditioning Fundamentals	3
10601123	HVACR Intro to Installations	2
10601124	HVACR Principles of Airflow	2
10601125	HVACR Hydronic Heating Systems	2
		13

TOTAL 28

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

BASIC ELECTRICITY FOR CONSTRUCTION TRADES...provides practical DC/AC concepts to introduce various components, electrical quantities, and measuring values in DC and AC circuits. Circuit measurement of voltage, current, and resistance will be taken with analog and digital meters applying basic concepts. The student will learn about electrical theory, electrical safety, basic circuit design, measuring equipment, general wiring practices, motors, and transformers.

BLUEPRINT READING FOR BUILDING CONSTRUCTION...provides instruction in reading and interpreting shop drawings, residential drawings, and commercial building plans. Emphasis is placed on building terminology and learning conventional techniques of communicating building methods from the designer to the builder. Students learn to visualize the structure and to interpret elevations, plan views, details, and sections from drawings. They also learn to read and interpret building specifications.

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtrc Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

DC FUNDAMENTALS...prepares the student to convert values to scientific and engineering notations; calculate math quantities; describe basic atomic theory; identify basic electrical terms; use established symbols standards; describe DC voltage characteristics and current sources and electrical resistance; measure and analyze electrical quantities in series and parallel circuits; and desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1

HVACR AIR CONDITIONING FUNDAMENTALS...instructs the learner in air conditioning principles and terms, physical principles of air movement, air filtering and humidity, and methods of conditioning air for comfort and health. The proper use of psychrometers, dry bulb thermometers, hygrometers, and reading and interpretation of psychrometric charts and scales are covered, in addition to ASHRAE and BPI ventilation standards for residential units. PREREQUISITE: 10413105 Basic Electricity for Construction Trades

HVACR HEATING SYSTEMS...focuses on the different forms of heat transfer, the types of heat, and how they relate to various HVAC systems. The basic operation of gas, oil, electric and hydronic heating systems are explored and major components and controls are identified. The main objective is understanding the basic functions of heating appliances. PREREQUISITE: 10410101 Intro to Construction

HVACR HYDRONIC HEATING SYSTEMS...explains how heat is transferred from water to air. The course covers system components, boilers, pressure reducing valves, relief valves, expansion and compression tanks, flow checks, integral flow checks, pumps, and circulators. Basic system installation, repair, and troubleshooting will be discussed. COREQUISITE: 10601121 HVACR Heating Systems

HVACR INTRODUCTION TO INSTALLATIONS...instructs the learner in residential and light commercial heating and cooling systems. Emphasizes the diversity of heating and cooling systems and how they operate. Students participate in the installation of a variety of HVACR systems as well as in troubleshooting and servicing systems. PREREQUISITES: 10413105 Basic Electricity for Construction Trades and 10410103 OSHA 30 for Construction and COREQUISITES: 10601122 HVACR Air Cond Fundamentals and 10601121 HVACR Heating Systems

HVACR PRINCIPLES OF AIRFLOW...instructs the learner in evaluating and testing natural gas and propane heating appliances. Major components and controls are identified and the proper methods of troubleshooting and diagnosing are learned and practiced. Evaluating proper airflow patterns, combustion safety, and system performance for systems are emphasized. The main objective is to assist the technician to work on a variety of gas-fired appliances when the course is completed.

INTRODUCTION TO CONSTRUCTION...provides the learner with an overview of the various construction trades including framing, roofing, masonry block work, masonry flat work, electrical, HVAC, plumbing, and finish cabinetry work.

MECHANICAL SERVICE APPLICATIONS-SHEET METAL...introduces the student to copper soldering and brazing, oxy-acetylene torch usage for welding and brazing steel, sheet metal layout and fabrication, press fitting pipe, corrugated stainless steel tubing, PVC, and black iron pipe assembly procedures.

OSHA 30 FOR CONSTRUCTION...is an introductory course designed to provide instruction on general construction safety and health topics. The participant is given an overview of the key components of the Occupation Safety and Health Act of 1970, so they become familiar with the enforcement and compliance efforts. The course is taught by certified OSHA instructors.

WELDING INTRODUCTION...introduces the learner to the world of welding, weld shop safety practices, welding terminology, and welding machine setup to industry standards. Learners will be introduced to the three major welding processes: SMAW, GMAW, and GTAW and will build skills welding with each process in the flat and horizontal positions while using the common welding joints found in industry. The learner will process material using the two major hand-held cutting processes - Oxyfuel and PAC.

Program Number 50-413-1

4-Year Contract

Work Hours (including related instruction): 8320

Related Instruction Hours: 720 • Night School Hours: 8

ABOUT THE APPRENTICESHIP

Apprenticeships are employer-sponsored training programs. You must have a contract before being invited to school. A special application process is used for these programs. Please contact the Apprenticeship Office for the proper forms. Apprenticeship means you earn while you learn. If you want a career in a skilled trade, apprenticeship is the best way to get there. You'll combine on-the-job training with on campus learning—you'll have the best of both worlds when it comes to learning the skills you need to get ahead. And even better, you'll earn a paycheck while you learn those skills.

ABOUT THE CAREER

Industrial electricians maintain and repair many different types of electrical equipment. In addition, they modify and install electrical equipment such as motors, transformers, generators, controls, instruments, lighting systems, and power distribution. Typical duties of this trade include performing preventative maintenance; replacing units or parts such as wiring, fuses, circuit breakers, coils or switches; measuring, cutting, bending, threading and installing conduits; using such devices as test lamps, volt-ohm meters and oscilloscopes; working from blueprints, drawings, and diagrams; making mathematical computations to determine the current carrying capacities of electrical wire and equipment; and troubleshooting AC and DC drives and programmable logic controllers.

CAREERS

Graduates of LTC's Industrial Electrician Apprenticeship program work as journey-level industrial electricians in commercial, industrial, and public establishments.

INDUSTRIAL APPRENTICE APPLICATION REQUIREMENTS

- Determined by employer
- Wisconsin Apprentice Contract

PROGRAM OUTCOMES

- Apply AC and DC theory to an industrial setting.
- Apply the National Electric Code requirements to industrial equipment and facilities.
- Apply operational and troubleshooting principles to a transformer installation.
- Maintain electric motors and motor controls.
- Test solid-state electronic system components.
- Apply operational and troubleshooting principles to power systems and variable speed drives.
- Apply operational and troubleshooting principles to programmable logic controllers and automation equipment.
- Apply operational and troubleshooting principles to fluid power systems.
- Interpret industrial equipment drawings and electrical prints.
- Communicate trade and occupational-related information effectively.

APPROXIMATE COSTS

Contact the LTC Apprenticeship Office or visit www.gotoltc.edu/apprenticeship for detailed information.

SPECIAL NOTE

You must have a sponsoring employer and contract before attending school.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

Catalog No.	Class Title	Credit(s)
Term 1		
50413750	DC Electricity for IE Part 1	1
50413773	Safety and Print Reading for IE	0.5
50413762	Industrial Electrician Motor Controls 1	1
50413752	Codes for IE 1: Intro to the NEC	0.5
		3
Term 2		
50413774	DC Electricity for IE Part 2	1
50413763	Industrial Electrician Motor Controls 2	1
50413753	Codes for IE 2: OCPD and Electrical Device	0.5
		2.5
Term 3		
50413751	AC Electricity for IE Part 1	1
50413764	Industrial Electrician Motor Controls 3	1
50413754	Codes for IE 3: Article 250 Part A	0.5
		2.5
Term 4		
50413775	AC Electricity for IE Part 2	1
50413769	IE Programmable Logic Controllers 1	1
50413755	Codes for IE 4: Article 250 Part B	0.5
		2.5
Term 5		
50413760	Industrial Electrician Transformers	1
50413770	IE Programmable Logic Controllers 2	1
50413759	Codes for IE 8: Transformers	0.5
		2.5
Term 6		
50413761	IE Motors and Generators	1
50413771	IE Programmable Logic Controllers 3	1
50413758	Codes for IE 7: Motors and Generators	0.5
		2.5
Term 7		
50413768	IE Solid State Electronics	2
50413767	Fluid Power systems for IE - Hydraulics	0.5
50413766	Fluid Power Systems for IE- Pneumatics	0.5
		3
Term 8		
50413765	Power Systems & Variable Speed Drives for IE	2
50413757	Codes for IE 6: Conductors, Raceways, Data Cables	0.5
50413756	Codes for IE 5: Article 300 Cords/Cables	0.5
		3
		TOTAL 21.5

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with the Apprenticeship Office for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AC ELECTRICITY FOR IE PART 1...introduces the industrial electrical apprentice to the basic concepts of alternating current. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of the modern industrial electric systems. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

AC ELECTRICITY FOR IE PART 2...introduces the industrial electrical apprentice to the basic concepts of alternating current. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of the modern industrial electric systems. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

CODES FOR IE 1: INTRO TO THE NEC...introduces apprentice to the layout and purpose of the National Electric Code (NEC). It also strives to teach the apprentice proper methodology to research a code question and correctly interpret what they are reading. Apprentices will research the structure of the NEC and define the requirements of the code that are common to all electrical installations. Apprentices will examine the installation requirements for fire pumps, emergency systems and fire alarms. CONDITION: 504131 Ind Electrician Apprentice or 504641 Maint Tech Apprentice requirements met

CODES FOR IE 2: OCPD AND ELECTRICAL DEVICE...introduces the industrial electrical apprentice how to plan for the installation of overcurrent protection devices and how to select the proper boxes, cabinets and conduits for industrial electrical codes. This is the second of 8 course modules on the NEC. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

CODES FOR IE 3: ARTICLE 250 PART A...examines the application of grounding to industrial electrical situations as required by the NEC and other electrical codes. CONDITION: 504131 Ind Electrician Appr or 504641 Maint Tech Apprentice reqs met

CODES FOR IE 4: ARTICLE 250 PART B...examines course four of eight on the NEC Article 250 and grounding applications for industrial electrical installants. Apprentices will complete their review of this portion of the NEC and examine additional related electrical codes in effect across Wisconsin. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

CODES FOR IE 5: ARTICLE 300 CORDS/CABLES...examines course five of eight, article 300 of the NEC and wiring methods for industrial electrical applications. In addition, apprentices will determine sizing requirements for cords and cables for installations common to industrial facilities. Finally, the course will identify code requirements for equipment installations in hazardous locations. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maint Technician Apprentice requirements met

CODES FOR IE 6: CONDUCTORS, RACEWAYS, DATA CABLES...examines course six of eight covering selection of proper conductors and raceways for industrial electrical installations as required by the NEC and other electrical codes. In addition, course competencies will include examining the installation requirements for data and communication cables. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

CODES FOR IE 7: MOTORS AND GENERATORS...examines course seven of eight which reviews the code requirements for the selection of electrical components for typical industrial electrical motor installations. Course module includes sizing of controls, conductors, switches, branches, and more. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

CODES FOR IE 8: TRANSFORMERS...examines course eight of eight which reviews the electrical code requirements which provide for the protection of various industrial transformer installations. Course competencies include developing plans, sizing equipment and components, safety, and references to applicable sections of the NEC. CONDITION: 504131 Ind Electrician Appr or 504641 Maint Tech Apprentice reqs met

DC ELECTRICITY FOR IE PART 1...introduces the fundamental concepts of and computations related to DC electricity. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of modern industrial electric systems. Competencies related to metering and safe use of measuring devices are included. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

DC ELECTRICITY FOR IE PART 2...introduces the fundamental concepts of and computations related to DC electricity. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of modern industrial electric systems. Competencies related to metering and safe use of measuring devices are included. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

FLUID POWER SYSTEMS FOR IE - HYDRAULICS...examines hydraulics course customized for industrial electricians and relates the basics of hydraulic theory and hydraulic components. Safety and the interrelationship between hydraulic power with electrical control is emphasized. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

FLUID POWER SYSTEMS FOR IE - PNEUMATICS...examines pneumatics customized for industrial electrician apprentices who deal with fluid power systems. This course will relate the basics of pneumatic theory and pneumatic components. Safety and the interrelationship between hydraulic power with electrical control is emphasized. CONDITION: 504131 Ind Electrician Appr or 504641 Maint Tech Apprentice reqs met

IE MOTORS AND GENERATORS...introduces the industrial electrician apprentices to explore motor controls. This course introduces concepts, terminology, and safety. In addition, this is designed to give the Industrial Electrician Apprentice the knowledge required by industry to maintain electric motors and generators. This course material will cover DC motors and generators, single-phase and three-phase motors, as well as alternators. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

IE PROGRAMMABLE LOGIC CONTROLLERS 1...designed to teach the fundamentals of programmable logic controller and its programming software. The first course of 3 will introduce terminology, concepts, print reading and safety. CONDITION: 504131 Ind Electrician Apprentice or 504641 Maint Tech Apprentice requirements met

IE PROGRAMMABLE LOGIC CONTROLLERS 2...examines second of three courses for industrial electrician apprentices. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

IE PROGRAMMABLE LOGIC CONTROLLERS 3...examines third course of three for industrial electrician apprentices. PLC applications and assessment projects are planned. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Tech Apprentice requirements met

IE SOLID STATE ELECTRONICS...provides apprentice with the skills and knowledge for troubleshooting basic solid-state devices and circuits. The construction, identification, and operating characteristics of solid-state devices are investigated. The apprentice builds test circuits, gathers and analyzes data, and follows safety procedures. Methods for locating defective component are applied. Replacement of printed circuit board components is performed. Also examined is the effect of temperature on devices. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Tech Apprentice requirements met

INDUSTRIAL ELECTRICIAN MOTOR CONTROLS 1...introduces learner through the fundamentals of electric motor control. Will learn to recognize and draw the basic symbols, the language of motor controls, and how to apply these symbols into current industrial format. Will also learn to draw ladder and wiring diagrams. Introduced to the logic used in motor control and be required to apply this logic in order to correctly interpret, design and wire control circuits. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

INDUSTRIAL ELECTRICIAN MOTOR CONTROLS 2...examines second course of three and examines motor controls applicable to the industrial electrician trade. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

INDUSTRIAL ELECTRICIAN MOTOR CONTROLS 3...examines third of three courses examining motor controls applicable to the industrial electrician trade. Applications and assessment activities are intended in this course. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

INDUSTRIAL ELECTRICIAN TRANSFORMERS...introduces Industrial Electrician Apprentice to the basic concepts of single and three-phase transformers. The course will cover transformer theory, turns, current and voltage ratios as well as proper connections and use of various transformers. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

POWER SYSTEMS AND VARIABLE SPEED DRIVES FOR IE...provides opportunity for students to learn about power systems and variable speed drives (VSD's). Topics include electricity, electronics, power transmissions, motor operations, AC and DC motor drives, servo and stepper drives, peripherals and communication. Will also explore closed loop control, feedback devices, and drive maintenance and the troubleshooting of VSD's. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

SAFETY AND PRINT READING FOR IE...acquaints the apprentice with the interpretation of "prints" (blueprints) and other engineering and manufacturing documentation. The primary focus of the course will be on the basics of prints and how they are used to convey information to technicians. Application of electrical prints from industrial settings will be studied. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

Program Number 50-420-9
18 Month Contract

Work Hours (including related instruction): 3000
Related Instruction Hours: 256 • Night School Hours: 8

ABOUT THE APPRENTICESHIP

Apprenticeships are employer-sponsored training programs. You must have a contract before being invited to school. A special application process is used for these programs. Please contact the Apprenticeship Office for the proper forms. Apprenticeship means you earn while you learn. If you want a career in a skilled trade, apprenticeship is the best way to get there. You'll combine on-the-job training with on campus learning—you'll have the best of both worlds when it comes to learning the skills you need to get ahead. And even better, you'll earn a paycheck while you learn those skills.

ABOUT THE CAREER

Entry-level industrial manufacturing technicians operate industrial production-related equipment, work with manufacturing-related tools, and perform work processes related to a wide variety of manufacturing settings. Industrial manufacturing technician apprentices will learn to set up, operate, monitor, and control production equipment. They will also help improve manufacturing processes and schedules to meet customer requirements. This apprenticeship training program combines on-the-job learning with related instruction in a classroom to prepare apprentices for journey-level work after they complete the program.

CAREERS

Graduates of LTC's Industrial Manufacturing Technician Apprenticeship program work as journey-level industrial manufacturing technicians in commercial, industrial, and public settings.

INDUSTRIAL APPRENTICE APPLICATION REQUIREMENTS

- Determined by employer
- Wisconsin Apprentice Contract

PROGRAM OUTCOMES

- Protect self and other workers from accidents and injuries.
- Interpret technical information.
- Measure work.
- Inspect work.
- Use mechanical tools and testing equipment.
- Set up production equipment.
- Operate production equipment.
- Produce quality work.
- Be aware of inventory and material processes.
- Be aware of trends and the current state of the business.
- Apply soft skills to production and manufacturing work processes.
- Demonstrate continuous improvement.

APPROXIMATE COSTS

Contact the LTC Apprenticeship Office or visit www.gotoltc.edu/apprenticeship for detailed information.

SPECIAL NOTE

You must have a sponsoring employer and contract before attending school.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

Catalog No.	Class Title	Credit(s)
Term 1		
50420510	Industrial Manufacturing Technician Apprentice 1	3
50420711	Mathematics for Machine Trades	1
Term 2		
50420512	Industrial Manufacturing Technician Apprentice 2	3
50420712	Communications for Apprentices	1
		4
		TOTAL 8

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with the Apprenticeship Office for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

COMMUNICATIONS FOR APPRENTICES...introduces the apprentice to basic communication concepts relating to the workplace. It is designed specifically for the apprentice to acquire the necessary skills of giving instructions, writing a technical memo, and explaining a technical process. Throughout the course the apprentice will brainstorm, write, edit, revise, and use one-on-one communication delivery in a small group. The course combines lecture and hands-on activities. CONDITION: Industrial Manufacturing Technician Apprentice program requirements met

INDUSTRIAL MANUFACTURING TECH APPRENTICE 1...includes an orientation to the trade and manufacturing, followed by the MSSC safety module, MSSC quality module, OSHA 10 certification, blueprint reading, visual inspection, measurement, and first aid & CPR training. Manufacturing concepts will be introduced and applied in a variety of manufacturing settings. MSSC modules 1 and 2 are aligned with the learning plans for this course along with Machine Trades Math. CONDITION: Industrial Manufacturing Technician Apprentice program requirements met

INDUSTRIAL MANUFACTURING TECH APPRENTICE 2...includes the MSSC manufacturing processes and production and maintenance awareness modules, along with communication, lean manufacturing, problem solving, and frontline leadership. Manufacturing-related concepts will be applied to a variety of industrial settings. The course wraps up with an examination of emerging trends and technologies and future directions for manufacturing. MSSC learning objectives in modules 3 and 4 are aligned with curriculum. CONDITION: Industrial Manufacturing Technician Apprentice program requirements met

MATHEMATICS FOR MACHINE TRADES...provides applied mathematics instruction from a review of basic arithmetic; basic algebra; applications based on geometry; right triangle trigonometry and oblique angle trigonometry; and compound angles. CONDITION: 504209 Industrial Manufacturing Technician Apprentice program requirements met

Program Number 61-620-1
Certificate • 9 credits

ABOUT THE PROGRAM

Change is constant. Change is rapid. In the world of manufacturing technology change brings more complex systems of assembly, control measurement, and material processing of manufactured products. If you're good at problem solving, like working with automated manufacturing equipment, and you're looking forward to work that continuously challenges you to keep growing your knowledge and skills—consider an always-evolving career in electro-mechanical technology.

PROGRAM OUTCOMES

- Perform work safely.
- Troubleshoot electrical and mechanical systems and devices.
- Repair electrical and mechanical systems.
- Communicate technical information.
- Integrate electrical and mechanical systems and devices.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Career Coach about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
COURSES		
10620122	Industrial Wiring	2
10620103	Fluid Power 1	2
10620169	Robotic Mechanical Maintenance	1
10804113	College Technical Math 1A*	3
10620120	Basic Tools and Measurement	1

TOTAL 9

*Students planning to transition to a 4-year college following LTC program completion may want to take 10801198 Calculus 1 in place of College Technical Math 1A.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtn Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

FLUID POWER 1...prepares the learner to identify hydraulic and pneumatic component symbols; adjust a pressure relief valve; analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits; analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. COREQUISITES: 10804115 College Technical Math 1 or 10804114 College Tech Math 1A

INDUSTRIAL WIRING...prepares the learner to follow safety procedures; maintain a safe and healthy work environment; construct electrical circuits; measure electrical quantities using a VOM and/or DVM; analyze measured values using electrical circuit laws; construct typical industrial control circuits; and analyze typical industrial control circuits.

ROBOTIC MECHANICAL MAINTENANCE...introduces the students to the robot teach pendant and robot jogging. Students will be taught to replace servo motors, recalibrate the robot and back up robot software and programs.

TOOLS AND MEASUREMENT...prepares the learner to use hand tools, precision measuring instruments, and torque tools.

ABOUT THE PROGRAM

Introduces the student to the basics of stick and wire welding, weld print reading as well as the proper terminology, tool and safe work practices as it relates to welding in an industrial setting.

PROGRAM OUTCOMES

- Apply safety practices
- Interpret blueprints and AWS Welding symbols
- Apply basic math to the field of welding
- Perform SMAW and GMAW welding processes in various positions

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

This certificate is available in the evenings. All classes meet the American Welding Society requirements.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

Credits transfer to LTC's Welding–Industrial and Fabrication Technician programs.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
COURSES		
31442300	Welding Introduction	1
31442310	Welding Shielded Metal Arc 1 (Stick)	1
31442350	Welding Hand/Power Tools	1
31442351	Welding Measurement 1	1
31442320	Welding Gas Metal Arc 1 (Wire/Mig)	1
31442322	Welding Gas Metal Arc 2 (Wire/Mig)	1
31442324	Welding Gas Metal Arc 3 (Wire/Mig)	1
31442385	Welding Print Reading	1
31442308	Welding Metallurgy	1
31442382	Welding Math 1	1
		TOTAL 10

COURSES

Catalog No.	Class Title	Credit(s)
31442300	Welding Introduction	1
31442310	Welding Shielded Metal Arc 1 (Stick)	1
31442350	Welding Hand/Power Tools	1
31442351	Welding Measurement 1	1
31442320	Welding Gas Metal Arc 1 (Wire/Mig)	1
31442322	Welding Gas Metal Arc 2 (Wire/Mig)	1
31442324	Welding Gas Metal Arc 3 (Wire/Mig)	1
31442385	Welding Print Reading	1
31442308	Welding Metallurgy	1
31442382	Welding Math 1	1

TOTAL 10

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

WELDING GAS METAL ARC 1...prepares the learner to demonstrate safe shop work practices; learners will perform set up and shut down of GMAW and FCAW equipment; weld mild steel using the GMAW and FCAW welding processes, and weld in all positions using the GMAW process. COREQUISITE: 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

WELDING GAS METAL ARC 2...will use safe shop work practices while producing 3/4" fillet welds using the FCAW and MCAW welding processes and 1/4" fillet welds while welding tube to plate in the horizontal position. Learners will produce V-groove weldments in all four positions, using .035 hard wire, .052 Flux Core and Metal electrode wires. COREQUISITE: 31442320 Welding Gas Metal Arc 1

WELDING GAS METAL ARC 3...will have learners demonstrate safe shop working practices while welding fillet welds in all positions using the FCAW and MCAW welding process. Learners will perform single bevel groove welds and V-groove welds in all positions using the multiple GMAW welding process, and will perform groove welds with and without backing material. COREQUISITE: 31442322 Welding Gas Metal Arc 2

WELDING HAND/POWER TOOLS...prepares the learner to communicate proper measurement terminology used in industry; will develop safety practices for the work place; proper use of measuring equipment and obtain measurement readings from measuring equipment; layout steel fabrication using hand measuring devices and layout equipment. The learner will inspect a variety of steel fabrications and how to classify industrial fasteners. Learners will have the opportunity to receive up to three NC3/Starrett measuring certifications. COREQUISITE: 31442351 Welding Measurement 1 and 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

WELDING INTRO...introduces the learner to the world of welding, weld shop safety practices, welding terminology, and welding machine setup to industry standards. Learners will be introduced to the three major welding processes: SMAW, GMAW, and GTAW and will build skills welding with each process in the flat, and horizontal positions while using the common welding joints found in industry. The learner will process material by using the two major hand held cutting processes - the Oxyfuel and PAC cutting processes.

WELDING MATH 1...provides the learner with the necessary skills to solve problems involving whole numbers, fractions, and decimal numbers using pad and pencil and calculator. The course is designed for individualized student needs. This is credit one of the twomath credits need for the Welding program.

WELDING MEASUREMENT 1...prepares the learner to communicate proper measurement terminology used in industry; will develop safety practices for the work place; proper use of measuring equipment and obtain measurement readings from measuring equipment; layout steel fabrication using hand measuring devices and layout equipment. The learner will inspect a variety of steel fabrications and how to classify industrial fasteners. Learners will have the opportunity to receive up to three NC3/Starrett measuring certifications.

WELDING METALLURGY...prepares the learner to interpret properties of ferrous materials, heat treat ferrous metals; and test the hardness of ferrous materials. The learner will interpret weld discontinuities and how heat of the weld affects base metal properties.

WELDING PRINT READING...prepares the learner to apply orthographic projection principles and AWS welding symbols as they relate to welding fabrications. Students will learn the basics of print reading including alphabet lines, tolerances, bill of materials, title blocks, and revision blocks.

WELDING SHIELDED METAL ARC I...prepares the learner to demonstrate safe shop work practices; make bead on plate welds on mild steel; make padding plate welds on mild steel; make fillet welds in 3/8" mild steel plate in the flat and horizontal positions; and make groove welds in mild steel plate. COREQUISITE: 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

ABOUT THE PROGRAM

Learn CNC and Machining at your own pace, through hands-on learning, and with your instructor and success coach to guide you. Just about every product that you use in your daily activities is the result of a machine tool manufacturing process. If you like hands-on work, are detail-oriented, have good math skills, and are able to develop and follow through on work instructions, a career in machine tool operation offers you lifelong opportunities.

PROGRAM OUTCOMES

- Apply basic safety practices in the machine shop.
- Interpret industrial/engineering drawings.
- Apply precision measuring methods to part inspection.
- Perform basic machine tool equipment setup and operation
- Perform programming, setup, and operation of CNC machine tools.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Career Coach about how to apply for aid.

SPECIAL NOTE

This program is Competency-Based. Competency-Based Education (CBE) is learning at your own pace by mastering competencies through demonstration. Once all competencies for a program have been assessed and mastered, students will earn a certificate, diploma, or degree.

RELATED PROGRAMS

- CNC Technician Technical Diploma
- Machinist Apprenticeship
- Tool & Die Apprenticeship

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
COURSES		
31420310	Shop Tools and Fasteners	1
31420330	Precision Measuring	1
31420385	Orthographic Projection Print	1
31420325	Machining Math Basic	1
31420338	Drills and Saws	1
31420340	Lathe Facing and Turning	1
31420350	Mill-Squaring	1
31420342	Lathe-Hole Producing and Threading	1
31420351	Mill-Slots and Holes	1
31444301	Mill-G&M Code	1

TOTAL 10

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

GD&T INTRO...prepares the learner to interpret manufacturing drawings for geometric dimension and tolerances (GD&T). COREQUISITE: 31420385 Orthographic Projection Print

LATHE FACING AND TURNING...prepares the learner to perform lathe facing and turning operations safely. COREQUISITE: 31420310 Shop Tools and Fasteners or 31420394 Ind Mtnc Machine Tool Introduction or 10420194 Machine Tool Introduction or CONDITION: 324571 Welding Fabrication Tech

MACHINING GEOMETRY AND BASIC TRIGONOMETRY...prepares the learner to apply geometry and basic trig to solve technical problems. COREQUISITE: 31420325 Machining Math Basic

MACHINING MATH BASIC...prepares the learner to apply basic technical math skills to solve problems.

MILL-G&M CODE...prepares the learner to create milling G&M code programs.

MILL-SLOTS AND HOLES...prepares the learner to perform slot milling and hole producing operations on a vertical milling machine. COREQUISITE: 31420350 Mill-Squaring or 10420105 Machine Tool Mills 1A or 31420395 IM MT Lathes and Mills or 31420348 Machine Tool Mills 1 for Fabric

MILL-SQUARING...prepares the learner to square a part using a vertical mill machine safely. COREQUISITE: 31420310 Shop Tools and Fasteners or 31420394 Ind Mtnc Machine Tool Intro or 10420194 Machine Tool Intro or CONDITION: 324571 Welding Fabrication Technician program

ORTHOGRAPHIC PROJECTION PRINT...prepares the learner to interpret manufacturing orthographic projection prints.

PRECISION MEASURING...prepares the learner to demonstrate use of precision measuring instruments.

SHOP TOOLS AND FASTENERS...prepares the learner to demonstrate use of shop tools and fasteners. COREQUISITE: 31420330 Precision Measuring

ABOUT THE PROGRAM

Prepares the learner for entry-level maintenance and production employment. The student will have hands-on learning of basic maintenance and electrical tasks as well as instruction in print and math that pertain to the manufacturing environment. The student will also get a basic understanding of tools and measurement that is used in manufacturing.

PROGRAM OUTCOMES

- Demonstrate safe work procedures.
- Maintain industrial equipment.
- Communicate technical information.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

Students need to supply their own safety glasses and welding gloves.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

- Certificate embedded in the Maintenance Mechanic and Maintenance Technician Technical Diplomas
- Electro-Mechanical Technician
- Maintenance Mechanic/Millwright Journeyworker

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10804113	College Technical Math 1A OR Calculus 1* (4 cr)	3
10462107	Tools and Measurement	1
10442100	Welding Introduction	1
10462109	Maintenance Introduction	1
10462111	Maintenance Print Reading	2
10620122	Industrial Wiring	2

TOTAL 10

*Students who plan to also achieve a Bachelor's degree are encouraged to take this transferable course.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtn Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

INDUSTRIAL WIRING...prepares the learner to follow safety procedures; maintain a safe and healthy work environment; construct electrical circuits; measure electrical quantities using a VOM and/or DVM; analyze measured values using electrical circuit laws; construct typical industrial control circuits; and analyze typical industrial control circuits.

MAINTENANCE INTRODUCTION...prepares the learner to apply basic safety, mechanics, force, friction, work, and energy; learn terminology related to maintenance; introduction to threaded and non-threaded fasteners and concrete anchoring; learn to use precision measuring tools; introduction to single-phase and three-phase motor wiring. PREREQUISITE: 31462325 Maintenance Tools and Measurement or COREQUISITE: 10462107 Tools and Measurement

MAINTENANCE PRINT READING...prepares the learner to read prints; make isometric sketches; interpret orthographic projection drawings, to include sections, surface finishes, and tolerancing. The course when delivered in the evening is self-paced, open-entry/exit, and designed for individualized student needs. Tools and Measurement...prepares the learner to use hand tools, precision measuring instruments, and torque tools.

WELDING INTRODUCTION...introduces the learner to the world of welding, weld shop safety practices, welding terminology, and welding machine setup to industry standards. Learners will be introduced to the three major welding processes: SMAW, GMAW, and GTAW and will build skills welding with each process in the flat, and horizontal positions while using the common welding joints found in industry. The learner will process material using the two major hand held cutting processes - the Oxyfuel and PAC cutting processes.

Program Number 10-154-3
Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

Computers—can you imagine life without them? So much of what we do, whether at work, at home, or somewhere in between, depends on the use of computer information systems. If you enjoy using various operating systems, learning all kinds of software applications, doing some programming, troubleshooting hardware and software, and helping others learn to use technology and information systems, a career as a computer support specialist may be the perfect fit for your high-tech talents.

PROGRAM OUTCOMES

- Manage information technology hardware.
- Manage software.
- Support computer networks.
- Provide end user support.
- Solve information technology problems.
- Demonstrate customer service skills as an IT professional.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Students are required to have one USB 80 gig hard drive or greater.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10154104	Intro to IT	3
10150114	Networking I	3
10154122	PC Support	3
10801195	Written Communication	3
10804133	Math & Logic	3
		15
Term 2		
10150173	Server Administration 1	3
10150176	Networking 2	3
10154124	Information Security Principles	3
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
10809196	Introduction to Sociology OR 10809122 Introduction to American Government OR 10809166 Introduction to Ethics	3
		15
Term 3		
10154128	Service Desk 1	3
10150174	Server Administration 2	3
10154102	Business Apps Fundamentals	3
10154103	Training and Documentation	2
10154131	Apple Support	3
		14
Term 4		
10154129	Service Desk 2	3
10154132	MS Windows	3
10154160	IT Computer Capstone	3
10154106	IT-Career and Professional Development	1
10150164	Mobile Devices	3
10809198	Introduction to Psychology	3
		16
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

APPLE SUPPORT...prepares the student to support the Apple Mac OS operating system. The course covers installation and configuration, user account management, file and data management, application support, network configuration and services as well as other system management functions.

BUSINESS APPS FUNDAMENTALS...prepares the learner to evaluate, use, and support common information system applications that an end-user would use in a typical business environment. Both individual productivity tools as well as enterprise tools are examined. The competencies in the course will articulate to other courses in the information technology programs. Opportunity to earn TestOut Desktop Pro Certification.

INFORMATION SECURITY PRINCIPLES...introduces the learner to Information Systems Security. Students will review and analyze the control and security concerns in the information systems environment; the security challenges created from the emergence of new technology and the changing internal and external environments; and the effect of legal, regulatory, and current security technology on policy development. Opportunity to earn TestOut Security Pro Certification. PREREQUISITE: 10154104 Intro to IT

INTRO TO IT...introduces student to IT field to basic concepts and terminology of a computer system hardware and software, Operating Systems (including Mac OS), and Networks; applied skills include: managing computer data files; protecting against computer viruses; creating simple web pages; producing electronic word documents, spreadsheets and presentations; examining techniques of systems analysis and design, programming languages and database systems.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

IT COMPUTER CAPSTONE...will allow the student to demonstrate the skills learned while in the Computer Support Specialist program. The student will demonstrate the ability to manage information technology hardware and software, support computer networks, provide end users support, solve information technology problems and demonstrate customer service skills as an IT professional, through the completion of a comprehensive project. PREREQUISITES: 10154129 Service Desk 2 and 10154132 MS Windows 2

IT-CAREER AND PROFESSIONAL DEVELOPMENT...introduces students to job seeking skills and work environment communications skills. Written and oral communication skills needed in the work place will be emphasized. Students will build a resume, create a cover letter and follow up letters. Participate in job-seeking skills, which include research of a particular job and company and participating in a mock interview. Course should be taken in last semester of course work.

MATH & LOGIC...will apply mathematical problem solving techniques. Topics will include symbolic logic, sets, algebra, Boolean algebra, and number bases. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

MOBILE DEVICES...are quickly becoming indispensable tools in the production environment. This course will introduce the learner to various industry mobile technologies used to promote better decision-making, reporting, and improve manufacturing performance. Some of the devices covered are tablets, smartphones, barcode printers and readers, and radio frequency identification (RFID) readers/writers.

MS WINDOWS...is a course designed to give the student the skills to support, and troubleshoot problems with, the Microsoft Windows operating system in an enterprise environment. Issues with remote access, networking, security, group policy, Internet Explorer, and mobile devices are covered. Opportunity to earn Testout Client Pro Certification.

NETWORKING 1...is a lecture/hands-on course designed to introduce students to network fundamentals. Topics covered include: OSI Reference Model; LAN and WAN topologies; cabling systems; access methods; protocols; Internet working devices (e.g. hubs, bridges, routers, switches, etc.); and basic network design.

NETWORKING 2...provides the students with networking terminology, protocols, network standards, LAN's, WAN's, TCP/IP addressing, and routing. PREREQUISITE: 10150114 Networking 1

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PC SUPPORT...prepares you to be able to install, manage, repair, and troubleshoot PC hardware and Windows, Linux, and Mac operating systems. You will learn how to set up a new computer, identify system requirements, install or upgrade operating systems, manage external devices, troubleshoot common computer problems, and connect to a small home network. Opportunity to earn TestOut PC Pro Certification.

SERVER ADMINISTRATION 1...is a hands-on course designed to introduce the learner to the installation and configuration of Windows Server servers. The student will learn how to install and configure servers, configure server roles and features, configure Hyper-V, deploy and configure core network services, install and administer Active Directory (AD), and create and manage Group Policy. PREREQUISITE: 10154104 Intro to IT

SERVER ADMINISTRATION 2...is a hands-on course designed to introduce the learner to administration of Windows Server servers. The student will learn how to deploy, manage, and maintain servers; configure file and print services; configure network services and access; configure a network policy server infrastructure; configure and manage Active Directory; and configure and manage Group Policy. Opportunity to earn TestOut Server Pro Certification. PREREQUISITE: 10150173 Server Administration 1

SERVICE DESK 1...provides the learner with the knowledge required to become a Help Desk Support technician. Students will learn fundamental Help Desk concepts such as: Help Desk operations, roles and responsibilities, processes and procedures, tools and technologies, individual and team performance measures, and how to provide support as a Help Desk professional.

SERVICE DESK 2...expands the learners' ability to troubleshoot all information technology issues utilizing Service Desk and Asset Management applications. Learners will expand their knowledge of ITIL practices and procedures used to manage an IT operation and its associated infrastructure. Communication, documentation, and teamwork skills are enforced. PREREQUISITE: 10154128 Service Desk 1

TRAINING AND DOCUMENTATION...provides the learner with the skills to develop various types of user documentation in hard copy and on-line formats. In addition, the learner will develop oral and written training skills necessary to provide individual and group end-user training.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-150-2
Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

Computers networked together sharing data and resources are powerfully amazing! Today, businesses of all sizes are networking their computers to maximize efficiency and productivity. If creating an overall computer network strategy, having the ability to analyze ideas/processes, installing hardware/software, and troubleshooting problems are skills you would like to put to use in a career, becoming a network specialist is your ticket to success.

PROGRAM OUTCOMES

- Implement computer networks.
- Implement client systems.
- Implement server operating systems.
- Implement network security components.
- Develop technical documentation.
- Troubleshoot network systems.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Students are required to have one USB 80 gig hard drive or greater.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10154104	Intro to IT	3
10150114	Networking I	3
10154122	PC Support	3
10801195	Written Communication	3
10804133	Math & Logic	3
		15
Term 2		
10150173	Server Administration 1	3
10150176	Networking 2	3
10154124	Information Security Principles	3
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
10809196	Introduction to Sociology OR 10809122 Introduction to American Government OR 10809166 Introduction to Ethics	3
		15
Term 3		
10150169	Network Design & Documentation	2
10150163	Networking 3	3
10150174	Server Administration 2	3
10150129	Virtualization	2
10809198	Introduction to Psychology	3
10150125	Linux	2
		15
Term 4		
10150165	Networking 4	3
10150164	Mobile Devices	3
10150175	Server Administration 3	3
10150179	Network Security	3
10150181	IT Networking Capstone	3
		15
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

INFORMATION SECURITY PRINCIPLES...introduces the learner to Information Systems Security. Students will review and analyze the control and security concerns in the information systems environment; the security challenges created from the emergence of new technology and the changing internal and external environments; and the effect of legal, regulatory, and current security technology on policy development. Opportunity to earn TestOut Security Pro Certification. PREREQUISITE: 10154104 Intro to IT

INTRO TO IT...introduces student to IT field to basic concepts and terminology of a computer system hardware and software, Operating Systems (including Mac OS), and Networks; applied skills include: managing computer data files; protecting against computer viruses; creating simple web pages; producing electronic word documents, spreadsheets and presentations; examining techniques of systems analysis and design, programming languages and database systems.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

IT NETWORKING CAPSTONE...will integrate many of the technologies and concepts that the students have learned throughout the Network Specialist program. The integration projects will include such areas as network client and server administration, general networking concepts, IP addressing, network security, and switch and router configuration. COREQUISITES: 10150165 Networking 4 and 10150175 Server Administration 3 and PREREQUISITE: 10150129 Virtualization

LINUX...is a hands-on course designed to provide the learner with the skills to install the Linux operating system, use its command-line and graphical user interfaces, manage system resources, and create scripts. The course will also introduce the learner to Linux system administration including the installation and administration of users, files, software, networking, and Internet and Intranet services.

MATH & LOGIC...will apply mathematical problem solving techniques. Topics will include symbolic logic, sets, algebra, Boolean algebra, and number bases. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

MOBILE DEVICES...are quickly becoming indispensable tools in the production environment. This course will introduce the learner to various industry mobile technologies used to promote better decision-making, reporting, and improve manufacturing performance. Some of the devices covered are tablets, smartphones, barcode printers and readers, and radio frequency identification (RFID) readers/writers.

NETWORK DESIGN AND DOCUMENTATION...is a lecture/hands-on course designed to introduce students to network design and documentation fundamentals. Topics include: needs analysis, hardware needs and analysis, network layout and design, and documenting a network. PREREQUISITE: 10150176 Networking 2

NETWORK SECURITY...introduces the student to the various methodologies for defending a network. Learners will develop an in-depth theoretical understanding of network security principles as well as the tools and configurations available. The learner will emphasize on the practical application of skills needed to design, implement, and support a secure Cisco network. PREREQUISITE: 10150163 Networking 3

NETWORKING 1...is a lecture/hands-on course designed to introduce students to network fundamentals. Topics covered include: OSI Reference Model; LAN and WAN topologies; cabling systems; access methods; protocols; Internet working devices (e.g. hubs, bridges, routers, switches, etc.); and basic network design.

NETWORKING 2...provides the students with networking terminology, protocols, network standards, LAN's, WAN's, TCP/IP addressing, and routing. PREREQUISITE: 10150114 Networking 1

NETWORKING 3...introduces the student to switching technology, hardware and software firewalls, and virtual private networks (VPN). PREREQUISITE: 10150176 Networking 2

NETWORKING 4...is a hands-on course designed to introduce IT students to enterprise-level IT technologies. The student will learn how to configure and manage Cisco wireless controllers, explore cloud computing technologies such as Google Apps and Microsoft Azure, learn about data center storage and backup solutions, advanced security technologies, and data center power and cooling. PREREQUISITE: 10150176 Networking 2

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PC SUPPORT...prepares you to be able to install, manage, repair, and troubleshoot PC hardware and Windows, Linux, and Mac operating systems. You will learn how to set up a new computer, identify system requirements, install or upgrade operating systems, manage external devices, troubleshoot common computer problems, and connect to a small home network. Opportunity to earn TestOut PC Pro Certification.

SERVER ADMINISTRATION 1...is a hands-on course designed to introduce the learner to the installation and configuration of Windows Server servers. The student will learn how to install and configure servers, configure server roles and features, configure Hyper-V, deploy and configure core network services, install and administer Active Directory (AD), and create and manage Group Policy. PREREQUISITE: 10154104 Intro to IT

SERVER ADMINISTRATION 2...is a hands-on course designed to introduce the learner to administration of Windows Server servers. The student will learn how to deploy, manage, and maintain servers; configure file and print services; configure network services and access; configure a network policy server infrastructure; configure and manage Active Directory; and configure and manage Group Policy. Opportunity to earn TestOut Server Pro Certification. PREREQUISITE: 10150173 Server Administration 1

SERVER ADMINISTRATION 3...will introduce you to PowerShell and help you be effective with it in a production environment. PowerShell is both a scripting language and an administrative shell that lets you control and automate nearly every aspect of Windows. PREREQUISITE: 10150176 Networking 2

VIRTUALIZATION...is a hands-on course designed to introduce the learner to the skills needed to install, configure, and manage a highly available and scalable virtual infrastructure. Objectives include: create, configure, migrate, manage, and monitor virtual machines and virtual appliances; manage user access to the virtual infrastructure; and configure and manage virtual network and storage systems. PREREQUISITE: 10154104 Introduction to IT

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

ABOUT ITS

LTC's Individualized Technical Studies (ITS) associate degree is designed for working adults with unique backgrounds and educational needs that can't be met by the college's existing associate degree programs. ITS provides the option of creating your own degree. As an ITS student, you'll work with an occupational mentor of your choosing, an academic advisor, and college faculty to design an academically sound, student- and industry-specific program.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
 - Complete the online Student Success Questionnaire.
 - Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.
 - Program specific requirements as applicable (i.e. background check, health form, etc.)
- *Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

• \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Curriculum varies depending upon the learner's individualized educational plan. Per the Wisconsin Technical College System (WTCS), 25 percent of coursework/credits must be completed from LTC and must be in the area of technical credits.

UNIQUE REQUIREMENTS

- Development of an individualized portfolio to be approved by the ITS Committee.
 - Create an educational degree plan.
 - Selection of occupational mentor(s).

CONTACT

Chou Yang, Program Counselor
920.693.1733 • chou.yang@gotoltc.edu

General Education 15-21 credits

Communication - 6 credits
Math or Science - 3 credits
Intro to Psych - 3 credits
Social Science - 3 credits
Diversity Recommended

ITS Occupational/Technical 45 credits

One program specific area - 20 credits
Other program areas - 25 credits

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.



Program Number 61-154-1
Certificate • 18 credits

ABOUT THE PROGRAM

The IT Service Center Technician embedded pathway certificate prepares students to provide support and technical assistance to computer users with computer software and hardware systems. First year program courses for IT Network Specialist, IT Computer Support Specialist, and Manufacturing IT.

PROGRAM OUTCOMES

- Qualifies for entry-level positions in a wide variety of IT fields.
- Prepares learner for associate degree program.
- Covers CompTIA A+, Cisco CCENT curriculum.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

- Credits apply toward IT Network Specialist, IT Computer Support Specialist, and Manufacturing IT.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10154104	Intro to IT	3
10150114	Networking 1	3
10154122	PC Support	3
		9
Term 2		
10150173	Server Administration 1	3
10150176	Networking 2	3
10154124	Information Security Principles	3
		9
		TOTAL 18

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

INFORMATION SECURITY PRINCIPLES...introduces the learner to Information Systems Security. Students will review and analyze the control and security concerns in the information systems environment; the security challenges created from the emergence of new technology and the changing internal and external environments; and the effect of legal, regulatory, and current security technology on policy development. Opportunity to earn TestOut Security Pro Certification. PREREQUISITE: 10154104 Intro to IT

INTRO TO IT...introduces student to IT field to basic concepts and terminology of a computer system hardware and software, Operating Systems (including Mac OS), and Networks; applied skills include: managing computer data files; protecting against computer viruses; creating simple web pages; producing electronic word documents, spreadsheets and presentations; examining techniques of systems analysis and design, programming languages and database systems.

NETWORKING 1...is a lecture/hands-on course designed to introduce students to network fundamentals. Topics covered include: OSI Reference Model; LAN and WAN topologies; cabling systems; access methods; protocols; Internet working devices (e.g. hubs, bridges, routers, switches, etc.); and basic network design.

NETWORKING 2...provides the students with networking terminology, protocols, network standards, LAN's, WAN's, TCP/IP addressing, and routing. PREREQUISITE: 10150114 Networking 1

PC SUPPORT...prepares you to be able to install, manage, repair, and troubleshoot PC hardware and Windows, Linux, and Mac operating systems. You will learn how to set up a new computer, identify system requirements, install or upgrade operating systems, manage external devices, troubleshoot common computer problems, and connect to a small home network. Opportunity to earn TestOut PC Pro Certification.

SERVER ADMINISTRATION 1...is a hands-on course designed to introduce the learner to the installation and configuration of Windows Server servers. The student will learn how to install and configure servers, configure server roles and features, configure Hyper-V, deploy and configure core network services, install and administer Active Directory (AD), and create and manage Group Policy. PREREQUISITE: 10154104 Intro to IT

ABOUT THE PROGRAM

The program curriculum focuses on programming principles, including web application development, mobile device development, database administration, and integration of web marketing and website design. The program is offered in a traditional, face-to-face or 100% online delivery.

PROGRAM OUTCOMES

- Design web and software applications.
- Apply data persistence technologies.
- Develop software applications.
- Develop web applications.
- Use Infrastructures.
- Analyze new technologies.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- Students are required to have access to a computer with internet connectivity. Computers are available at LTC's campuses for those students who do not have a computer and/or internet access at home.
- Students are required to purchase a domain name and web hosting in Terms 2 and 4. The approximate cost is \$60 per term.
- Students are strongly encouraged to take Written Communications during the summer before enrolling in Term 1 classes. General Education courses during summer term allow concentrated time during the fall and spring term for core program courses, and enrolling in Math with Business Applications in the first term.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10152100	Programming Introduction	4
10152124	Intro to Database Design and Development	2
10152196	Web Development 1	3
10804123	Math with Business Applications	3
		12
Term 2		
10152199	Web Development 2	4
10152187	Web Development 3	4
10201118	Advancements in Web and Development	2
10801195	Written Communication	3
		13
Term 3 (Summer)		
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
10809195	Economics OR 10809166 Introduction to Ethics	3
		6
Term 4		
10152109	Object-Oriented Programming 1	4
10152112	Object-Oriented Programming 2 OR 10152190 Web & Software Developer Internship	4
10152123	Mobile Device Development 1	3
10809196	Introduction to Sociology OR 10809172 Introduction to Diversity Studies	3
		14
Term 5		
10152106	Integrated Web Concepts	4
10152114	Mobile Device Development 2	3
10152117	Object-Oriented Programming 3	4
10152119	Portfolio Assessment-Web & Software Dev	1
10809198	Introduction to Psychology OR 10809188 Developmental Psychology	3
		15
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

ADVANCEMENTS IN WEB AND DEVELOPMENT...building on the competencies from Web Development 1, this course introduces students to additional web-related topics such as usability, web analytics, and search engine optimization. PREREQUISITE: 10152196 Web Development 1

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

INTEGRATED WEB CONCEPTS...introduces students in the Web and Software Developer, Graphic and Web Design, and Marketing programs to working within interdisciplinary teams. Through the building of all aspects of an application, each team will select and utilize design thinking processes and US/UI tools, prototype potential design solutions, ask for, give, and receive directive feedback, and effectively communicate and persuasively present ideas to an interdisciplinary audience. PREREQUISITES: 10104136 Retail Marketing and 101043 Mktg req met or 10152109 Object-Oriented Program 1, 10152123 Mobile Device Dev 1 and 101527 IT Web and Soft Dev req met or 10201119 Web Dev Advanced and 102012 Graphic and Web Design requirements met

INTRO TO DATABASE DESIGN AND DEVELOPMENT...introduces the student to DBMS components, the design and development of databases, table relationships, SQL, database best practices and database integration with web applications.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

MATH W BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

MOBILE DEVICE DEVELOPMENT 1...introduces students to popular mobile development frameworks in addition to using tools to convert web-based mobile applications to their native format. PREREQUISITES: 10152187 Web Development 3 and 10152199 Web Development 2 and 10201118 Advancements in Web and Development

MOBILE DEVICE DEVELOPMENT 2...will build upon the skills learned in Mobile Device Development 1 by building advanced hybrid mobile applications. PREREQUISITE: 10152123 Mobile Device Development 1

OBJECT-ORIENTED PROGRAMMING 1...introduces students to the Java programming language and object-oriented programming (OOP) concepts. Students will use the Java programming language and OOP to create desktop applications and server-side applications and services. PREREQUISITE: 10152187 Web Development 3

OBJECT-ORIENTED PROGRAMMING 2...introduces students to the Python programming language. Students will learn to develop applications using Python's language features and the library modules and packages. COREQUISITE: 10152109 Object-Oriented Programming 1

OBJECT-ORIENTED PROGRAMMING 3...introduces the learner to Microsoft's .NET platform, .NET frameworks, content-managed web sites and Web server architecture. Students will develop interactive and dynamic web applications using Microsoft ASP.NET, MVC architecture, and ADO.NET components to access data and data services through the creation of data-driven ASP.NET web pages and configuration of an ASP.NET application. Microsoft SQL Server is used. PREREQUISITE: 10152109 Object-Oriented Programming 1

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PORTFOLIO ASSESSMENT - WEB AND SOFTWARE DEVELOPER...assesses what the student has learned through the Web and Software Developer degree. The course will focus on the continued development of their electronic career portfolio, the freelance/contract software development market, the analysis of the achievement of their core abilities and program outcomes, and job search topics such as resumes, cover letters, and interview skills. PREREQUISITES: 10152123 Mobile Device Dev 1 and 10152106 Integrated Web Concepts and 10152109 Object-Oriented Programming 1 and CONDITION: 101527 Web and Software Developer admissions requirements met

PROGRAMMING INTRODUCTION...introduces the students to the programming process. Students will start with designing programs using flowcharts and progress to using programming code to create programs that use variables, data types, decisions, loops, arrays, and functions.

WEB DEVELOPMENT 1...introduces the students to web page design principles and proceeds to teach students how to create their own visually appealing designs for the web. Students will have hands-on experience using current versions of Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) to code and format accessible, valid, and optimized websites. Websites will be published live on the web using FTP. Students also explore recent trends in web design and development.

WEB DEVELOPMENT 2...introduces the student to using JavaScript to develop dynamic client-side applications. Students will learn the latest version of JavaScript, jQuery, and Typescript. PREREQUISITES: 10152196 Web Development 1 and 10152121 Programming 2 or 10152100 Programming Introduction

WEB DEVELOPMENT 3...introduces the learner to PHP, MySQL, PHP frameworks, content-managed Web sites, and Web server architecture. Topics covered include an introduction to the Apache Web server, server-side scripting, PHP control logic and functions, controlling state using sessions and cookies, querying database content and population to a Web page, MySQL relational database administration, and processing form information and populating it to a MySQL database. PREREQUISITES: 10152121 Programming 2 or 10152100 Programming Introduction and 10152196 Web Development 1 and 10152124 Intro to Database Design and Development

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

The program curriculum focuses on programming principles, including web application development, database administration, and website design. The program is offered in a traditional, face-to-face or 100% online delivery.

PROGRAM OUTCOMES

- Design web sites or applications.
- Utilize essential data technologies.
- Develop basic applications.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- Students are required to have access to a computer with internet connectivity. Computers are available at LTC's campuses for those students who do not have a computer and/or internet access at home.
- Students are required to purchase a domain name and web hosting in Term 2. The approximate cost is \$60 per term.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10152100	Programming Introduction	4
10152124	Intro to Database Design & Development	2
10152196	Web Development 1	3
10804123	Math with Business Applications	3
		12
Term 2		
10152199	Web Development 2	4
10152187	Web Development 3	4
10201118	Advancements in Web and Development	2
		10
		TOTAL 22

Term 1
Term 2

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

ADVANCEMENTS IN WEB AND DEVELOPMENT...building on the competencies from Web Development 1, this course introduces students to additional web-related topics such as usability, web analytics, and search engine optimization. PREREQUISITE: 10152196 Web Development 1

INTRO TO DATABASE DESIGN AND DEVELOPMENT...introduces the student to DBMS components, the design and development of databases, table relationships, SQL, database best practices and database integration with web applications.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

PROGRAMMING INTRODUCTION...introduces the students to the programming process. Students will start with designing programs using flowcharts and progress to using programming code to create programs that use variables, data types, decisions, loops, arrays, and functions.

WEB DEVELOPMENT 1...introduces the students to web page design principles and proceeds to teach students how to create their own visually appealing designs for the web. Students will have hands-on experience using current versions of Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) to code and format accessible, valid, and optimized websites. Websites will be published live on the web using FTP. Students also explore recent trends in web design and development.

WEB DEVELOPMENT 2...introduces the students to using JavaScript developing dynamic client-side web pages. Students will learn JQuery, TypeScript, and client-side data storage. PREREQUISITES: 10152196 Web Development 1 and 10152121 Programming 2 or 10152100 Programming Introduction

WEB DEVELOPMENT 3...introduces the learner to PHP, MySQL, PHP frameworks, content-managed Web sites, and Web server architecture. Topics covered include an introduction to the Apache Web server, server-side scripting, PHP control logic and functions, controlling state using sessions and cookies, querying database content and population to an HTML Web page, MySQL relational database administration, and processing form information and populating it to a MySQL database. PREREQUISITES: 10152121 Programming 2 or 10152100 Programming Introduction and 10152196 Web Development 1 and 10152124 Intro to Database Design and Development

ABOUT THE PROGRAM

Landscape design is an excellent career choice for people who are creative and enjoy plants and outdoor environments. Design skills are also an excellent complement to work as a landscape contractor, landscape-industry business owner, in horticultural plant marketing and sales, and in sustainable landscape creation and restoration. The green industry is always in need of capable landscape designers. The Landscape Design ITS program is designed to give students a strong background both in the principles of landscape design and creative expressions in the landscape, as well as how to communicate design ideas visually. The material pallet of landscape design is thoroughly explored. This includes how plants grow and stay healthy and how plants are best used in the landscape for visual, practical and ecological effect. This also includes how material construction and properties of built elements in the landscape create beautiful spaces for practical use with water features, patios, decks, walkways, walls, topographic changes, fencing, structures, and formal and naturalized plantings.

PROGRAM OUTCOMES

- Create salable, buildable and billable landscape designs.
- Understand the correct construction and design of landscape structures.
- Communicate as a horticulture professional.
- Analyze growing media.
- Diagnose plant health.
- Apply the principles of plant science.
- Apply design principles.
- Expand your ability to propose creative, practical, and sustainable solutions in the landscape.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Ensure enrolled in or graduate of Horticulture Technician program.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$138.90 per credit tuition (WI resident) plus \$8.33 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Advisor about how to apply for aid.

SPECIAL NOTE

Terms 1 and 2 of this curriculum completes the Horticulture Technician technical diploma. Terms 3 and 4 include select courses from other curriculums that provide knowledge and skills for this emphasis. Terms 3 and 4 have the option for several online courses as well as in-person options.

CONTACT

Don Geiger, Program Counselor
 920.693.1378 • donald.geiger@gotoltc.edu

Catalog No.	Proposed Courses	Credit(s)
Term 1		
10001110	Horticulture Introduction	3
10001112	Plants in Summer and Fall	3
10001115	Culinary Plants - Fall	1
10001148	Plant Communities of Wisconsin	3
10001172	Landscape Maintenance	3
10001113	Landscape Installation	3
		16
Term 2		
10001132	Plants in Winter and Spring	3
10001116	Culinary Plants - Spring	1
10001120	Greenhouse & Nursery Production	3
10001121	Landscape Design Studio	3
10001123	Site & Soil Analysis	3
10001149	Sustainable Landscape & Water Mgmt	3
		16
Term 3		
10001174	Horticulture Internship 1	1
10606101	Basic Mechanical Drafting	2
10606103	Intermediate Mechanical Drafting	2
10201101	Design Fundamentals	3
10201108	Photoshop	3
10801196	Oral/Interpersonal Communications	3
		14
Term 4		
10001175	Horticulture Internship 2	1
10201115	Digital Photography	2
10804123	Math with Business Applications OR 10806112 Principles of Sustainability	3
10809195	Economics OR 10809196 Introduction to Sociology	3
10809198	Introduction to Psychology	3
10801195	Written Communications	3
		15
		TOTAL 61

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

BASIC MECHANICAL DRAFTING USING AUTOCAD...provides the learner with the skills to utilize AutoCAD's drawing editor, viewing commands; apply coordinate entry methods, AutoCAD file commands; utilize draw commands, modify commands; create and edit text, prints & plots; apply geometric construction to solve a drawing problem; utilize selection sets, duplicating modify commands, layers & objects properties, blocks; apply principles of orthographic and multi view projection.

CULINARY PLANTS - FALL...introduces students to fall culinary plant production through the maintenance of summer vegetables in the field and raised beds, and through fall plantings. Garden cleanup, soil enhancing practices, and hoop house production will be explored; planting of winter crops will be conducted. Season-extension techniques, vegetable-storage techniques, and harvesting crops for winter forcing will be practiced with familiar and exotic crops.

CULINARY PLANTS - SPRING...introduces students to winter vegetable production, planning for the summer season, and spring work in the greenhouse, garden, and hoop house. Students will produce crops for harvest in the heated greenhouse, force winter vegetables, develop a planting plan, harvest vegetables from the unheated hoop house, and learn about different production methods (organic versus sustainable versus conventional).

DESIGN FUNDAMENTALS...introduces the learner to the elements of art (line, texture, color, shape and value.) Students will investigate how these elements can be manipulated using various principles of design to achieve different effects. Basic color theory, historic eras, and emerging trends will be covered.

DIGITAL PHOTOGRAPHY...will help the individual understand photographic principles and file manipulation. Through in-class discussions, audio visuals, camera demonstrations, and in-the-field shooting sessions, the individual will learn shooting and lighting techniques designed to capture a better image. Printing, cropping, retouching and file management will also be covered.

ECONOMICS...provides participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems. growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQ: 10838105 Intro Reading & Study Skills or Reading placement assessment equiv or CONDITION: 610062 Agribusiness/Fin Basic prog adms met

GREENHOUSE AND NURSERY PRODUCTION...provides the student with the knowledge and skills for horticultural production. Students implement efficient, cost-effective, and sustainable methods of horticultural production in the greenhouse, in a variety of other horticulture-related structures, as well as in field scenarios.

HORTICULTURE INTERNSHIP 1...Provides broad variety of specific occupational experiences in the horticultural industry. Students work with faculty to develop an internship plan and identify, coordinate, and evaluate learning experiences appropriate to the field of study and major career focus of the student.

HORTICULTURE INTERNSHIP 2...provides a broad variety of specific occupational experiences in the horticultural industry. Students work with faculty to develop an internship plan and identify, coordinate, and evaluate learning experiences appropriate to the field of study and major career focus of the student.

HORTICULTURE INTRODUCTION...engages learner through instructor-led interactive research and presentation while exploring plant growth, development, and ecology; plant classification; plant health care; horticultural crops and production; the horticulture industry and related careers; and principles of design and design implementation.

INTERMEDIATE MECHANICAL DRAFTING (AUTOCAD)...provides the learner with the skills to create two dimensional section views, create two-dimensional auxiliary views, create prints/plots from paper space, modify and set dimension attributes, apply dimensioning symbols, and apply ASME Y14.5M standards for dimensioning and tolerancing. COREQUISITE: 10606101 Basic Mechanical Drafting

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

LANDSCAPE DESIGN STUDIO...provides learner with strategies to develop and apply a structured approach to designing landscape space. Fundamentals of the design process are applied including basic site analysis, plan development and detailing, proper plant selection, landscape graphic conventions, and client interactions. Both manual drafting and CAD software used for design communications. Property lines, topography, site planning, hardscapes, planting plans, and section view graphics are covered.

LANDSCAPE INSTALLATION...investigates and implements landscape construction techniques including the proper and safe use of landscape tools, plan reading and interpretation, site management, proper planting, and the installation of landscape features. Potential projects include landscape plantings, mixed material patios, retaining walls, water features, sustainable landscape elements, rain gardens, roof gardens, wooden structures, etc. The course will also introduce basic estimating and contracting standards.

LANDSCAPE MAINTENANCE...assists the learner in identification and implementation of appropriate cultural practices while dealing with challenges in the landscape, including pruning techniques, insect/disease/abiotic problems; pesticides; turf issues; and resolving situations in the field. Course includes production, installation, maintenance, and harvest of edible and ornamental plants.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

ORAL/INTERPERSONAL COMMUNICATIONS...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PHOTOSHOP...introduces the learner to using Adobe Photoshop to edit, enhance, and combine digital images which are prepared for print and web media. Topics will include photo correction, masks, channels, page backgrounds, brushes and optimizes images for web use.

PLANT COMMUNITIES OF WISCONSIN...enables the student to experience the diversity of the native plant communities throughout the Lakeshore region of Wisconsin and beyond. This course will involve extensive plant and plant community identification and analysis in the field, as well as native plant community design, restoration and preservation best practices.

PLANTS IN SUMMER AND FALL...explores ornamental and weedy, woody, and herbaceous plant identification, biology and culture/management through outdoor and indoor applied activities. The course activities focus on plants encountered in interior and outdoor landscaping as well as ornamental and food production in eastern Wisconsin and the Midwest. This is the fall and summer focused course of a two-course series that complements Plants in Winter and Spring.

PLANTS IN WINTER AND SPRING...explores ornamental and weedy, woody, and herbaceous plant identification, biology and culture/management through outdoor and indoor applied activities. The course activities focus on plants encountered in interior and outdoor landscaping as well as ornamental and food production in eastern Wisconsin and the Midwest. This is the winter and spring focused course of a two-course series that complements Plants in Summer and Fall.

SITE AND SOIL ANALYSIS...guides students through site analysis with evaluation of physical, biological, water, and cultural resources to determine landscape development potentials and sensitivities. Analyzes interactions of plants with soil dynamics and examines physical, chemical, biological and management characteristics of both healthy and resilient as well as degraded but renewable soils.

SUSTAINABLE LANDSCAPE AND WATER MANAGEMENT...approaches sustainable landscape management from a practical goal-based outlook and implements management and supervisory strategies for "triple bottom-line" sustainability (Environment, Economic, and Social). Special attention will be paid to green infrastructure and integrated management practices for Sustainable Landscapes and Stormwater Management. Project based management opportunities will enable students to practice and employ best management practices.

WRITTEN COMMUNICATIONS...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro Rdg & Study Skills or Reading placement assessment equivalent

Program Number 61-001-4
Certificate • 12 credits

ABOUT THE PROGRAM

This certificate introduces the learner to the field of horticulture, including landscaping and greenhouse/nursery production. Learner receives a broad understanding of practical horticulture and the science of horticulture.

PROGRAM OUTCOMES

- Provide horticulture maintenance
- Implement a landscape construction design plan.
- Use carpentry and masonry hand and power tools.
- Safely operate landscape equipment.
- Install irrigation equipment.
- Diagnose and treat pest problems on ornamental plants.
- Prepare for Wisconsin Pesticide Certification.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

CREDENTIALS AVAILABLE TO PROGRAM STUDENTS

- WI Commercial Pesticide Applicator - Turf & Landscape
- WI Commercial Pesticide Applicator - Greenhouse & Nursery
- BAHCO Pruner
- BAHCO Lopper

SPECIAL NOTE

- All certificate students are highly encouraged to take the Horticulture Introduction class in the first semester of study.
- This certificate has many practical, hands-on experiences which completes many of the requirements of the one year technical diploma.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

Landscape Horticulture Basics certificate completers will find work in this field as a Technician 1, with opportunities to advance to Technician 2 and 3 in horticulture and landscaping businesses.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
COURSES		
10001110	Horticulture Introduction	3
10001112	Plants in Summer and Fall	3
10001172	Landscape Maintenance	3
10001113	Landscape Installation	3
		TOTAL 12

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

HORTICULTURE INTRODUCTION...engages the learner through instructor-led interactive research and presentation while exploring plant growth, development, and ecology; plant classification; plant health care; horticultural crops and production; the horticulture industry and related careers; and principles of design and design implementation.

LANDSCAPE INSTALLATION...investigates and implements landscape construction techniques including the proper and safe use of landscape tools, plan reading and interpretation, site management, proper planting, and the installation of landscape features. Potential projects include landscape plantings, mixed material patios, retaining walls, water features, sustainable landscape elements, rain gardens, roof gardens, wooden structures, etc. The course will also introduce basic estimating and contracting standards.

LANDSCAPE MAINTENANCE...assists the learner in identification and implementation of appropriate cultural practices while dealing with challenges in the landscape, including pruning techniques, insect/disease/abiotic problems; pesticides; turf issues; and resolving situations in the field. Course includes production, installation, maintenance, and harvest of edible and ornamental plants.

PLANTS IN SUMMER AND FALL...explores ornamental and weedy, woody, and herbaceous plant identification, biology and culture/management through outdoor and indoor applied activities. The course activities focus on plants encountered in interior and outdoor landscaping as well as ornamental and food production in eastern Wisconsin and the Midwest. This is the fall and summer focused course of a two-course series that complements Plants in Winter and Spring.

ABOUT THE PROGRAM

The program of study for the Associate Degree in Legal Studies/Paralegal is ABA-approved and complies with the requirements established by the Wisconsin Bar Association to become a Wisconsin Bar Certified Paralegal. Paralegals work under the supervision of lawyers in a range of tasks—researching the law; investigating; preparing for hearings, trials, and real estate closings; interviewing clients and witnesses; and preparing legal documents and other legal correspondence. Paralegals cannot give legal advice or represent clients in court. If you are detail oriented, organized, strong in communications, and enjoy researching and analyzing facts, you might find a career as a paralegal very rewarding. A degree in Legal Studies/Paralegal provides a wide range of career opportunities beyond the law office, including insurance companies, bank and bank trust departments, real estate title insurance and sales, government offices and agencies, the court system, human resources, and corporate legal departments.

PROGRAM OUTCOMES

- Apply ethical principles in a legal environment.
- Process legal documents.
- Perform legal research.
- Apply critical thinking skills to address legal issues.
- Demonstrate professionalism in a legal environment.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE FOR ONLINE LEARNERS

While many of the courses may be offered online, students are required to take at least ten semester credits or the equivalent of legal specialty courses through traditional classroom instruction. This requirement may be satisfied through synchronous interactive video systems, as they are considered equivalent to traditional classroom instruction.

LTC's Legal Studies/Paralegal program is approved by the American Bar Association.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10102160	Business Law 1	3
10103191	Word - Level 1	1
10110101	Introduction to Paralegalism and Legal Ethics	3
10110130	Real Estate Law - Paralegal	3
10801195	Written Communication	3
10809196	Introduction to Sociology OR 10809166 Introduction to Ethics	3
		16
Term 2		
10101155	Accounting for Professionals OR 10101111 Accounting 1 (4 cr)	3
10110102	Civil Litigation 1	3
10110104	Legal Research	3
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
10110160	Employment Law - Paralegal	3
		15
Term 3		
10110103	Civil Litigation 2	3
10110105	Legal Writing	3
10110132	Personal Branding-Paralegal	1
10110168	Criminal Law Paralegal	3
10809122	Introduction to American Government OR 10809195 Economics	3
10809198	Introduction to Psychology	3
		16
Term 4		
10110107	Legal Aspects of Business Organizations	3
10110114	Administration of Estates	3
10110143	Paralegal Internship OR 10110145 Paralegal Studies	2
10110106	Family Law	3
10806112	Principles of Sustainability OR 10804107 College Mathematics	3
		14
		TOTAL 61

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQUISITE: 10804123 Math w Business Applications or CONDITION: 101101 Paralegal program requirements met

ADMINISTRATION OF ESTATES...provides the learner with the skills to assist attorneys to administer estates, differentiate between probate and nonprobate property, contrast various forms of marital property, gather appropriate factual and financial information, select and draft appropriate forms to open an estate, prepare an inventory, draft a final accounting and documents to close an estate, draft tax documents, prepare powers of attorney and simple wills, and assist in the valid execution of estate planning documents. PREREQUISITE: 10110101 Intro to Paralegalism

BUSINESS LAW 1...provides the learner with the skills to summarize the American legal system; diagram the state/federal court systems; evaluate dispute resolution methods; sequence the civil litigation process; summarize the administrative agencies; differentiate civil and criminal law; apply theories of negligence, intentional tort, and product liability; summarize elements of a contract; assess the validity of a contract; assess third-party rights and available remedies; and summarize Article II of the UCC.

CIVIL LITIGATION 1...provides the learner with the skills to evaluate causes of action and defenses; conduct an initial client interview; perform an initial investigation; draft a summons and complaint, answer, counterclaim, cross complaint, motions and supporting documents, select appropriate discovery devices; draft interrogatories and responses; prepare for depositions; draft a Notice of deposition and Subpoenas; analyze fact patterns; and evaluate evidentiary objections. PREREQUISITE: 10110101 Intro to Paralegalism

CIVIL LITIGATION 2...provides the learner with the skill to evaluate and summarize depositions; evaluate evidentiary challenges; prepare a witness list; draft settlement documents; locate expert witnesses; prepare witnesses; prepare for presentation of evidence at trial; prepare a trial notebook; draft a Bill of Costs; prepare post trial motions; evaluate and research appellate issues. PREREQUISITE: 10110102 Civil Litigation

CRIMINAL LAW-PARALEGAL...provides the learner with the skills to analyze state and federal criminal procedures, determine if a search and arrest is in accordance with the Fourth Amendment, analyze the Miranda rules, draft a criminal summons and complaint, determine possible defenses for a defendant, draft motions, analyze a criminal complaint and jury instructions for required elements, create demonstrative evidence, create a trial notebook, conduct a client interview, and contrast prosecution and defense roles. PREREQUISITE: 10110101 Intro to Paralegalism

EMPLOYMENT LAW-PARALEGAL...provides the learner with the skills to analyze state and federal law governing employment relationships, job discrimination, sexual harassment, workplace privacy, labor standards and human resource management. PREREQUISITE: 10110101 Intro to Paralegalism

FAMILY LAW...provides the learner with the skills to conduct an initial client interview for a family law matter, including divorce and domestic violence; draft initial pleadings for divorce, financial family law documents, divorce discovery documents, and concluding documents in divorces; assess the need for post-divorce modification and enforcement; and outline factors involving child custody and support. PREREQUISITE: 10110101 Intro to Paralegalism

INTRODUCTION TO AMERICAN GOVERNMENT...introduces American political processes and institutions. It focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. It explores the role of the media, interest groups, political parties and public opinion in the political process. It also explores the role of state and national government in our federal system. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PARALEGALISM AND LEGAL ETHICS...introduces the learner to the paralegal profession, including civil, criminal, and administrative procedure; state and federal judicial systems; legal research; case briefing; ethical rules that apply to paralegals; law office software; and substantive civil law.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

LEGAL ASPECTS OF BUSINESS ORGANIZATIONS...provides learners with the skills to analyze legal aspects of the formation, operation, and dissolution of sole proprietorships, partnerships, limited liability entities, and corporations; draft documents related to various business entities such as Certificates of Limited Partnership; Articles of Organization and Incorporation, Name Reservation Applications, Organizational Resolutions, Form SS-4 and 2553, Stock Certificates, Resolutions and Minutes, and Amendments and Articles of Dissolution. PREREQUISITE: 10110101 Intro to Paralegalism

LEGAL RESEARCH...provides the learner with the skills to differentiate between primary or secondary authority, locate statutes and constitutional provisions, locate case law, locate administrative regulations, locate secondary authority, use correct citation form, verify and update legal authority, formulate legal issues, use effective research strategies, evaluate solutions to legal problems, and use computer-assisted and internet legal research strategies. Some classes will be held off campus in a law library. PREREQUISITE: 10110101 Intro to Paralegalism

LEGAL WRITING...provides the learner with the skills to draft legal correspondence, operative legal documents, case briefs, and legal and office memoranda; analyze and synthesize legal authority; use correct citation form; draft a civil pleading, affidavit, trial brief, and appellate brief; and apply rules of civil procedure. PREREQUISITE: 10110104 Legal Research and 10801195 Written Comm or 10801195OL Written Comm Online

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PARALEGAL INTERNSHIP...enhances the participant's ability to perform the duties of a paralegal; to seek and obtain employment as a paralegal; apply paralegal skills in an actual workplace setting; to perform legal research and writing; and understand law office systems and administration. Students are responsible for seeking and obtaining an internship position for a minimum of 144 hours in a legal environment under the supervision of an attorney or other qualified professional, completing an internship agreement and e-folio, maintaining a work log and obtaining approval from the internship instructor. COREQUISITE: 10110105 Legal Writing

PERSONAL BRANDING-PARALEGAL...prepares the student to prepare an electronic portfolio, to develop a career plan, write a resume, create a cover letter, prepare for an interview, search for work on the internet, adapt a resume for an electronic scan, and post a resume and cover letter on the internet.

PRINCIPLES OF SUSTAINABILITY...prepares students to develop sustainable literacy, analyze interconnections among physical and biological sciences and environmental systems, summarize effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal/recycling in the U.S., and analyze approaches used by your community. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

REAL ESTATE LAW - PARALEGAL...provides the learner with the skills to analyze types of real estate ownership; analyze the effect of the Marital Property Act on real estate; determine the requirements of listing contracts; draft legal descriptions; draft an offer to purchase; negotiate a real property sale; prepare financing documents; compare abstracting and title insurance; record deeds; compare land contracts; summarize foreclosure procedure; draft closing documents; compare landlord and tenant rights and responsibilities. COREQUISITE: 10110101 Introduction to Paralegalism and Legal Ethics

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro Rdg & Study Skills or Reading placement assessment equivalent

Program Number 20-800-1
Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

The Liberal Arts Transfer program serves students planning to earn an associate in arts (AA) or associate in science (AS) degree and/or who intend to transfer to a four-year university. The program provides students with an excellent foundation for continuing in higher education.

By completing the degree through LTC, in partnership with Madison College, students will have enough flexibility for broad major exploration, regardless of a transfer destination. With a pre-business focus, students receive the education necessary to be successful in business and economics programs at four-year institutions. The program helps students meet most entry-level requirements and even some program requirements for bachelor's degrees in the field.

PROGRAM OUTCOMES

- Use identified critical thinking skills to pose questions, process information and make decisions.
- Engage in collaborative activities in ways that contribute to the achievement of shared goals.
- Exhibit self-awareness and self-management skills necessary to succeed in increasingly challenging academic environments.
- Recognize the contributions of diverse cultures, historical periods and art forms to the improvement of the human condition in a global society.
- Compute and analyze quantitative data using mathematical, statistical and logical methods to solve problems.
- Explore physical and social environments using scientific tools and methods.
- Communicate with varied audiences by:
 - Listening actively in personal and professional relationships.
 - Reading and comprehending written materials in the content areas at grade 14 level.
 - Synthesizing and organizing information for diverse audiences.
- Research a question by planning and implementing an appropriate investigative strategy and synthesizing the results in an academic document.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Students will work with advisors from both LTC and Madison College to ensure all entry steps are completed. Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study and discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This program works in partnership with Madison College. Students will register and work with both colleges on LTC's campus but have access to Madison advisors and other services. All classes are held at LTC or online. Due to shared program agreement with Madison College, course pre-requisites will vary.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall)		
10801196	Oral/Interpersonal Communication	3
10809166	Introduction to Ethics: Theory and Apps	3
10809198	Introduction to Psychology	3
20802211	Spanish 1 (or other Humanities course through Madison College)	4
	Elective	3
		16
Term 2 (Spring)		
10804198	Calculus 1 (4 cr) OR 10804189 Introductory Statistics (3 cr)	4/3
10809172	Introduction to Diversity Studies	3
20801201	English 1 (Madison College)	3
20802212	Spanish 2 (or other Humanities course through Madison College)	4
20807269	Stress Management Foundations	1
		14/15
Term 3 (Fall)		
10806134	General Chemistry OR 10806154 General Physics 1	4
20801202	English 2 (Madison College)	3
20809211	Macro Economics (Madison College)	3
	Electives	6
		16
Term 4 (Spring)		
10806177	General A&P OR 10806179 Advanced A&P OR 10806197 Microbiology	4
10801198	Speech	3
20801204	Intro to Literature (Madison College)	3
20809212	Micro Economics (Madison College)	3
	Elective	3
		16
		TOTAL 62/63
Electives		
10102110	Intro to Business Management	3
10196193	Intro to HR Management	3
10104102	Principles of Marketing	3
10182131	Supply Chain Management	3
10801195	Written Communication	3
10809188	Developmental Psychology	3
10809195	Economics	3
10809122	Introduction to American Government	3
10809196	Introduction to Sociology	3

*Other electives are available through Madison College's Pre-Business program in online delivery.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ADVANCED ANATOMY AND PHYSIOLOGY...is the second semester in a two-semester sequence in which normal human anatomy and physiology are studied using a body systems approach with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Instructional delivery within a classroom and laboratory setting. Experimentation within a science lab will include analysis of cellular metabolism, the individual components of body systems such as the nervous, neuro-muscular, cardiovascular, and urinary. Continued examination of homeostatic mechanisms and their relationship to fluid, electrolyte, acid-base balance and blood. Integration of genetics to human reproduction and development are also included in this course. PREREQUISITE: 10806177 General A & P or equivalent

CALCULUS 1...teaches students to analyze and graph algebraic expressions, especially conic sections; to develop an intuitive understanding of limits, derivative and integrals; and to apply the derivative and the integral to certain physical problems. CONDITION: Math enrollment reqs met

DEVELOPMENTAL PSYCHOLOGY...introduces the student to the study of human development throughout the lifespan. This course explores developmental theory and research with an emphasis on the interactive nature of the biological, cognitive, and psychosocial changes that affect the individual from conception to death. Application activities and critical thinking skills will enable students to gain an increased knowledge and understanding of themselves and others. COREQUISITE: 10838105 Intro Reading & Study Skills or Reading placement assessment equiv

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading & Study Skills or Reading placement assessment equiv or CONDITION: 610062 Agribusiness/Financial Basic prog admissions met

ENGLISH 1...the first course in communication skills at the college level, developing student abilities in critical reading, writing, listening, and speaking, for both exposition and argumentation. The course emphasizes summarizing, analyzing, and synthesizing information from sources, and develops research and presentation skills. The class assumes competence in English grammar and paragraph structure. PREREQUISITE: 10808181 College Reading Strategies OR 10838105 Intro to Reading and 10831103 Intro to College Writing or equivalent

ENGLISH 2...this course is a continuation of English 1. Students will use advanced research skills to write papers from across the curriculum. Research papers will be informative and persuasive in nature and will be based on topics from academic disciplines (social sciences, literature and the humanities, or science and mathematics). Students will conduct research using primary and secondary library resources, surveys and questionnaires, observation, and interviews and will use the MLA format and one other format (APA, Chicago) to document their sources. Students will be asked to prepare 25-35 pages of polished writing. PREREQUISITE: 20801201 English 1, grade of "C" or higher

GENERAL ANATOMY AND PHYSIOLOGY...examines basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare health care professionals who need to apply basic concepts of whole body anatomy and physiology to informed decision-making and professional communication with colleagues and patients. PREREQUISITE: 10806134 Gen Chemistry or equiv and Reading placement assessment equiv

GENERAL CHEMISTRY...covers fundamentals of chemistry. Topics include the metric system, problem-solving, periodic relationships, chemical reactions, chemical equilibrium, properties of water; acids, bases, and salts; and gas laws. PREREQ: 10804113 Col Tech Math 1A, 10804107 Col Math, or 10834110 Elem Algebra or equiv & COREQ: 10838105 Intro Rdg & Study Skills or equiv

GENERAL PHYSICS 1...presents applications and theory of basic physics principles. Course emphasizes problem-solving, laboratory investigation, and applications. Topics include unit conversions and analysis, vectors, translational and rotational kinematics, translational and rotational dynamics, heat and temperature, and harmonic motion and waves. PREREQ: 10804113 College Tech Math 1A, 10804115 College Tech Math 1, or 10804118 Interm Algebra, or Math plcmnt assmnt equiv

HUMAN RESOURCE MANAGEMENT...applies the skills/tools necessary to effectively value and apply employees' abilities and needs to organization goals. Learners will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies/procedures, training, performance management, employee counseling/development, and effective use of compensation and benefit strategies.

INTRO TO BUSINESS MANAGEMENT...provides an introduction to the world of business from both the organizational and managerial viewpoint. It examines areas of business including the business environment, business formation, planning, operations, accounting, marketing, human resource management, and building effective teams.

INTRODUCTION TO AMERICAN GOVERNMENT...introduces American political processes and institutions. It focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. It explores the role of the media, interest groups, political parties and public opinion in the political process. It also explores the role of state and national government in our federal system. COREQUISITE: 10838105 Intro to Reading & Study Skills or Reading placement assessment equiv

INTRODUCTION TO DIVERSITY STUDIES...introduction to study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. COREQ: 10838105 Intro Rdg & Study Skills or Rdg plcmnt assmnt equiv

INTRODUCTION TO ETHICS: THEORY AND APPLICATION...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. COREQUISITE: 10838105 Intro Rdg & Study Skills or Rdg placement assessment equiv

INTRODUCTION TO LITERATURE...recommended as a first course in literary analysis, this course introduces students to the major genres of literature and addresses issues related to writing about literature and/or other texts. Individual sections may focus on a particular literary theme or emphasis. PREREQUISITE: 20801201 English 1, grade of "C" or better

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading & Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading & Study Skills or Reading plcmnt assmnt equiv

INTRODUCTORY STATISTICS...prepares students to display data with graphs, describe distributions with numbers perform correlation and regression analyses, and design experiments. They use probability and distributions to make predictions, estimate parameters, and test hypotheses. They draw inferences about relationships including ANOVA. PREREQUISITE: 10834109 Pre-Algebra or equivalent

MACRO ECONOMICS...this course provides an introduction to basic economic principles with applications to current economic problems affecting the overall performance of a nation's economy. The course begins with an analysis of the role of markets and prices in an economy. Topics include the causes and consequences of unemployment, inflation, and economic growth; the role of money and banking in the economy; the role of government taxing and spending policies to correct market failure and stabilize the economy; the implications of budget deficits and the national debt; and the implications of an increasingly global economy. This course is designed to meet the need for college transfer credit. PREREQUISITE: Reading and Math placement assessment equivalent

MICRO ECONOMICS...course provides an introduction to basic economic principles with applications to current economic problems affecting individuals and businesses. It begins with an in-depth analysis of the role of markets and prices in an economy, with emphasis on when markets work well and when they fail to yield the best outcome for the society. Topics include how individuals choose to best use their limited resources; the causes and consequences of poverty and the distribution of income and wealth; the behavior of businesses in setting prices and production levels; problems of monopoly power; wage determination in labor markets; and the economics of environmental challenges. Course is designed to meet the need for college transfer credit. PREREQ: Rdg & Math plcmnt assmnt equiv

MICROBIOLOGY...introduces learner to examine microbial structure, metabolism, genetics, growth and relationship between humans and microorganisms. Addresses disease production, epidemiology, host defense mechanisms and the medical impact of microbes. Examines the role of microbes in the environment, industry, and biotechnology. PREREQUISITE: 10806177 General Anatomy and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Rdg plcmnt assmnt equiv

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading & Study Skills or Reading placement assessment equivalent

PRINCIPLES OF MARKETING...introduces the student to the consumer decision process model, the bases used to segment a market, basic concepts about goods, services, and ideas, the nature of supply chain and distribution, integrated marketing communications, and the stages of the product life cycle and their impact on the marketing mix.

SPANISH 1...this course is for students beginning the study of Spanish or those who need to review the basics before going on to Spanish 2. Students will learn to participate in uncomplicated conversations on everyday topics and gain a better understanding of and appreciation for people and cultures other than their own.

SPANISH 2...this course is for students who have completed 1 year of high school Spanish OR 1 semester of college Spanish. Students will learn to understand more complicated conversations and readings and respond with longer, more complex sentences and even paragraphs. Emphasis will be placed on gaining a better understanding of and appreciation for other cultures.

SPEECH...explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

STRESS MANAGEMENT FOUNDATIONS...innovative approach to viewing stress as necessary and healthy, this course is designed to help individuals build resilience to stress. Combines interactive exercises, self reflective experiences, foundations of mindfulness based meditations, foundations of mindfulness based movements, guided imagery to improve mental focus, progressive muscle relaxation to aid deep relaxation, and specific breathing techniques to promote healthy self regulation and coping skills.

SUPPLY CHAIN MANAGEMENT...has been developed to provide a basic understanding of the planning and control of materials into, through, and out of organizations. In addition, those who want to become certified by APICS need a fundamentals course to learn about the material planning and control system. This course will provide a basis for further study leading to certification.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills required. Also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQ: 10831103 Intro to College Wrtg or Writing plcmnt assmnt equiv and COREQ: 10838105 Intro to Rdg & Study Skills or Rdg plcmnt assmnt equiv

Program Number 20-800-1
Associate Degree in Applied Science
ABOUT THE PROGRAM

The Liberal Arts Transfer program serves students planning to earn an associate in arts (AA) or associate in science (AS) degree and/or who intend to transfer to a four-year university. The program provides students with an excellent foundation for continuing in higher education.

By completing the degree through LTC, in partnership with Madison College, students will have enough flexibility for broad major exploration, regardless of a transfer destination. With a pre-business focus, students receive the education necessary to be successful in business and economics programs at four-year institutions. The program helps students meet most entry-level requirements and even some program requirements for bachelor's degrees in the field.

PROGRAM OUTCOMES

- Use identified critical thinking skills to pose questions, process information and make decisions.
- Engage in collaborative activities in ways that contribute to the achievement of shared goals.
- Exhibit self-awareness and self-management skills necessary to succeed in increasingly challenging academic environments.
- Recognize the contributions of diverse cultures, historical periods and art forms to the improvement of the human condition in a global society.
- Compute and analyze quantitative data using mathematical, statistical and logical methods to solve problems.
- Explore physical and social environments using scientific tools and methods.
- Communicate with varied audiences by:
 - Listening actively in personal and professional relationships.
 - Reading and comprehending written materials in the content areas at grade 14 level.
 - Synthesizing and organizing information for diverse audiences.
- Research a question by planning and implementing an appropriate investigative strategy and synthesizing the results in an academic document.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
 - Complete the online Student Success Questionnaire.
 - Students will work with advisors from both LTC and Madison College to ensure all entry steps are completed. Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study and discuss the results of the Student Success Questionnaire.
- *Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This program works in partnership with Madison College. Students will register and work with both colleges on LTC's campus but have access to Madison advisors and other services. All classes are held at LTC or online. Due to shared program agreement with Madison College, course pre-requisites will vary.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10809166	Introduction to Ethics: Theory and Apps	3
20802211	Spanish 1 (or other Humanities course through Madison College)	4
		7
Term 2 (Spring 2022)		
10804198	Calculus 1 (4 cr) OR 10804189 Introductory Statistics (3 cr)	4/3
20802212	Spanish 2 (or other Humanities course through Madison College)	4
20807269	Stress Management Foundations (Madison College)	1
		8/9
Term 3 (Summer 2022)		
10809172	Introduction to Diversity Studies	3
10801196	Oral/Interpersonal Communication	3
		6
Term 4 (Fall 2022)		
		3
10806134	Elective General Chemistry OR 10806154 General Physics 1	4
		7
Term 5 (Spring 2023)		
20801201	English 1 (Madison College)	3
10806177	General A&P OR 10806179 Advanced A&P OR 10806197 Microbiology	4
		3
		10
Term 6 (Summer 2023)		
10801198	Speech	3
10809198	Introduction to Psychology	3
		6
Term 7 (Fall 2023)		
20801202	English 2 (Madison College)	3
20809211	Macro Economics (Madison College)	3
		3
		9
Term 8 (Spring 2024)		
20801204	Intro to Literature (Madison College)	3
20809212	Micro Economics (Madison College)	3
		3
		9
Program Total		62/63
Electives		
10102110	Intro to Business Management	3
10196193	Intro to HR Management	3
10104102	Principles of Marketing	3
10182131	Supply Chain Management	3
10801195	Written Communication	3
10809188	Developmental Psychology	3
10809195	Economics	3
10809122	Intro to American Government	3
10809196	Intro to Sociology	3

*Other electives are available through Madison College's Pre-Business program in online delivery.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

2021-22

ADVANCED ANATOMY AND PHYSIOLOGY...is the second semester in a two-semester sequence in which normal human anatomy and physiology are studied using a body systems approach with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Instructional delivery within a classroom and laboratory setting. Experimentation within a science lab will include analysis of cellular metabolism, the individual components of body systems such as the nervous, neuro-muscular, cardiovascular, and urinary. Continued examination of homeostatic mechanisms and their relationship to fluid, electrolyte, acid-base balance and blood. Integration of genetics to human reproduction and development are also included in this course. PREREQUISITE: 10806177 General A & P or equivalent

CALCULUS 1...teaches students to analyze and graph algebraic expressions, especially conic sections; to develop an intuitive understanding of limits, derivative and integrals; and to apply the derivative and the integral to certain physical problems. CONDITION: Math enrollment reqs met

DEVELOPMENTAL PSYCHOLOGY...introduces the student to the study of human development throughout the lifespan. This course explores developmental theory and research with an emphasis on the interactive nature of the biological, cognitive, and psychosocial changes that affect the individual from conception to death. Application activities and critical thinking skills will enable students to gain an increased knowledge and understanding of themselves and others. COREQUISITE: 10838105 Intro Reading & Study Skills or Reading placement assessment equiv

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading & Study Skills or Reading placement assessment equiv or CONDITION: 610062 Agribusiness/Financial Basic prog admissions met

ENGLISH 1...the first course in communication skills at the college level, developing student abilities in critical reading, writing, listening, and speaking, for both exposition and argumentation. The course emphasizes summarizing, analyzing, and synthesizing information from sources, and develops research and presentation skills. The class assumes competence in English grammar and paragraph structure. PREREQUISITE: 10808181 College Reading Strategies OR 10838105 Intro to Reading and 10831103 Intro to College Writing or equivalent

ENGLISH 2...this course is a continuation of English 1. Students will use advanced research skills to write papers from across the curriculum. Research papers will be informative and persuasive in nature and will be based on topics from academic disciplines (social sciences, literature and the humanities, or science and mathematics). Students will conduct research using primary and secondary library resources, surveys and questionnaires, observation, and interviews and will use the MLA format and one other format (APA, Chicago) to document their sources. Students will be asked to prepare 25-35 pages of polished writing. PREREQUISITE: 20801201 English 1, grade of "C" or higher

GENERAL ANATOMY AND PHYSIOLOGY...examines basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare health care professionals who need to apply basic concepts of whole body anatomy and physiology to informed decision-making and professional communication with colleagues and patients. PREREQUISITE: 10806134 Gen Chemistry or equiv and Reading placement assessment equiv

GENERAL CHEMISTRY...covers fundamentals of chemistry. Topics include the metric system, problem-solving, periodic relationships, chemical reactions, chemical equilibrium, properties of water, acids, bases, and salts; and gas laws. PREREQ: 10804113 Col Tech Math 1A, 10804107 Col Math, or 10834110 Elem Algebra or equiv & COREQ: 10838105 Intro Rdg & Study Skills or equiv

GENERAL PHYSICS 1...presents applications and theory of basic physics principles. Course emphasizes problem-solving, laboratory investigation, and applications. Topics include unit conversions and analysis, vectors, translational and rotational kinematics, translational and rotational dynamics, heat and temperature, and harmonic motion and waves. PREREQ: 10804113 College Tech Math 1A, 10804115 College Tech Math 1, or 10804118 Intern Algebra, or Math plcmnt assmnt equiv

HUMAN RESOURCE MANAGEMENT...applies the skills/tools necessary to effectively value and apply employees' abilities and needs to organization goals. Learners will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies/procedures, training, performance management, employee counseling/development, and effective use of compensation and benefit strategies.

INTRO TO BUSINESS MANAGEMENT...provides an introduction to the world of business from both the organizational and managerial viewpoint. It examines areas of business including the business environment, business formation, planning, operations, accounting, marketing, human resource management, and building effective teams.

INTRODUCTION TO AMERICAN GOVERNMENT...introduces American political processes and institutions. It focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. It explores the role of the media, interest groups, political parties and public opinion in the political process. It also explores the role of state and national government in our federal system. COREQUISITE: 10838105 Intro to Reading & Study Skills or Reading placement assessment equiv

INTRODUCTION TO DIVERSITY STUDIES...introduction to study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. COREQ: 10838105 Intro Rdg & Study Skills or Rdg plcmnt assmnt equiv

INTRODUCTION TO ETHICS: THEORY AND APPLICATION...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. COREQUISITE: 10838105 Intro Rdg & Study Skills or Rdg placement assessment equiv

INTRODUCTION TO LITERATURE...recommended as a first course in literary analysis, this course introduces students to the major genres of literature and addresses issues related to writing about literature and/or other texts. Individual sections may focus on a particular literary theme or emphasis. PREREQUISITE: 20801201 English 1, grade of "C" or better

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading & Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading & Study Skills or Reading plcmnt assmnt equiv

INTRODUCTORY STATISTICS...prepares students to display data with graphs, describe distributions with numbers perform correlation and regression analyses, and design experiments. They use probability and distributions to make predictions, estimate parameters, and test hypotheses. They draw inferences about relationships including ANOVA. PREREQUISITE: 10834109 Pre-Algebra or equivalent

MACRO ECONOMICS...this course provides an introduction to basic economic principles with applications to current economic problems affecting the overall performance of a nation's economy. The course begins with an analysis of the role of markets and prices in an economy. Topics include the causes and consequences of unemployment, inflation, and economic growth; the role of money and banking in the economy; the role of government taxing and spending policies to correct market failure and stabilize the economy; the implications of budget deficits and the national debt; and the implications of an increasingly global economy. This course is designed to meet the need for college transfer credit. PREREQUISITE: Reading and Math placement assessment equivalent

MICRO ECONOMICS...course provides an introduction to basic economic principles with applications to current economic problems affecting individuals and businesses. It begins with an in-depth analysis of the role of markets and prices in an economy, with emphasis on when markets work well and when they fail to yield the best outcome for the society. Topics include how individuals choose to best use their limited resources; the causes and consequences of poverty and the distribution of income and wealth; the behavior of businesses in setting prices and production levels; problems of monopoly power; wage determination in labor markets; and the economics of environmental challenges. Course is designed to meet the need for college transfer credit. PREREQ: Rdg & Math plcmnt assmnt equiv

MICROBIOLOGY...introduces learner to examine microbial structure, metabolism, genetics, growth and relationship between humans and microorganisms. Addresses disease production, epidemiology, host defense mechanisms and the medical impact of microbes. Examines the role of microbes in the environment, industry, and biotechnology. PREREQUISITE: 10806177 General Anatomy and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Rdg plcmnt assmnt equiv

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading & Study Skills or Reading placement assessment equivalent

PRINCIPLES OF MARKETING...introduces the student to the consumer decision process model, the bases used to segment a market, basic concepts about goods, services, and ideas, the nature of supply chain and distribution, integrated marketing communications, and the stages of the product life cycle and their impact on the marketing mix.

SPANISH 1...this course is for students beginning the study of Spanish or those who need to review the basics before going on to Spanish 2. Students will learn to participate in uncomplicated conversations on everyday topics and gain a better understanding of and appreciation for people and cultures other than their own.

SPANISH 2...this course is for students who have completed 1 year of high school Spanish OR 1 semester of college Spanish. Students will learn to understand more complicated conversations and readings and respond with longer, more complex sentences and even paragraphs. Emphasis will be placed on gaining a better understanding of and appreciation for other cultures.

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STRESS MANAGEMENT FOUNDATIONS...innovative approach to viewing stress as necessary and healthy, this course is designed to help individuals build resilience to stress. Combines interactive exercises, self reflective experiences, foundations of mindfulness based meditations, foundations of mindfulness based movements, guided imagery to improve mental focus, progressive muscle relaxation to aid deep relaxation, and specific breathing techniques to promote healthy self regulation and coping skills.

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WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills required. Also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQ: 10831103 Intro to College Wrtg or Writing plcmnt assmnt equiv and COREQ: 10838105 Intro to Rdg & Study Skills or Rdg plcmnt assmnt equiv

Program Number 31-420-1 Technical Diploma • Two Terms

ABOUT THE PROGRAM

Learn CNC and Machining at your own pace, through hands-on learning, and with your instructor and success coach to guide you. Just about every product that you use in your daily activities is the result of a machine tool manufacturing process. If you like hands-on work, are detail-oriented, have good math skills, and are able to develop and follow through on work instructions, a career in machine tool operation offers you lifelong opportunities.

PROGRAM OUTCOMES

- Apply basic safety practices in the machine shop.
- Interpret industrial/engineering drawings.
- Apply precision measuring methods to part inspection.
- Perform basic machine tool equipment setup and operation
- Perform programming, setup, and operation of CNC machine tools.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This program is Competency-Based. Competency-Based Education (CBE) is learning at your own pace by mastering competencies through demonstration. Once all competencies for a program have been assessed and mastered, students will earn a certificate, diploma, or degree.

RELATED PROGRAMS

- CNC Technician Technical Diploma
- Machinist Apprenticeship
- Tool & Die Apprenticeship

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
31420310	Shop Tools and Fasteners	1
31420330	Precision Measuring	1
31420385	Orthographic Projection Print	1
31420325	Machining Math Basic	1
31420338	Drills and Saws	1
31420340	Lathe Facing and Turning	1
31420350	Mill-Squaring	1
31420386	GD&T Intro	1
31420326	Machining Geometry and Basic Trigonometry	1
31420342	Lathe-Hole Producing and Threading	1
31420351	Mill-Slots and Holes	1
31444301	Mill-G&M Code	1
31444303	CNC Machining Operation	1
31444309	CNC Turning Operation	1
31420359	Safe Heat Treating Operations	1
		15
Term 2		
31801361	Interpersonal Skills	1
31801360	Workplace Fundamentals	1
31444305	Turning-G&M Code	1
31444307	Mill-2D Using CAM	1
31420353	ProtoTrak Mill-Squaring Programming	1
31420354	ProtoTrak Mill-Slot & Hole Programming	1
31420356	Surface Grinder Operations	1
31444311	CNC Turning-Turning and Cut Off Setup	1
31444313	CNC Turning-Hole Producing Setup/Threading	1
31444315	CNC Machining-Facing & End Milling Setup	1
31444317	CNC Machining-Hole/Slot/Engraving Setup	1
31444321	CNC Turning-Toolpaths Using CAM	1
31420361	Complex Print Drawings	1
31420362	Advanced Precision Measuring	1
31420363	GD&T Inspection	1
		15
		TOTAL 30

Term 1

Catalog No.	Class Title	Credit(s)
31420310	Shop Tools and Fasteners	1
31420330	Precision Measuring	1
31420385	Orthographic Projection Print	1
31420325	Machining Math Basic	1
31420338	Drills and Saws	1
31420340	Lathe Facing and Turning	1
31420350	Mill-Squaring	1
31420386	GD&T Intro	1
31420326	Machining Geometry and Basic Trigonometry	1
31420342	Lathe-Hole Producing and Threading	1
31420351	Mill-Slots and Holes	1
31444301	Mill-G&M Code	1
31444303	CNC Machining Operation	1
31444309	CNC Turning Operation	1
31420359	Safe Heat Treating Operations	1

15

Term 2

31801361	Interpersonal Skills	1
31801360	Workplace Fundamentals	1
31444305	Turning-G&M Code	1
31444307	Mill-2D Using CAM	1
31420353	ProtoTrak Mill-Squaring Programming	1
31420354	ProtoTrak Mill-Slot & Hole Programming	1
31420356	Surface Grinder Operations	1
31444311	CNC Turning-Turning and Cut Off Setup	1
31444313	CNC Turning-Hole Producing Setup/Threading	1
31444315	CNC Machining-Facing & End Milling Setup	1
31444317	CNC Machining-Hole/Slot/Engraving Setup	1
31444321	CNC Turning-Toolpaths Using CAM	1
31420361	Complex Print Drawings	1
31420362	Advanced Precision Measuring	1
31420363	GD&T Inspection	1

15

TOTAL 30

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ADVANCED PRECISION MEASURING...prepares the learner to demonstrate the use of advanced precision measuring instruments. COREQUISITE: 31420330 Precision Measuring

CNC MACHINING OPERATION...prepares the learner to set up and operate CNC Machining Center safely. COREQUISITE: 31420351 Mill-Slots and Holes

CNC MACHINING-FACING AND END MILLING SETUP...prepares the learner to perform setup of CNC machining center for facing and end milling operations. COREQUISITE: 31444303 CNC Machining Operation or PREREQUISITE: 31420307 Intro to CNC Machining Center

CNC MACHINING-HOLE/SLOT/ENGRAVING SETUP...prepares the learner to perform setup of CNC machining center for hole producing, milling slots and engraving operations. COREQUISITE: 31444315 CNC Machining-Facing and End Milling Setup

CNC TURNING OPERATION...prepares the learner to set up and operate CNC turning center safely. COREQUISITE: 31420342 Lathe-Hole Producing and Threading or PREREQUISITES: 31420340 Lathe Facing and Turning or 10420103 Lathes 1 or 31420395 IM MT Lathes and Mills

CNC TURNING-HOLE PRODUCING SETUP/THREADING...prepares the learner to perform setup of CNC turning center for hole producing and threading operations. COREQUISITE: 31444311 CNC Turning-Turning and Cut Off Setup

CNC TURNING-TOOLPATHS USING CAM...prepares the learner to create lathe toolpaths using CAM software. COREQUISITE: 31420342 Lathe-Hole Producing and Threading

CNC TURNING-TURNING AND CUT OFF SETUP...prepares the learner to perform setup of CNC turning center for turning and cutoff operations. COREQUISITE: 31444309 CNC Turning Operation or 31420308 Intro to CNC Turning Center

COMPLEX PRINT DRAWINGS...prepares the learner to interpret complex part drawings. COREQUISITE: 31420386 GD&T Intro

DRILLS AND SAWS...learner will demonstrate use of sawing and drilling machines safely. COREQUISITE: 31420310 Shop Tools and Fasteners or PREREQUISITES: 31420394 IM Machine Tool Intro or 10420194 Machine Tool Intro or CONDITION: 324571 Welding Fab Tech enrollment requirement

GD&T INSPECTION...prepares the learner to inspect GD&T part features as well as programming and operation of coordinate measuring machine (CMM). COREQUISITE: 31420362 Advanced Precision Measuring

GD&T INTRO...prepares the learner to interpret manufacturing drawings for geometric dimension and tolerances (GD&T). COREQUISITE: 31420385 Orthographic Projection Print

INTERPERSONAL SKILLS...prepares the learner to model interpersonal skills, ethics and diversity.

LATHE FACING AND TURNING...prepares the learner to perform lathe facing and turning operations safely. COREQUISITE: 31420310 Shop Tools and Fasteners or 31420394 Ind Mtn Machine Tool Introduction or 10420194 Machine Tool Introduction or CONDITION: 324571 Welding Fabrication Tech

LATHE-HOLE PRODUCING AND THREADING...prepares the learner to perform lathe hole producing and threading operations. PREREQUISITE: 31420341 Machine Tool Lathes 1B or COREQUISITE: 31420340 Lathe Facing and Turning

MACHINING GEOMETRY AND BASIC TRIGONOMETRY...prepares the learner to apply geometry and basic trig to solve technical problems. COREQUISITE: 31420325 Machining Math Basic

MACHINING MATH BASIC...prepares the learner to apply basic technical math skills to solve problems.

MILL-2D USING CAM...prepares the learner to create 2D milling toolpaths using computer aided machining (CAM) software. COREQUISITE: 31420351 Mill-Slots and Holes

MILL-G&M CODE...prepares the learner to create milling G&M code programs.

MILL-SLOTS AND HOLES...prepares the learner to perform slot milling and hole producing operations on a vertical milling machine. COREQUISITE: 31420350 Mill-Squaring or 10420105 Machine Tool Mills 1A or 31420395 IM MT Lathes and Mills or 31420348 Machine Tool Mills 1 for Fabric

MILL-SQUARING...prepares the learner to square a part using a vertical mill machine safely. COREQUISITE: 31420310 Shop Tools and Fasteners or 31420394 Ind Mtn Machine Tool Intro or 10420194 Machine Tool Intro or CONDITION: 324571 Welding Fabrication Technician program

ORTHOGRAPHIC PROJECTION PRINT...prepares the learner to interpret manufacturing orthographic projection prints.

PRECISION MEASURING...prepares the learner to demonstrate use of precision measuring instruments.

PROTOTRAK MILL-SLOT AND HOLE PROGRAMMING...prepares the learner to mill slots and hole producing operations using conversational programming on ProtoTrak vertical milling machine. COREQUISITES: 31420353 ProtoTrak Mill-Squaring Programming and 31420351 Mill-Slots and Holes

PROTOTRAK MILL-SQUARING PROGRAMMING...prepares the learner to perform squaring operations using conversational programming on ProtoTrak vertical milling machine. COREQUISITE: 31420351 Mill-Slots and Holes

SAFE HEATING TREATING OPERATIONS...prepares the learner to perform heat treating operations safely.

SHOP TOOLS AND FASTENERS...prepares the learner to demonstrate use of shop tools and fasteners. COREQUISITE: 31420330 Precision Measuring

SURFACE GRINDER OPERATIONS...prepares the learner to perform surface grinder operations safely.

TURNING-G&M CODE...prepares the learner to create turning G&M code programs. PREREQUISITE: 31420311 Machine Tool Programming Basic or 31444301 Mill-G&M Code

WORKPLACE FUNDAMENTALS...prepares the learner to incorporate problem solving, creativity and communication skills into daily workplace habits.

Program Number 50-420-2
4-Year Contract
Work Hours (including related instruction): 8000
Related Instruction Hours: 432 • Night School Hours: 8
ABOUT APPRENTICESHIP

Apprenticeships are employer-sponsored training programs. You must have a contract before being invited to school. A special application process is used for these programs. Please contact the Apprenticeship Office for the proper forms. Apprenticeship means you earn while you learn. If you want a career in a skilled trade, apprenticeship is the best way to get there. You'll combine on-the-job training with on-campus learning—you'll have the best of both worlds when it comes to learning the skills you need to get ahead. And even better, you'll earn a paycheck while you learn those skills.

ABOUT THE CAREER

Machines allow industry to produce large quantities of materials quickly, precisely, and cost-effectively. But without high-skilled operators, the machines are useless. That's where you come in. The Machinist Apprenticeship program is an employer-sponsored, hands-on training program in which you'll learn all phases of the machinist occupation. If you're interested in working with mechanical equipment and following precise plans to produce materials of the highest quality, becoming a journey-level machinist may be the perfect career for you.

CAREERS

Graduates of LTC's Machinist Apprenticeship program work as journey-level machinists in a variety of industrial settings.

INDUSTRIAL APPRENTICE APPLICATION REQUIREMENTS

- Determined by employer
- Wisconsin Apprentice Contract

PROGRAM OUTCOMES

- Apply basic safety practices in the machine shop.
- Interpret industrial/engineering drawings.
- Apply precision measuring methods to part inspection.
- Perform basic machine tool equipment setup and operation.
- Perform programming, setup, and operation of CNC machine tools.

APPROXIMATE COSTS

Contact the LTC Apprenticeship Office or visit www.gotoltc.edu/apprenticeship for detailed information.

SPECIAL NOTE

You must have a sponsoring employer and contract before attending school.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

Catalog No.	Class Title	Credit(s)
Term 1		
50420714	Engineering Drawings for Machine Trades Apprentice 1	1
50420713	Precision Measurement for Machine Tool Trades	1
		2
Term 2		
50420734	Mathematics for Machinist Apprentice 1	1
50420715	Mechanical Hardware and Hand Tools for Machine Trades Apprentice	0.5
50420720	Materials and Cut-Off Machines for Machine Trades	0.5
		2
Term 3		
50420721	Math for Machine Trades 2	0.5
50420722	Engineering Drawings for Machine Trades 2	0.5
50420718	Drilling Machines for Machine Trades Apprentice	0.5
50420717	Milling Machines for Machine Trades Apprentice	0.5
		2
Term 4		
50420724	CNC Programming and Planning for Machine Trades	1
50420716	Turning Machines for Machine Trades Apprentice	0.5
50420723	Intro to CAM for Machine Tools Trades Apprentice	0.5
		2
Term 5		
50420725	Basic CAD/CAM for Machine Trades Apprentice	1
50420726	Jig and Fixture Design for Machine Trade Apprentice	0.5
50420719	Grinding Machines for Machine Trades Apprentice	0.5
		2
Term 6		
50420733	CNC Operations for Machine Tool Trades Apprentice	1
50420727	Geometric Design and Tolerancing for Machine Trades	0.5
50420731	Metallurgy for Machine Trades Apprentices	0.5
		2
		TOTAL 12

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with the Apprenticeship Office for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

BASIC CAD/CAM FOR MACHINE TRADES APPRENTICE... is designed to provide concepts and techniques used in computer-aided design (CAD) and computer-aided manufacturing (CAM) as part of their related instruction. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

CNC OPERATIONS FOR MACHINE TOOL TRADES APPRENTICE... will examine CNC related operations and safety. Course competencies include classifying types of equipment, comparing CNC tooling, setup, and work holding operations. Additional CNC programming skill development is included in the course. CNC controls and communications are explored as well. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

CNC PROGRAMMING AND PLANNING FOR MACHINE TRADES... is a classroom introduction to CNC programming for apprentices, with a focus on CNC turning and milling centers. Apprentices will create set up sheets, develop tool lists, calculate speeds and feeds, assign tool offsets and write CNC program. CONDITION: 504393 Tool & Die Apprentice or 504202 Machinist Apprentice prog requirements met

DRILLING MACHINES FOR MACHINE TRADES APPRENTICE... focuses on the safety, terminology, construction and operations of drilling machines in the metal-working industry. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

ENGINEERING DRAWINGS FOR MACH TRADES APPRENTICE 1... will acquaint the apprentice with the interpretation of engineering prints and other technical and manufacturing documentation. The primary focus of the course will be on that part of manufacturing most closely related to machining and tooling. Background information is provided relative to the process used to create and finish the product or piece part on the prints being studied. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

ENGINEERING DRAWINGS FOR MACHINE TRADES 2... prepares the learner to interpret manufacturing prints to extract detailed information about threads, sections, auxiliary views, fasteners, surface finishes, welding symbols, assembly, geometric location, and tolerances. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

GEOMETRIC DESIGN AND TOLERANCING FOR MACHINE TRADES... will acquaint the apprentice with the skills to interpret the geometric dimensions and tolerances found on engineering drawings and in other industrial documents. Instruction concentrates on interpreting the symbols, identifying tolerance zones and determining ways to check parts for conformity to the specified geometric controls. Reference is made to ASME Y14.5M - 1994. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

GRINDING MACHINES FOR MACHINE TRADES APPRENTICE... focuses on the safety, terminology, construction, and operation of grinding machines in the metal working industry. It instructs apprentices in the use of traditional grinding machines and the attachments and accessories frequently encountered in manufacturing operations that use the common grinding processes. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

INTRO TO CAM FOR MACHINE TOOLS TRADES APPRENTICE... is widely used in industry for creating G&M code programs for CNC machines. In this course the learner will explore the Mastercam interface. You will be determining the proper post processors for the work being done. Create and edit basic geometry. Create and edit tool paths for basic operations. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

JIG AND FIXTURE DESIGN FOR MACHINE TRADE APPRENTICE... introduces the apprentice to the concepts of jig and fixture design as part of their apprentice related instruction. Topics include the basic elements of tool design, jig and fixture application, and the actual design of tooling. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

MATERIALS AND CUTOFF MACHINES FOR MACHINE TRADES... prepares the learner to identify metal composition and classification, follow cutoff machine tool safety rules, operate horizontal cutoff machine tools, and operate vertical machine tools. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

MATH FOR MACHINE TRADES 2... prepares the learner to interpret symbols used in algebraic expressions, solve equations by the rearrangement of formulas, use formulas, solve unknown angles using angular principles, and solve for the angles and length of sides in right triangles. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

MATHEMATICS FOR MACHINIST APPRENTICE 1... provides applied mathematics instruction from a review of basic arithmetic; basic algebra; applications based on geometry; right triangle trigonometry and oblique angle trigonometry; and compound angles. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

MECHANICAL HARDWARE & HAND TOOLS FOR MACHINE TRADES APPRENTICE... provides instruction for the apprentice in the recognition, selection, and operation of mechanical hardware and hand tools. Apprentices are taught to use outside sources to select correct component or tool sizes, characteristics, and operating parameters. Apprentices will sharpen drills and single point cutting tools. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program reqs met

METALLURGY FOR MACHINE TRADES APPRENTICES... prepares the learner to interpret the properties of ferrous and non-ferrous materials as well as how to heat treat and test the hardness of ferrous materials. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

MILLING MACHINES FOR MACHINE TRADES APPRENTICE... will instruct apprentices on the basic principles of vertical and horizontal milling machines for the machine tool trade. Instruction includes safety, basic parts and functions of the machines, work holding devices, tooling requirements, and feeds and speeds. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

PRECISION MEASUREMENT FOR MACHINE TOOL TRADES... is designed to acquaint the apprentice with the measurement systems and tools most frequently used in layout and machining processes. Learning outcomes relate to semi-precision through super-precision measuring tools and equipment combined with opportunities to investigate new technologies. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

TURNING MACHINES FOR MACHINE TRADES APPRENTICE... will acquaint the apprentice with the terminology, methods, and operations for turning machines used in the metal-working industry. Apprentices will learn to perform calculations needed to operate turning machines including speed and feed calculations. Apprentices will make calculations necessary to setup a turning machine for screw threads and taper operations. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

Program Number 31-462-2 Technical Diploma • Two Terms

ABOUT THE PROGRAM

Machines are important in our lives—directly or indirectly. Broken or inefficient machines slow the pace of manufacturing and, ultimately, profits. To remain competitive in today's fast-paced industrial/manufacturing environment, equipment needs to be maintained to run at peak performance. If you like to troubleshoot problems, put theory to work hands-on, and have interests in math and mechanical processes, a career in industrial maintenance may be your key to success.

PROGRAM OUTCOMES

- Demonstrate safe work procedures.
- Install industrial equipment and systems.
- Maintain industrial equipment and systems.
- Troubleshoot industrial equipment and systems.
- Repair industrial equipment and systems.
- Communicate technical information.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Students need to supply their own safety glasses and welding gloves.

RELATED PROGRAMS

- Millwright Apprenticeship
- Electro-Mechanical Maintenance Technology
- Electro-Mechanical Automation Technology

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10804113	College Technical Math 1A OR 10804198 Calculus 1*	3
10462109	Maintenance Introduction	1
10462111	Maintenance Print Reading	2
10462107	Tools and Measurement	1
10620122	Industrial Wiring	2
10420194	Machine Tool Introduction	2
10442100	Welding Introduction	1
10457103	Fabrication Introduction	1
10462115	Layout and Rigging	1
		14
Term 2		
10462123	Pumps, Fluid/Air Handling	2
10620155	Hydraulics and Pneumatics	3
10420103	Lathes 1	1
10420105	Mills 1	1
10462125	Bearings and Lubrication	3
10462119	Power Transmission	2
10462121	Troubleshooting and Machine Repair	3
10801196	Oral/Interpersonal Communication	3
		18
		TOTAL 32

*Calculus 1 is designed for students planning to transition to a 4-year college following LTC program completion.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

BEARINGS AND LUBRICATION...prepares the learner to properly identify, remove, install, and maintain both plain and rolling element bearings used with either a radial or axial load, including ball, cylindrical roller, tapered roller, linear, and thrust bearings; use manufacturers' resources for proper usage and life of bearings; and look at proper types, properties, and application methods of lubrication. PREREQUISITES: 10804113 College Tech Math 1A and 10462109 Maintenance Introduction or 31462309 Industrial Maintenance Introduction

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtnc Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

FABRICATION INTRODUCTION...introduces the learner to various types of structural steel, sheet metal, and pipe, and prepares the learner to perform fabrication from assembly prints, including cutting, welding, bending, straightening, and repair. COREQUISITE: 10442100 Welding Introduction or PREREQUISITES: 31442346 IM Intro to Welding or 31442300 Welding Intro and COREQUISITE: 10462109 Maintenance Intro or PREREQUISITE: Industrial Maintenance Intro

HYDRAULICS AND PNEUMATICS...prepares the learner to identify hydraulic and pneumatic component symbols and terms, adjust a pressure relief valve, analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits; analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. PREREQUISITES: 10462109 Maintenance Intro or 31462309 Industrial Maintenance Intro and 10804113 College Tech Math 1A

INDUSTRIAL WIRING...prepares the learner to follow safety procedures; maintain a safe and healthy work environment; construct electrical circuits; measure electrical quantities using a VOM and/or DVM; analyze measured values using electrical circuit laws; construct typical industrial control circuits; and analyze typical industrial control circuits.

LATHES 1...introduces the student to the characteristics and attributes of turning tools: follow engine lathe safety rules, identify engine lathe components, perform facing and center drilling operations, perform turning operations. COREQUISITE: 10462107 Tools and Measurement or PREREQUISITE: 31462325 Maintenance Tools and Measurement and PREREQUISITE: 10420194 Machine Tool Intro or 31420394 IM Machine Tool Intro

LAYOUT AND RIGGING...prepares the learner to perform layout skills for industrial maintenance to include machine layout, proper rigging, installation, and leveling with emphasis on baseline layout, machine rigging and installation, machine leveling, and alignment procedures. Participants will obtain lift truck operation certification upon completion. COREQUISITE: 10462109 Maintenance Intro or PREREQUISITE: 31462309 Ind Mtnc Intro and COREQUISITE: 10804113 College Tech Math 1A and COREQUISITE: 10462111 Maintenance Print Reading or PREREQUISITE: 31462388 IM Print Reading

MACHINE TOOL INTRODUCTION...prepares the learner with the skills to identify basic types of machining processes, follow standard shop safety rules, use semi-precision and precision measuring tools, perform workpiece layout procedures, identify metal composition and classification, follow cutoff machine safety rules, operate vertical and horizontal cutoff machines, follow sensitive drill press safety rules, identify drill press components, interpret attributes of hole-producing tools, and operate a sensitive drill press.

MAINTENANCE INTRODUCTION...prepares the learner to apply basic safety, mechanics, force, friction, work, and energy; learn terminology related to maintenance; introduction to threaded and non-threaded fasteners and concrete anchoring; learn to use precision measuring tools; introduction to single-phase and three-phase motor wiring. PREREQUISITE: 31462325 Maintenance Tools and Measurement or COREQUISITE: 10462107 Tools and Measurement

MAINTENANCE PRINT READING...prepares the learner to read prints; make isometric sketches; interpret orthographic projection drawings, to include sections, surface finishes, and tolerancing. The course when delivered in the evening is self-paced, open-entry/exit, and designed for individualized student needs.

MILLS 1...prepares the learner to identify vertical milling machine components, select cutting tools and workholding device(s), apply safety rules, set up the vertical milling machine, and mill square surfaces. COREQUISITE: 10420103 Lathes 1 or PREREQUISITE: 31420395 IM Machine Tool Lathes and Mills

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

POWER TRANSMISSION...introduces the learner to belt, chain, and gear drives used in industrial maintenance applications, including v-belts, flat belts, timing belts, conveyor chains, roller chains, bevel gears, worm gears, helical gears, spur gears, couplings, and alignment with emphasis on identification, installation, repair, and maintenance. COREQUISITE: 10462119 Bearings and Lubrication

PUMPS, FLUID/AIR HANDLING...prepares the learner to identify, install, repair, and maintain common pumps and plumbing applications, including centrifugal pumps, diaphragm pumps, packing and seals, tubing, and installing hose and piping used with fluid and air handling. PREREQUISITES: 10462115 Layout and Rigging or 31462302 IM Layout and Rigging and COREQUISITE: 10620155 Hydraulics and Pneumatics Tools and Measurement...prepares the learner to use hand tools, precision measuring instruments, and torque tools.

TROUBLESHOOTING AND MACHINE REPAIR...prepares the learner to perform essential troubleshooting, repair, and preventive maintenance of various machine tools and installations used in industrial maintenance and to integrate the skills learned in the other maintenance courses to perform complete repair of machine tools. COREQUISITES: 10462119 Power Transmission and 10462123 Pumps, Fluid/Air Handling and PREREQUISITE: 10620122 Industrial Wiring

WELDING INTRODUCTION...introduces the learner to the world of welding, weld shop safety practices, welding terminology, and welding machine setup to industry standards. Learners will be introduced to the three major welding processes: SMAW, GMAW, and GTAW and will build skills welding with each process in the flat, and horizontal positions while using the common welding joints found in industry. The learner will process material using the two major hand held cutting processes - the Oxyfuel and PAC cutting processes

Program Number 50-423-1
4-Year Contract
Work Hours (including related instruction): 8320
Related Instruction Hours: 576 • Night School Hours: 8
ABOUT APPRENTICESHIP

Apprenticeships are employer-sponsored training programs. You must have a contract before being invited to school. A special application process is used for these programs. Please contact the Apprenticeship Office for the proper forms. Apprenticeship means you earn while you learn. If you want a career in a skilled trade, apprenticeship is the best way to get there. You'll combine on-the-job training with on-campus learning—you'll have the best of both worlds when it comes to learning the skills you need to get ahead. And even better, you'll earn a paycheck while you learn those skills.

ABOUT THE CAREER

Maintenance mechanics and millwrights install, dismantle, or move machinery and heavy equipment according to layout plans, blueprints, or other drawings. They keep machines, mechanical equipment, or the structure of an establishment in repair. Duties may involve pipe fitting; boiler making; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs. This program provides the related instruction portion for this trade's apprenticeship.

CAREERS

Graduates of LTC's Maintenance Mechanic/Millwright Apprenticeship program work as journey-level maintenance mechanics/millwrights in a variety of industrial and organizational settings.

INDUSTRIAL APPRENTICE APPLICATION REQUIREMENTS

- Determined by employer
- Wisconsin Apprentice Contract

PROGRAM OUTCOMES

- Demonstrate proper rigging techniques.
- Select an appropriate power transmission system for a given application.
- Identify suitable pumps for given applications.
- Recommend bearings for given applications.
- Plan for fabricating parts and assemblies according to specifications.
- Apply operational and troubleshooting principles to fluid power systems.
- Lay out an equipment installation plan.
- Plan maintenance schedules for a given system.

APPROXIMATE COSTS

Contact the LTC Apprenticeship Office or visit www.gotoltc.edu/apprenticeship for detailed information.

SPECIAL NOTE

You must have a sponsoring employer and contract before attending school.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

Catalog No.	Class Title	Credit(s)
Term 1		
50423710	Math for the MMMP Trades	1
50423713	Precision Measurements for the MMMP Trades	0.5
50423717	Electricity for the MMMP Trades	0.5
2		
Term 2		
50423711	Print Reading for the MMMP Trades	1
50423726	Safety/Tools/Torque for the MMMP Trades	0.25
50423712	Fasteners for the MMMP Trades	0.5
50423723	Adhesives and Sealants for the MMMP Trades	0.25
2		
Term 3		
50423737	Equipment Installation for the MMMP Trades	0.75
50423727	Concrete for the MMMP Trades	0.25
50423714	Rigging for the MMMP Trades	1
2		
Term 4		
50423738	Sheet Metal and Structural Steel for the MMMP Trades	0.75
50423716	Metallurgy for the MMMP Trades	0.50
50423715	Welding for the MMMP Trades	0.75
2		
Term 5		
50423735	Mechanical Power Transmission for the MMMP Trades	0.75
50423733	Belts, Sheaves, Pulleys, and Drives for the MMMP Trades	0.5
50423736	Conveyors for the MMMP Trades	0.25
50423734	Gears, Gearboxes, and Gear Assemblies for the MMMP Trades	0.5
2		
Term 6		
50423731	Couplings and Alignment for the MMMP Trades	0.5
50423730	Bearings for the MMMP Trades	0.75
50423725	Machine Lubrication for the MMMP Trades	0.25
50423724	Preventative and Predictive Maintenance for the MMMP Trades	0.5
2		
Term 7		
50423720	Pipefitting and Valves for the MMMP Trades	0.75
50423722	Packings, Seals, and Gaskets for the MMMP Trades	0.5
50423732	Pumps for the MMMP Trades	0.75
2		
Term 8		
50423721	Hydraulics for the MMMP trades	1
50423718	Pneumatics and Compressed Air for the MMMP Trades	0.75
50423719	Vacuum Systems for the MMMP Trades	0.25
2		
		TOTAL 16

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with the Apprenticeship Office for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

ADHESIVES AND SEALANTS FOR MMMP TRADES...compares adhesives and sealant types and applications. The apprentice skills will be developed related to applying adhesives and sealants to repair applications, interpreting SDS information, and handling hazardous materials. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

BEARINGS FOR THE MMMP TRADES...will examine bearing types and applications, and compare equipment bearings. Then learners will develop skills related to bearing inspection, selection, removal, mounting, lubrication and diagnosing bearing failures. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

BELTS, SHEAVES, PULLEYS AND DRIVES FOR MMMP...compares different belt types and drive components. Apprentices will develop skills related to inspecting, troubleshooting, removing, selecting, and installing belt drive systems. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

CONCRETE FOR THE MMMP TRADES...examines the principles of concrete as well as anchoring. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

CONVEYORS FOR THE MMMP TRADES...examines chain, belt, and other types of conveyors and related components. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

COUPLINGS AND ALIGNMENT FOR MMMP TRADES...compares different coupling types and examines common misalignment problems. Apprentices will develop skills related to inspecting, troubleshooting, lubricating, and preparing couplings for removal and installation by using dial indicators and laser aligners. This course will also discuss types and principles of clutches and brakes. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

ELECTRICITY FOR THE MMMP TRADES...examines basic electrical terms and theory. Apprentices will learn motor wiring, multimeter use as well as lockout tagout as it applies to electricity. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

EQUIPMENT INSTALLATION FOR THE MMMP TRADES...will layout equipment installations, plan for moving equipment, and set and level equipment. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

FASTENERS FOR MMMP TRADES...provides apprentices with a chance to compare fasteners and their uses, analyze fastener failures, and install mechanical fasteners. This course also covers drilling and tapping application. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

GEARS, GEARBOXES, GEAR ASSEMBLIES FOR MMMP...compares gear types and applications. Apprentices will develop skills inspecting gear assemblies, troubleshooting gear problems, removing gears and components, and reassembling gear drive systems. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

HYDRAULICS FOR MMMP TRADES...provides instruction to apprentices concerning many aspects of inspecting, servicing, and troubleshooting hydraulic systems and components. Apprentices will learn safety related issues and be taught proper safety procedures for working with hydraulic systems and components. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

MACHINE LUBRICATION FOR THE MMMP TRADES...examines the types, principles and applications of machine lubricants and lubricating systems. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

MATH FOR MMMP TRADES...examines math concepts as they relate to millwrights and machine maintenance. Apprentices will develop skills related to converting fractions to decimals; using both standard and metric systems; applying basic algebra to solving problems; computing area, volume, mass, and torque; using trigonometry; and using math charts, tables and references in support of common work processes. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

MECHANICAL POWER TRANSMISSION FOR MMMP TRADES...examines drive transmission systems and their applications, including roller chains. Apprentices will develop skills inspecting power transmission systems and troubleshooting mechanical drive systems. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

METALLURGY FOR MMMP TRADES...develops apprentice skills regarding metallurgical concepts. Apprentices will compare various metals and their applications, apply metallurgical techniques to work processes, test metals for hardness, and examine heat treating applications. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PACKINGS, SEALS, GASKETS FOR MMMP TRADES...will examine packings, seals, and gaskets and compare materials and applications. The skills in layout, cutting, inspecting, removing, and installing these components will be developed. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PIPEFITTING AND VALVES FOR MMMP TRADES...introduces apprentices to principles, application and types of pipe, materials, fittings, tubing, and valves, and develops skills related to layout, installation, and maintenance. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PNEUMATICS AND COMPRESSED AIR FOR MMMP TRADES...provides instruction to apprentices concerning many aspects of inspecting, servicing, and troubleshooting pneumatic systems and components. Apprentices will learn safety related issues and be taught proper safety procedures for working with pneumatic systems and components. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PRECISION MEASUREMENTS FOR MMMP TRADES...develops apprentice skills in precision measurement. Types of measuring instruments will be compared and then measuring skills using tapes, steel rules, micrometers, calipers, indicators, and gauges will be developed. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PREVENTIVE AND PREDICTIVE MAINTENANCE FOR MMMP TRADES...examines both preventive and predictive maintenance concepts as they apply to millwright work processes and machine maintenance including vibration and lubrication analysis. Apprentices will develop skills related to assessing machine conditions and faults based on both preventative and predictive maintenance. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PRINT READING FOR MMMP TRADES...explores reading prints commonly used by millwrights and machine maintenance workers. Course competencies include comparing types of prints, interpreting structural drawings, identifying parts from prints, and developing apprentice sketching drawing skills. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PUMPS FOR THE MMMP TRADES...compares different pump types including centrifugal, diaphragm, gear, vane and their applications. Apprentices will complete a field inspection of pumps and learn how to troubleshoot, remove, overhaul, and install and perform preventative maintenance on pumps. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

RIGGING FOR MMMP TRADES...will compare types of rigging equipment and their uses; determine safe loads, rig and crib loads, and move a load with cranes and hoists, including signaling. Course will also cover usage and the safety of ladders and scaffolding. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

SAFETY, TOOLS AND TORQUE FOR MMMP TRADES...examines safety as it relates to hand and power tools as well as theory and application of torque in the Maintenance/Millwright trade. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

SHEET METAL AND STRUCTURAL STEEL FOR MMMP TRADES...compares types of sheet metal and tools used by the trade. Apprentices will develop skills related to fabricating sheet metal and structural steel, including layout, bending and forming, as well as erecting structural steel. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

VACUUM SYSTEMS FOR MMMP TRADES...introduces principles of vacuum systems and interpreting vacuum system schematics. Apprentices will then develop skills related to installing, repairing, replacing and applying troubleshooting principles to vacuum systems and components. Course examines preventive maintenance techniques commonly used on the job. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

WELDING FOR MMMP TRADES...compares common welding processes and develops apprentice skills related to welding, cutting, heating and using oxy-gas. Welding with arc, MIG and TIG is included, along with common cutting and joining techniques. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

Program Number 50-464-1

5-Year Contract

Work Hours (including related instruction): 10,000

Related Instruction: 1,296 hours • Night School: 8 hours

ABOUT APPRENTICESHIP

Apprenticeships are employer-sponsored training programs. You must have a contract before being invited to school. A special application process is used for these programs. Please contact the Apprenticeship Office for the proper forms. Apprenticeship means you earn while you learn. If you want a career in a skilled trade, apprenticeship is the best way to get there. You'll combine on-the-job training with on-campus learning—you'll have the best of both worlds when it comes to learning the skills you need to get ahead. And even better, you'll earn a paycheck while you learn those skills.

ABOUT THE CAREER

Maintenance Technicians work in industrial manufacturing and safely perform mechanical and electrical duties to keep machines, equipment, or the structure of a facility in repair. The Maintenance Technician Apprenticeship program is employer sponsored. This program combines the on-the-job hands-on training with related training at the technical college. Some hands-on training is used to reinforce the related training. Thus, skills are developed to help the technician keep machines and equipment operating and productive. If you like to maintain, repair, and troubleshoot problems and put theory to work, a career as a maintenance technician may be your ticket to success.

CAREERS

Graduates of LTC's Maintenance Technician Apprenticeship program work as journey-level maintenance technicians in a variety of industrial and organizational settings.

INDUSTRIAL APPRENTICE APPLICATION REQUIREMENTS

- Determined by employer
- Wisconsin Apprentice Contract

PROGRAM OUTCOMES

- Demonstrate proper rigging techniques.
- Select an appropriate power transmission system for a given application.
- Identify suitable pumps for given applications.
- Recommend bearings for given applications.
- Plan for fabricating parts and assemblies according to specifications.
- Apply operational and troubleshooting principles to fluid power systems.
- Lay out an equipment installation plan.
- Plan maintenance schedules for a given system.
- Apply AC and DC theory to an industrial setting.
- Apply the National Electric Code requirements to industrial equipment and facilities.
- Apply operational and troubleshooting principles to a transformer installation.
- Maintain electric motors and motor controls.
- Test solid-state electronic system components.
- Apply operational and troubleshooting principles to power systems & variable speed drives.
- Apply operational and troubleshooting principles to programmable logic controllers and automation equipment.
- Apply operational and troubleshooting principles to fluid power systems.
- Interpret industrial equipment drawings and electrical prints.
- Communicate trade and occupational-related information effectively.

APPROXIMATE COSTS

Contact the LTC Apprenticeship Office or visit www.gotoltc.edu/apprenticeship for detailed information.

SPECIAL NOTE

You must have a sponsoring employer and contract before attending school.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

Catalog No.	Class Title	Credit(s)
Term 1		
50423710	Math for the MMMP Trades	1
50423713	Precision Measurements for the MMMP Trades	0.5
50423717	Electricity for the MMMP Trades	0.5
50413750	DC Electricity for IE Part 1	1
50413773	Safety and Print Reading for IE	0.5
50413762	Industrial Electrician Motor Controls 1	1
50413752	Codes for IE 1: Intro to the NEC	0.5
		5
Term 2		
50423711	Print Reading for the MMMP Trades	1
50423726	Safety/Tools/Torque for the MMMP Trades	0.25
50423712	Fasteners for the MMMP Trades	0.5
50423723	Adhesives and Sealants for the MMMP Trades	0.25
50413774	DC Electricity for IE Part 2	1
50413763	Industrial Electrician Motor Controls 2	1
50413753	Codes for IE 2: OCPD and Electrical Device	0.5
		4.5
Term 3		
50423737	Equipment Installation for the MMP Trades	0.75
50423727	Concrete for the MMP Trades	0.25
50423714	Rigging for the MMP Trades	1
50413751	AC Electricity for IE Part 1	1
50413764	Industrial Electrician Motor Controls 3	1
50413754	Codes for IE 3: Article 250 Part A	0.5
		4.5
Term 4		
50423738	Sheet Metal & Structural Steel for the MMMP Trades	0.75
50423716	Metallurgy for the MMMP Trades	0.5
50423715	Welding for the MMMP Trades	0.75
50413775	AC Electricity for IE Part 2	1
50413769	IE Programmable Logic Controllers 1	1
50413755	Codes for IE 4: Article 250 Part B	0.5
		4.5
Term 5		
50423735	Mechanical Power Transmission for the MMMP Trades	0.75
50423733	Belts, Sheaves, Pulleys, & Drives for the MMMP Trades	0.5
50423736	Conveyors for the MMMP Trades	0.25
50423734	Gears, Gearboxes, and Gear Assemblies for the MMMP Trades	0.5
50413760	Industrial Electrician Transformers	1
50413770	IE Programmable Logic Controllers 2	1
50413759	Codes for IE 8: Transformers	0.5
		4.5
Term 6		
50423731	Couplings and Alignment for the MMMP Trades	0.5
50423730	Bearings for the MMMP Trades	0.75
50423725	Machine Lubrication for the MMMP Trades	0.25
50423724	Preventative and Predictive Maintenance for the MMMP Trades	0.5
50413761	IE Motors and Generators	1
50413771	IE Programmable Logic Controllers 3	1
50413758	Codes for IE 7: Motors and Generators	0.5
		4.5
Term 7		
50423720	Pipefitting and Valves for the MMMP Trades	0.75
50423722	Packings, Seals, & Gaskets for the MMMP Trades	0.5
50423732	Pumps for the MMMP Trades	0.75
50413768	IE Solid State Electronics	2
50413767	Fluid Power systems for IE - Hydraulics	0.5
50413766	Fluid Power Systems for IE- Pneumatics	0.5
		5
Term 8		
50423721	Hydraulics for the MMMP trades	1
50423718	Pneumatics & Compressed Air for the MMMP Trades	0.75
50423719	Vacuum Systems for the MMMP Trades	0.25
50413765	Power Systems & Variable Speed Drives for IE	2
50413757	Codes for IE 6: Conductors, Raceways, Data Cables	0.5
50413756	Codes for IE 5: Article 300, Cords/Cables	0.5
		5
		TOTAL 37.5

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with the Apprenticeship Office for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AC ELECTRICITY FOR IE PART 1...introduces the industrial electrical apprentice to the basic concepts of alternating current. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of the modern industrial electric systems. CONDITION: 504131 Ind Electrician Appr or 504641 Maintenance Technician Appr req met

AC ELECTRICITY FOR IE PART 2...introduces the industrial electrical apprentice to the basic concepts of alternating current. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of the modern industrial electric systems. CONDITION: 504131 Ind Electrician Appr or 504641 Maintenance Technician Appr reqs met

ADHESIVES AND SEALANTS FOR MMMP TRADES...compares adhesives and sealant types and applications. The apprentice skills will be developed related to applying adhesives and sealants to repair applications, interpreting SDS information, and handling hazardous materials. CONDITION: 504231 Millwright Appr or 504641 Maintenance Technician Appr reqs met

BEARINGS FOR THE MMMP TRADES...will examine bearing types and applications, and compare equipment bearings. Then learners will develop skills related to bearing inspection, selection, removal, mounting, lubrication and diagnosing bearing failures. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

BELTS, SHEAVES, PULLEYS AND DRIVES FOR MMMP...compares different belt types and drive components. Apprentices will develop skills related to inspecting, troubleshooting, removing, selecting, and installing belt drive systems. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

CODES FOR IE 1: INTRO TO THE NEC...introduces the apprentice to the layout and purpose of the National Electric Code (NEC). It also strives to teach the apprentice proper methodology to research a code question and correctly interpret what they are reading. Apprentices will research the structure of the NEC and define the requirements of the code that are common to all electrical installations. In addition, apprentices will examine the installation requirements for fire pumps, emergency systems and fire alarms. CONDITION: 504131 Industrial Electrician Appr or 504641 Maintenance Technician Apprentice requirements met

CODES FOR IE 2: OCPD AND ELECTRICAL DEVICE...introduces ind electrical apprentice how to plan for installation of overcurrent protection devices and how to select proper boxes, cabinets and conduits for industrial electrical codes. This is the second of 8 course modules on the NEC. CONDITION: 504131 Ind Electrician Appr or 504641 Maint Tech Appr reqs met

CODES FOR IE 3: ARTICLE 250 PART A...examines the application of grounding to industrial electrical situations as required by the NEC and other electrical codes. CONDITION: 504131 Ind Electrician Appr or 504641 Maint Tech Appr reqs met

CODES FOR IE 4: ARTICLE 250 PART B...examines course four of eight on the NEC Article 250 and grounding applications for industrial electrical installations. Apprentices will complete their review of this portion of the NEC and examine additional related electrical codes in effect across Wisconsin. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

CODES FOR IE 5: ARTICLE 300 CORDS/CABLES...examines course five of eight, article 300 of the NEC and wiring methods for industrial electrical applications. In addition, apprentices will determine sizing requirements for cords and cables for installations common to industrial facilities. Finally, the course will identify code requirements for equipment installations in hazardous locations. CONDITION: 504131 Industrial Electrician Appr or 504641 Maintenance Technician Appr reqs met

CODES FOR IE 6: CONDUCTORS, RACEWAYS, DATA CABLES...examines course six of eight covering selection of proper conductors and raceways for industrial electrical installations as required by the NEC and other electrical codes. In addition, course competencies will include examining the installation requirements for data and communication cables. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

CODES FOR IE 7: MOTORS AND GENERATORS...examines course seven of eight which reviews the code requirements for the selection of electrical components for typical industrial electrical motor installations. Course module includes sizing of controls, conductors, switches, branches, and more. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

CODES FOR IE 8: TRANSFORMERS...examines course eight of eight which reviews the electrical code requirements which provide for the protection of various industrial transformer installations. Course competencies include developing plans, sizing equipment and components, safety, and references to applicable sections of the NEC. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

CONCRETE FOR THE MMMP TRADES...examines the principles of concrete as well as anchoring. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

CONVEYORS FOR THE MMMP TRADES...examines chain, belt, and other types of conveyors and related components. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

COUPLINGS AND ALIGNMENT FOR MMMP TRADES...compares different coupling types and examines common misalignment problems. Apprentices will develop skills related to inspecting, troubleshooting, lubricating, and preparing couplings for removal and installation by using dial indicators and laser aligners. This course will also discuss types and principles of clutches and brakes. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Appr requirements met

DC ELECTRICITY FOR IE PART 1...introduces the fundamental concepts of and computations related to DC electricity. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of modern industrial electric systems. Competencies related to metering and safe use of measuring devices are included. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

DC ELECTRICITY FOR IE PART 2...introduces the fundamental concepts of and computations related to DC electricity. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of modern industrial electric systems. Competencies related to metering and safe use of measuring devices are included. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

ELECTRICITY FOR THE MMMP TRADES...examines basic electrical terms and theory. Apprentices will learn motor wiring, multimeter use as well as lockout tagout as it applies to electricity. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

EQUIPMENT INSTALLATION FOR THE MMMP TRADES...will layout equipment installations, plan for moving equipment, and set and level equipment. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

FASTENERS FOR MMMP TRADES...provides apprentices with a chance to compare fasteners and their uses, analyze fastener failures, and install mechanical fasteners. This course also covers drilling and tapping application. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

FLUID POWER SYSTEMS FOR IE - HYDRAULICS...examines hydraulics course customized for industrial electricians and relates the basics of hydraulic theory and hydraulic components. Safety and the interrelationship between hydraulic power with electrical control is emphasized. CONDITION: 504131 Ind Electrician Appr or 504641 Maint Tech Appr requirements met

FLUID POWER SYSTEMS FOR IE - PNEUMATICS...examines pneumatics customized for industrial electrician apprentices who deal with fluid power systems. This course will relate the basics of pneumatic theory and pneumatic components. Safety and the interrelationship between hydraulic power with electrical control is emphasized. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

GEARS, GEARBOXES, GEAR ASSEMBLIES FOR MMMP...compares gear types and applications. Apprentices will develop skills inspecting gear assemblies, troubleshooting gear problems, removing gears and components, and reassembling gear drive systems. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

HYDRAULICS FOR MMMP TRADES...provides instruction to apprentices concerning many aspects of inspecting, servicing, and troubleshooting hydraulic systems and components. Apprentices will learn safety related issues and be taught proper safety procedures for working with hydraulic systems and components. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

IE MOTORS AND GENERATORS...introduces the industrial electrician apprentices to explore motor controls. This course introduces concepts, terminology, and safety. In addition, this is designed to give the Industrial Electrician Apprentice the knowledge required by industry to maintain electric motors and generators. This course material will cover DC motors and generators, single-phase and three-phase motors, as well as alternators. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

IE PROGRAMMABLE LOGIC CONTROLLERS 1...designed to teach the fundamentals of programmable logic controller and its programming software. The first course of 3 will introduce terminology, concepts, print reading and safety. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

IE PROGRAMMABLE LOGIC CONTROLLERS 2...examines second of three courses for industrial electrician apprentices. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Appr requirements met

IE PROGRAMMABLE LOGIC CONTROLLERS 3...examines third course of three for industrial electrician apprentices. PLC applications and assessment projects are planned. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

IE SOLID STATE ELECTRONICS...provides apprentice with the skills and knowledge for troubleshooting basic solid-state devices and circuits. The construction, identification, and operating characteristics of solid-state devices are investigated. The apprentice builds test circuits, gathers and analyzes data, and follows safety procedures. Methods for locating defective component are applied. Replacement of printed circuit board components is performed. Also examined is the effect of temperature on devices. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Appr requirements met

INDUSTRIAL ELECTRICIAN MOTOR CONTROLS 1...introduces learner through the fundamentals of electric motor control. Will learn to recognize and draw the basic symbols, the language of motor controls, and how to apply these symbols into current industrial format. Will also learn to draw ladder and wiring diagrams. Introduced to the logic used in motor control and be required to apply this logic in order to correctly interpret, design and wire control circuits. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

INDUSTRIAL ELECTRICIAN MOTOR CONTROLS 2...examines second course of three and examines motor controls applicable to the industrial electrician trade. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

INDUSTRIAL ELECTRICIAN MOTOR CONTROLS 3...examines third of three courses examining motor controls applicable to the industrial electrician trade. Applications and assessment activities are intended in this course. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

INDUSTRIAL ELECTRICIAN TRANSFORMERS...introduces Industrial Electrician Apprentice to the basic concepts of single and three-phase transformers. The course will cover transformer theory, turns, current and voltage ratios as well as proper connections and use of various transformers. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

MACHINE LUBRICATION FOR THE MMMP TRADES...examines the types, principles and applications of machine lubricants and lubricating systems. CONDITION: 504231 Millwright Apprentice or 504641 Maint Tech Appr requirements met

MATH FOR MMMP TRADES...examines math concepts as they relate to millwrights and machine maintenance. Apprentices will develop skills related to converting fractions to decimals; using both standard and metric systems; applying basic algebra to solving problems; computing area, volume, mass, and torque; using trigonometry; and using math charts, tables and references in support of common work processes. CONDITION: 504231 Millwright Appr or 504641 Maint Technician Appr requirements met

MECHANICAL POWER TRANSMISSION FOR MMMP TRADES...examines drive transmission systems and their applications, including roller chains. Apprentices will develop skills inspecting power transmission systems and troubleshooting mechanical drive systems. CONDITION: 504231 Millwright Appr or 504641 Maintenance Technician Appr requirements met

METALLURGY FOR MMMP TRADES...develops apprentice skills regarding metallurgical concepts. Apprentices will compare various metals and their applications, apply metallurgical techniques to work processes, test metals for hardness, and examine heat treating applications. CONDITION: 504231 Millwright Appr or 504641 Maint Technician Appr requirements met

PACKINGS, SEALS, GASKETS FOR MMMP TRADES...will examine packings, seals, and gaskets and compare materials and applications. The skills in layout, cutting, inspecting, removing, and installing these components will be developed. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PIPEFITTING AND VALVES FOR MMMP TRADES...introduces apprentices to principles, application and types of pipe, materials, fittings, tubing, and valves, and develops skills related to layout, installation, and maintenance. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PNEUMATICS AND COMPRESSED AIR FOR MMMP TRADES...provides instruction to apprentices concerning many aspects of inspecting, servicing, and troubleshooting pneumatic systems and components. Apprentices will learn safety related issues and be taught proper safety procedures for working with pneumatic systems and components. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

POWER SYSTEMS AND VARIABLE SPEED DRIVES FOR IE...provides opportunity for students to learn about power systems and variable speed drives (VSD's). Topics include electricity, electronics, power transmissions, motor operations, AC and DC motor drives, servo and stepper drives, peripherals and communication. Will also explore closed loop control, feedback devices, and drive maintenance and the troubleshooting of VSD's. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

PRECISION MEASUREMENTS FOR MMMP TRADES...develops apprentice skills in precision measurement. Types of measuring instruments will be compared and then measuring skills using lapses, steel rules, micrometers, calipers, indicators, and gauges will be developed. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PREVENTIVE AND PREDICTIVE MAINTENANCE FOR MMMP TRADES...examines both preventive and predictive maintenance concepts as they apply to millwright work processes and machine maintenance including vibration and lubrication analysis. Apprentices will develop skills related to assessing machine conditions and faults based on both preventative and predictive maintenance. CONDITION: 504231 Millwright Appr or 504641 Maintenance Technician Apprentice reqs met

PRINT READING FOR MMMP TRADES...explores reading prints commonly used by millwrights and machine maintenance workers. Course competencies include comparing types of prints, interpreting structural drawings, identifying parts from prints, and developing apprentice sketching drawing skills. CONDITION: 504231 Millwright Appr or 504641 Maint Tech Appr reqs met

PUMPS FOR THE MMMP TRADES...compares different pump types including centrifugal, diaphragm, gear, vane and their applications. Apprentices will complete a field inspection of pumps and learn how to troubleshoot, remove, overhaul, and install and perform preventative maintenance on pumps. CONDITION: 504231 Millwright Appr or 504641 Maint Tech Appr reqs met

RIGGING FOR MMMP TRADES...will compare types of rigging equipment and their uses; determine safe loads, rig and crib loads, and move a load with cranes and hoists, including signaling. Course will also cover usage and the safety of ladders and scaffolding. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

SAFETY AND PRINT READING FOR IE...acquaints the apprentice with the interpretation of "prints" (blueprints) and other engineering and manufacturing documentation. The primary focus of the course will be on the basics of prints and how they are used to convey information to technicians. Application of electrical prints from industrial settings will be studied. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

SAFETY, TOOLS AND TORQUE FOR MMMP TRADES...examines safety as it relates to hand and power tools as well as theory and application of torque in the Maintenance/Millwright trade. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

SHEET METAL AND STRUCTURAL STEEL FOR MMMP TRADES...compares types of sheet metal and tools used by the trade. Apprentices will develop skills related to fabricating sheet metal and structural steel, including layout, bending and forming, as well as erecting structural steel. CONDITION: 504231 Millwright Appr or 504641 Maint Tech Appr requirements met

VACUUM SYSTEMS FOR MMMP TRADES...introduces principles of vacuum systems and interpreting vacuum system schematics. Apprentices will then develop skills related to installing, repairing, replacing and applying troubleshooting principles to vacuum systems and components. Course examines preventive maintenance techniques commonly used on the job. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

WELDING FOR MMMP TRADES...compares common welding processes and develops apprentice skills related to welding, cutting, heating and using oxy-gas. Welding with arc, MIG and TIG is included, along with common cutting and joining techniques. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

ABOUT THE PROGRAM

Manufacturing Engineering Technology program prepares students to work in the manufacturing sector assisting engineering and management in the design and development of new products and in the improvement of production processes.

PROGRAM OUTCOMES

- Characterize how lean culture and tools can help an organization achieve operational excellence.
- Apply proper engineering principles in design.
- Utilize computer - aided applications in design and manufacture of products and processes.
- Demonstrate the principles of material selection and application.
- Apply automation principles for design and control of manufacturing processes.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10664110	Introduction to Mechatronics	2
10620168	Robotics Introduction	2
10804113	College Technical Math 1A OR 10804198 Calculus 1* (4 cr)	3
10620105	DC Fundamentals	2
10196189	Team Building and Problem Solving	3
10606101	Basic Mechanical Drafting	2
10620124	Introduction to Programming Logic	1
		15
Term 2		
10664100	Introduction to Industrial Control Systems	2
10664120	Industrial Internet of Things	2
10620110	AC Fundamentals	2
10620155	Hydraulics and Pneumatics	3
10620171	Robotics Advanced	2
10801195	Written Communications	3
		14
Term 3		
10623118	Lean Manufacturing Overview	3
10196188	Project Management	3
10620138	Programmable Controllers - Allen Bradley	3
10623101	Quality Concepts	3
10801196	Oral/Interpersonal Communication	3
10606160	Manufacturing Processes	3
		18
Term 4		
10623110	Lean Six Sigma - Measure and Analyze	4
10462111	IM Print Reading OR 10623123 Blueprint Reading and Metrology (3 cr) OR 10606106 Geometric Dimensioning and Tolerancing (3 cr)	2
10623170	Manufacturing Cost Analysis	3
10620140	Programmable Controllers - Allen Bradley Advanced	2
10809195	Economics OR 10809196 Introduction to Sociology (3 cr)	3
10809198	Introduction to Psychology	3
		17
		TOTAL 64

*Students who plan to also achieve a Bachelor's degree are encouraged to take this transferable course.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AC FUNDAMENTALS...prepares the student to analyze electrical circuits using AC math, analyze AC waveforms, measure and analyze AC power, analyze capacitors and inductors in DC and AC circuits, analyze AC circuits containing reactance and calculate resonance, apply the elements and properties of basic measuring circuits, and describe transformer characteristics. PREREQUISITE: 10620105 DC Fund or 10660105 DC Fund

BASIC MECHANICAL DRAFTING USING AUTOCAD...provides the learner with the skills to utilize AutoCAD's drawing editor, viewing commands; apply coordinate entry methods, AutoCAD file commands; utilize draw commands, modify commands; create and edit text, prints & plots; apply geometric construction to solve a drawing problem; utilize selection sets, duplicating modify commands, layers & objects properties, blocks; apply principles of orthographic and multi view projection.

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtrc Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

DC FUNDAMENTALS...prepares the student to convert values to scientific and engineering notations; calculate math quantities; describe basic atomic theory; identify basic electrical terms; use established symbols standards; describe DC voltage characteristics and current sources and electrical resistance; measure and analyze electrical quantities in series and parallel circuits; and desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1 or 10804198 Calculus 1 or 10804118 Intern Algebra with Apps

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

HYDRAULICS AND PNEUMATICS...prepares the learner to identify hydraulic and pneumatic component symbols and terms, adjust a pressure relief valve, analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits.; analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. PREREQUISITES: 10462109 Maintenance Intro or 31462309 Industrial Maintenance Intro and 10804113 College Tech Math 1A

INDUSTRIAL INTERNET OF THINGS...introduces learners to theoretical and practical topics of the Industrial Internet of Things (IIoT). The learner investigates the range of sensor and actuator devices available, ways in which they communicate and compute, methods for getting information to and from IIoT-enabled devices, and ways of visualizing and processing data acquired from the IIoT. Upon completion, learners will utilize hardware and software to construct a sensor network within an existing system and utilize industry standard tools to visual the data captured.

INTRODUCTION TO INDUSTRIAL CONTROL SYSTEMS...introduces learners to basic concepts of industrial computer-controlled systems. The learner explores various types of programming using robots and PLCs and participates in lab experiments designed to introduce programming principles, electronic inputs and outputs (analog and digital), communication between system components including Ethernet protocols. Upon completion of the course, learners will be able to explain how the control processes are utilized to automate manufacturing facilities.

INTRODUCTION TO MECHATRONICS...introduces learners to microprocessor controlled electromechanical systems. The learner examines how individual components work, and how they are integrated into simple systems. Upon completion of the course, learners will understand what technicians do in the workplace and how industry utilizes Mechatronics in advanced manufacturing.

INTRODUCTION TO PROGRAMMING LOGIC...introduces the student to concepts in basic digital programming, programming logic, electronic components, and Digital and Analog I/O.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

LEAN MANUFACTURING OVERVIEW...expands the learner's ability to develop skills to prioritize and sequence work, execute work plans, implement controls, and create and analyze performance evaluations. Allows student to explore the execution of quality initiatives and continuous improvement plans in addition to the control and handling of inventories.

LEAN SIX SIGMA - MEASURE AND ANALYZE...provides student with skills and tools to collect and analyze data to solve problems and improve processes within an organization. Various techniques for process mapping are explored including SIPOC, FMEA, VSM, standard work sheets, & spaghetti diagrams. Statistical tools are explored including probability, confidence intervals, measurement systems analysis, hypothesis testing, and TAKT time analysis to create and implement a data collection plan.

MAINTENANCE PRINT READING...prepares the learner to read prints; make isometric sketches; interpret orthographic projection drawings, to include sections, surface finishes, and tolerancing. The course when delivered in the evening is self-paced, open-entry/exit, and designed for individualized student needs.

MANUFACTURING COST ANALYSIS...covers cost estimating and financial analysis techniques employed in typical manufacturing and processing industries. Topics include product material and labor costing, justification of expenditures and capital equipment, make vs buy analysis, and inventory costs. Also provides an understanding of soft costs, budgeting, and understanding cost behavior.

MANUFACTURING PROCESSES AND APPLICATIONS...introduces the learner to machining processes including, milling, turning, and drilling. The learner will also learn how to properly use and read dial and digital micrometers; dial, digital and vernier calipers; as well as height gages and angle measurement devices. In addition, the student will also explore metallurgy, computer-age machining and methods in advanced manufacturing technology.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or reading placement assessment equivalent

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY...prepares the student to understand basic PLC structure and terminology; learn to create and troubleshoot basic PLC programs using the RSLOGIX 500 software and the RSLINX communication software; become familiar with communicating with programming SLC-500 PLCs. This course is highly computer based.

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY ADVANCED...prepares the student to develop applications utilizing subroutine instructions, analog modules; gain a basic understanding of creating and troubleshooting programs using the ControlLogix, RSLOGIX5000 software. This course is highly computer based. PREREQUISITE: 10620138 Prog Cntrlr/AB. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

PROJECT MANAGEMENT...introduces the learner to explore the relationship of existing and emerging processes and technologies to manufacturing strategy and supply chain-related functions. This course addresses three main topics: aligning resources with the strategic plan, configuring and integrating operating processes to support the strategic plan, and implementing change.

QUALITY CONCEPTS...provides an overview of quality systems, methods and analysis. Basic quality philosophies such as Deming's principles, continuous improvement, quality costs, supplier relations and inspection theory will be presented. The components of a basic quality system compatible with ISO 9000 and Six Sigma will be explored. Techniques such as pareto, trend analysis, histograms, cause and effect diagrams and corrective/preventive action techniques will be applied to the data in order to address problems and improve processes.

ROBOTICS ADVANCED...introduces students to advanced robot programming commands to include use of Fanuc vision on the Fanuc Robots. PREREQUISITE: 10620168 Robotics Introduction. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

ROBOTICS INTRODUCTION...introduces the student to robotic axes, movement control, navigating the teach pendant, robotic frames, basic programming commands such as conditional branching, wait and call instructions. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

TEAMBUILDING AND PROBLEM SOLVING...applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, a systematic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, and evaluation.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Writing or writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading & Study Skills or reading placement assessment equivalent

Program Number 10-631-4
Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

This program will prepare the learner to be employed at the technician level or higher to work on the technology that is at the intersection of I.T. and Manufacturing. The program will train students on industrial computer networks, computer operating systems and servers, programmable logic controllers, and other networked manufacturing operations technology. Students will learn how to troubleshoot and integrate these technologies and help bridge a skills gap in manufacturing environments.

PROGRAM OUTCOMES

- Integrate IT systems with manufacturing equipment.
- Utilize network operating systems.
- Maintain PC and device support and security.
- Perform programming and configuration of Programmable Logic Controllers (PLCs)
- Implement computer networks to integrate manufacturing systems.
- Develop integration projects.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10154104	Intro to IT	3
10150114	Networking I	3
10154122	PC Support	3
10801195	Written Communication	3
10804133	Math & Logic	3
		15
Term 2		
10150173	Server Administration 1	3
10150176	Networking 2	3
10154124	Information Security Principles	3
10620138	Programmable Controllers - Allen Bradley	3
10809196	Introduction to Sociology OR 10809122 Introduction to American Government OR 10809166 Introduction to Ethics	3
		15
Term 3		
10620115	Electrical Math Applications	2
10620105	DC Fundamentals	2
10150163	Networking 3	3
10620140	Programmable Controllers - Allen Bradley Advanced	2
10620194	Touch Screen Applications	2
10620198	Industrial Networks	2
10150169	Network Design and Documentation	2
		15
Term 4		
10150164	Mobile Devices	3
10620110	AC Fundamentals	2
10620122	Industrial Wiring	2
10150177	Internet of Things	2
10801196	Oral/Interpersonal Communication	3
10809198	Introduction to Psychology	3
		15
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AC FUNDAMENTALS...prepares the student to analyze electrical circuits using AC math, analyze AC waveforms, measure and analyze AC power, analyze capacitors and inductors in DC and AC circuits, analyze AC circuits containing reactance and calculate resonance, apply the elements and properties of basic measuring circuits, and describe transformer characteristics. PREREQUISITE: 10620105 DC Fundamentals or 10660105 DC Fundamentals

DC FUNDAMENTALS...prepares the student to convert values to scientific and engineering notations; calculate math quantities; describe basic atomic theory; identify basic electrical terms; use established symbols standards; describe DC voltage characteristics and current sources and electrical resistance; measure and analyze electrical quantities in series and parallel circuits; and desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1

ELECTRICAL MATH APPLICATIONS...prepares learners to solve percent and proportion problems, use the laws of exponents, convert values between measurement systems, apply geometric concepts, and apply trigonometric concepts to solve right triangles. Emphasis will be on the application of skills to technical problems.

INDUSTRIAL NETWORKS...prepares the learner to configure, install and troubleshoot industrial communication networks. This course is highly computer based. COREQUISITES: 10620140 Programmable Controls AB Advanced. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

INDUSTRIAL WIRING...prepares the learner to follow safety procedures; maintain a safe and healthy work environment; construct electrical circuits; measure electrical quantities using a VOM and/or DVM; analyze measured values using electrical circuit laws; construct typical industrial control circuits; and analyze typical industrial control circuits.

INFORMATION SECURITY PRINCIPLES...introduces the learner to Information Systems Security. Students will review and analyze the control and security concerns in the information systems environment; the security challenges created from the emergence of new technology and the changing internal and external environments; and the effect of legal, regulatory, and current security technology on policy development. Opportunity to earn TestOut Security Pro Certification. PREREQUISITE: 10154104 Intro to IT

INTERNET OF THINGS...introduces students to IOT (Internet of things) connecting multiple physical objects that feature an IP address for internet connectivity. Learners will gain an understanding of the communication that occurs between these objects and other Internet-enabled devices and systems.

INTRO TO IT...introduces student to IT field to basic concepts and terminology of a computer system hardware and software, Operating Systems (including Mac OS), and Networks; applied skills include: managing computer data files; protecting against computer viruses; creating simple web pages; producing electronic word documents, spreadsheets and presentations; examining techniques of systems analysis and design, programming languages and database systems.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

MATH & LOGIC...will apply mathematical problem solving techniques. Topics will include symbolic logic, sets, algebra, Boolean algebra, and number bases. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equiv and COREQUISITE: 10838105 Intro Rdg & Study Skills or Rdg placement assmnt equiv

MOBILE DEVICES...are quickly becoming indispensable tools in the production environment. This course will introduce the learner to various industry mobile technologies used to promote better decision-making, reporting, and improve manufacturing performance. Some of the devices covered are tablets, smartphones, barcode printers and readers, and radio frequency identification (RFID) readers/writers. **Network Design and Documentation**...is a lecture/hands-on course designed to introduce students to network design and documentation fundamentals. Topics include: needs analysis, hardware needs and analysis, network layout and design, and documenting a network. PREREQUISITE: 10150176 Networking 2

NETWORKING 1...is a lecture/hands-on course designed to introduce students to network fundamentals. Topics covered include: OSI Reference Model; LAN and WAN topologies; cabling systems; access methods; protocols; Internet working devices (e.g. hubs, bridges, routers, switches, etc.); and basic network design.

NETWORKING 2...provides the students with networking terminology, protocols, network standards, LAN's, WAN's, TCP/IP addressing, and routing. PREREQUISITE: 10150114 Networking 1

NETWORKING 3...introduces the student to switching technology, hardware and software firewalls, and virtual private networks (VPN). PREREQUISITE: 10150176 Networking 2

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PC SUPPORT...prepares you to be able to install, manage, repair, and troubleshoot PC hardware and Windows, Linux, and Mac operating systems. You will learn how to set up a new computer, identify system requirements, install or upgrade operating systems, manage external devices, troubleshoot common computer problems, and connect to a small home network. Opportunity to earn TestOut PC Pro Certification.

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY...prepares the student to understand basic PLC structure and terminology; learn to create and troubleshoot basic PLC programs using the RSLOGIX 500 software and the RSLINX communication software; become familiar with communicating with programming SLC-500 PLCs. This course is highly computer based.

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY ADVANCED.. prepares the student to develop applications utilizing subroutine instructions, analog modules; gain a basic understanding of creating and troubleshooting programs using the ControlLogix, RSLOGIX5000 software. This course is highly computer based. PREREQUISITE: 10620138 Prog Cntrls/AB. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

SERVER ADMINISTRATION 1...is a hands-on course designed to introduce the learner to the installation and configuration of Windows Server servers. The student will learn how to install and configure servers, configure server roles and features, configure Hyper-V, deploy and configure core network services, install and administer Active Directory (AD), and create and manage Group Policy. PREREQUISITE: 10154104 Intro to IT

TOUCH SCREEN APPLICATIONS...prepares the student to create, edit, and troubleshoot screens, objects and I/O related to the FactoryTalkME application. Students will create, edit and communicate with Allen-Bradley PLC programs for real-time control utilizing the touchscreen applications. This course is highly computer based. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

Manufacturing Management is a unique associate degree program designed by local industry to meet the needs of the workplace through a combination of supply chain, quality, lean, leadership, and supervisory skills. Graduates of this program are prepared to provide leadership in manufacturing and service industries.

PROGRAM OUTCOMES

- Plan the operations of a business across functional areas.
- Organize resources to achieve the goals of the organization
- Direct individuals and/or processes to meet organizational goals.
- Control business processes.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1		
10103121	Excel - Level 1	1
10103191	Word - Level 1	1
10182131	Supply Chain Management	3
10196189	Teambuilding & Problem Solving	3
10623118	Lean Manufacturing Overview	3
10801195	Written Communication OR 10801136 English Composition 1	3
		14
Term 2		
10804123	Math with Business Applications	3
10196107	Principles of Management	3
10801196	Oral/Interpersonal Communications OR 10801198 Speech 3 (cr)	3
10196134	Legal Issues for Supervisors	3
10809166	Introduction to Ethics OR 10806112 Principles of Sustainability	3
		15
Term 3		
10101155	Accounting for Professionals	3
10105128	Personal Branding	2
10449114	Safety in the Workplace	3
10196188	Project Management	3
10623101	Quality Concepts	3
10623110	Lean Six Sigma - Measure and Analyze	4
		18
Term 4		
10196129	Portfolio Assessment - Manufacturing Management	1
10809198	Introduction to Psychology OR 10809188 Developmental Psychology (3 cr)	3
10623123	Blueprint Reading and Metrology	3
10623193	ISO 9001 Internal Auditor OR 10623195 ISO 9001 Concepts (3 cr)	3
10809195	Economics	3
		13
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. **PREREQUISITE:** 10804123 Math w Business Applications or **CONDITION:** 101101 Paralegal program requirements met

BLUEPRINT READING AND METROLOGY...provides knowledge and skill in the understanding of quality measurement, quality measurement devices and their proper application. Quality measurement topics include precision, accuracy, control of variation, gage R/R, calibration techniques and blueprint/specification reading. The quality measurement devices portion of this course provides hands-on use of common measurement and test equipment.

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. **COREQUISITE:** 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or **CONDITION:** 610062 Agribusiness/Financial Basic program admissions met

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

INTRODUCTION TO ETHICS: THEORY AND APPLICATION...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. **COREQUISITE:** 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. **PREREQUISITE:** Reading placement assessment equivalent or **COREQUISITE:** 10838105 Intro to Reading and Study Skills

ISO 9001 INTERNAL AUDITOR...is designed to introduce participants to the current ISO 9001 standard. The course is structured to provide a detailed review of the standards, how to document procedures, and how to perform audits. Students will practice preparation for and conducting audits in a local business. Successful completion of this course qualifies the student to receive the ISO 9001 Internal Auditor certificate (19-623-8).

LEAN MANUFACTURING OVERVIEW...expands the learner's ability to develop skills to prioritize and sequence work, execute work plans, implement controls, and create and analyze performance evaluations. It allows the student to explore the execution of quality initiatives and continuous improvement plans in addition to the control and handling of inventories.

LEAN SIX SIGMA - MEASURE AND ANALYZE...provides the student with skills and tools to collect and analyze data to solve problems and improve processes within an organization. Various techniques for process mapping are explored including SIPOC, FMEA, VSM, standard work sheets, and spaghetti diagrams. Statistical tools are explored including probability, confidence intervals, measurement systems analysis, hypothesis testing, and TAKT time analysis to create and implement a data collection plan.

LEGAL ISSUES FOR SUPERVISORS...applies the skills and tools necessary for a supervisor to effectively function in today's legal work environment. Learners will demonstrate the application of legal practices in both union and nonunion environments, analysis of the impact of U.S. employment laws, the impact of the global economy, the appeal process, reacting to legal charges, documenting the hiring/firing process, dealing with harassment issues, privacy issues, and summarizing legal issues facing contemporary supervisors.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. **PREREQUISITE:** 10834109 Pre-Algebra or Math placement assessment equivalent and **COREQUISITE:** 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or **CONDITION:** 610061 Agribusiness/Agronomy Basic program admissions requirements met

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. **COREQUISITE:** 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PERSONAL BRANDING...focuses on the importance of developing a strong brand identity for yourself as a professional. As a prospective employee, you are constantly selling yourself from how you talk, walk, dress, your facial expressions, and your body language; people are always forming impressions of you. In this course, you will develop a professional resume, cover letter, practice interview skills, and learn the role of social media in career development.

PORTFOLIO ASSESSMENT-MANUFACTURING MANAGEMENT...prepares the student to identify what they have learned throughout the program, write career goals, re-examine their resume, research and collect project samples of their achievements, and analyze their achievements within the college core abilities. **PREREQUISITE:** 10105128 Personal Branding

PRINCIPLES OF MANAGEMENT...will enable students to develop short and long range plans to effectively accomplish organizational goals. Through the use of terminology, exercises, and case studies, students will be able to give a critical appraisal of real life situations involving organizing, staffing, and motivating others. The student will also learn tools to aid in problem solving, value in diversity, and coping with change.

PROJECT MANAGEMENT...introduces the learner to explore the relationship of existing and emerging processes and technologies to manufacturing strategy and supply chain-related functions. This course addresses three main topics: aligning resources with the strategic plan, configuring and integrating operating processes to support the strategic plan, and implementing change.

QUALITY CONCEPTS...provides an overview of quality systems, methods and analysis. Basic quality philosophies such as Deming's principles, continuous improvement, quality costs, supplier relations and inspection theory will be presented. The components of a basic quality system compatible with ISO 9000 and Six Sigma will be explored. Techniques such as pareto, trend analysis, histograms, cause and effect diagrams and corrective/preventive action techniques will be applied to the data in order to address problems and improve processes.

SAFETY IN THE WORKPLACE...applies the skills and tools necessary to provide a safe and secure work environment. Each learner will demonstrate the application of safety awareness, federal/state/local compliance, incident investigation and documentation, human relations techniques, safety orientation, inspections, and risk analysis, issues of workplace violence, substance abuse, and health hazards, first aid and CPR, fire and electrical safety, emergency preparedness, and liaison with external agencies.

SUPPLY CHAIN MANAGEMENT...has been developed to provide a basic understanding of the planning and control of materials into, through, and out of organizations. In addition, those who want to become certified by APICS need a fundamentals course to learn about the material planning and control system. This course will provide a basis for further study leading to certification.

TEAMBUILDING AND PROBLEM SOLVING...applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, a systematic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, and evaluation.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. **PREREQUISITE:** 10831103 Intro to College Wrtg or Writing placement assessment equivalent and **COREQUISITE:** 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-623-5
Associate Degree in Applied Science
ABOUT THE PROGRAM

Manufacturing Management is a unique associate degree program designed by local industry to meet the needs of the workplace through a combination of supply chain, quality, lean, leadership, and supervisory skills. Graduates of this program are prepared to provide leadership in manufacturing and service industries.

PROGRAM OUTCOMES

- Plan the operations of a business across functional areas.
- Organize resources to achieve the goals of the organization
- Direct individuals and/or processes to meet organizational goals.
- Control business processes.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
 - Complete the online Student Success Questionnaire.
 - Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.
- *Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

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 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10809195	Economics	3
10804123	Math with Business Applications	3
10196189	Teambuilding & Problem Solving	3
10103191	Word - Level 1	1
10182131	Supply Chain Management	3
10103121	Excel - Level 1	1
		14
Term 2 (Spring 2022)		
10809198	Introduction to Psychology	3
10623195	ISO 9001 Concepts	3
10196107	Principles of Management	3
10196188	Project Management	3
		12
Term 3 (Summer 2022)		
10801195OL	Written Communication	3
		3
Term 4 (Fall 2022)		
10806112	Principles of Sustainability	3
10101155	Accounting for Professionals	3
10623118	Lean Manufacturing Overview	3
10105128	Personal Branding	2
		11
Term 5 (Spring 2023)		
10623110	Lean Six Sigma - Measure and Analyze	4
10623123	Blueprint Reading and Metrology	3
10623101	Quality Concepts	3
10196134	Legal Issues for Supervisors	3
		13
Term 6 (Summer 2023)		
10801196	Oral/Interpersonal Communication	3
		3
Term 7 (Fall 2023)		
10449114	Safety in the Workplace	3
10196129	Portfolio Assessment-Manufacturing Management	1
		4
		TOTAL 60

ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQUISITE: 10804123 Math w Business Applications or CONDITION: 101101 Paralegal program requirements met

BLUEPRINT READING AND METROLOGY...provides knowledge and skill in the understanding of quality measurement, quality measurement devices and their proper application. Quality measurement topics include precision, accuracy, control of variation, gage R/R, calibration techniques and blueprint/specification reading. The quality measurement devices portion of this course provides hands-on use of common measurement and test equipment.

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

INTRODUCTION TO ETHICS: THEORY AND APPLICATION...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

ISO 9001 INTERNAL AUDITOR...is designed to introduce participants to the current ISO 9001 standard. The course is structured to provide a detailed review of the standards, how to document procedures, and how to perform audits. Students will practice preparation for and conducting audits in a local business. Successful completion of this course qualifies the student to receive the ISO 9001 Internal Auditor certificate (19-623-8).

LEAN MANUFACTURING OVERVIEW...expands the learner's ability to develop skills to prioritize and sequence work, execute work plans, implement controls, and create and analyze performance evaluations. It allows the student to explore the execution of quality initiatives and continuous improvement plans in addition to the control and handling of inventories.

LEAN SIX SIGMA - MEASURE AND ANALYZE...provides the student with skills and tools to collect and analyze data to solve problems and improve processes within an organization. Various techniques for process mapping are explored including SIPOC, FMEA, VSM, standard work sheets, and spaghetti diagrams. Statistical tools are explored including probability, confidence intervals, measurement systems analysis, hypothesis testing, and TAKT time analysis to create and implement a data collection plan.

LEGAL ISSUES FOR SUPERVISORS...applies the skills and tools necessary for a supervisor to effectively function in today's legal work environment. Learners will demonstrate the application of legal practices in both union and nonunion environments, analysis of the impact of U.S. employment laws, the impact of the global economy, the appeal process, reacting to legal charges, documenting the hiring/firing process, dealing with harassment issues, privacy issues, and summarizing legal issues facing contemporary supervisors.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PERSONAL BRANDING...focuses on the importance of developing a strong brand identity for yourself as a professional. As a prospective employee, you are constantly selling yourself from how you talk, walk, dress, your facial expressions, and your body language; people are always forming impressions of you. In this course, you will develop a professional resume, cover letter, practice interview skills, and learn the role of social media in career development.

PORTFOLIO ASSESSMENT-MANUFACTURING MANAGEMENT...prepares the student to identify what they have learned throughout the program, write career goals, re-examine their resume, research and collect project samples of their achievements, and analyze their achievements within the college core abilities. PREREQUISITE: 10105128 Personal Branding

PRINCIPLES OF MANAGEMENT...will enable students to develop short and long range plans to effectively accomplish organizational goals. Through the use of terminology, exercises, and case studies, students will be able to give a critical appraisal of real life situations involving organizing, staffing, and motivating others. The student will also learn tools to aid in problem solving, value in diversity, and coping with change.

PROJECT MANAGEMENT...introduces the learner to explore the relationship of existing and emerging processes and technologies to manufacturing strategy and supply chain-related functions. This course addresses three main topics: aligning resources with the strategic plan, configuring and integrating operating processes to support the strategic plan, and implementing change.

QUALITY CONCEPTS...provides an overview of quality systems, methods and analysis. Basic quality philosophies such as Deming's principles, continuous improvement, quality costs, supplier relations and inspection theory will be presented. The components of a basic quality system compatible with ISO 9000 and Six Sigma will be explored. Techniques such as pareto, trend analysis, histograms, cause and effect diagrams and corrective/preventive action techniques will be applied to the data in order to address problems and improve processes.

SAFETY IN THE WORKPLACE...applies the skills and tools necessary to provide a safe and secure work environment. Each learner will demonstrate the application of safety awareness, federal/state/local compliance, incident investigation and documentation, human relations techniques, safety orientation, inspections, and risk analysis, issues of workplace violence, substance abuse, and health hazards, first aid and CPR, fire and electrical safety, emergency preparedness, and liaison with external agencies.

SUPPLY CHAIN MANAGEMENT...has been developed to provide a basic understanding of the planning and control of materials into, through, and out of organizations. In addition, those who want to become certified by APICS need a fundamentals course to learn about the material planning and control system. This course will provide a basis for further study leading to certification.

TEAMBUILDING AND PROBLEM SOLVING...applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, a systematic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, and evaluation.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 31-606-1 Technical Diploma • Three Terms

ABOUT THE PROGRAM

Students work on acquiring high-level drafting skills and utilize computer-aided drafting (CAD) software. They learn to construct and revise engineering working drawings to ASME standards.

PROGRAM OUTCOMES

- Assist engineers in the design process.
- Prepare detail and assembly drawings for documentation of mechanical parts and machines using CAD (Computer-Aided Design) software using ASME Y14.5M Standard.
- Function effectively on both self-directed and team-oriented projects.
- Ability to grasp spatial relationships.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Program can also be completed by attending evenings.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10606101	Basic Mechanical Drafting	2
10606103	Intermediate Mechanical Drafting (AutoCAD)	2
10606105	Introduction to Working Drawings (AutoCAD)	3
10606160	Manufacturing Processes & Applications	3
		10
Term 2		
10606106	Geometric Dimensioning and Tolerancing	3
10606140	Parametric Drafting Using Solidworks	3
10606196	Working Drawings Using SolidWorks	3
		9
Term 3		
10606191	Parametric Drafting Using Creo	2
10606193	Working Drawings Using Creo	2
10801196	Oral/Interpersonal Communication	3
		7

TOTAL 26

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

BASIC MECHANICAL DRAFTING USING AUTOCAD...provides the learner with the skills to utilize AutoCAD's drawing editor, viewing commands; apply coordinate entry methods, AutoCAD file commands; utilize draw commands, modify commands; create and edit text, prints & plots; apply geometric construction to solve a drawing problem; utilize selection sets, duplicating modify commands, layers & objects properties, blocks; apply principles of orthographic and multi view projection.

GEOMETRIC DIMENSIONING AND TOLERANCING...provides the learner with the skills to apply and interpret geometric tolerancing (ASME 14.5M-2009) to part drawings, including form, profile, orientation, runout, and positional tolerances.

INTERMEDIATE MECHANICAL DRAFTING (AUTOCAD)...provides the learner with the skills to create two dimensional section views, create two-dimensional auxiliary views, create prints/plots from paper space, modify and set dimension attributes, apply dimensioning symbols, and apply ASME Y14.5M standards for dimensioning and tolerancing. COREQUISITE: 10606101 Basic Mechanical Drafting

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO WORKING DRAWINGS (AUTOCAD)...provides the learner with the skill to create solid primitives, create a solid model from a two-dimensional closed profile, use Boolean operations, use modify options to existing solid models, create a detail drawing from a solid model and create assembly drawings from solid models. COREQUISITE: 10606103 Intermediate Mechanical Drafting (AutoCAD)

MANUFACTURING PROCESSES AND APPLICATIONS...Introduces the learner to machining processes including, milling, turning, and drilling. The learner will also learn how to properly use and read dial and digital micrometers; dial, digital and vernier calipers; as well as height gages and angle measurement devices. In addition, the student will also explore metallurgy, computer-age machining and methods in advanced manufacturing technology.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PARAMETRIC DRAFTING USING CREO...provides the learner with the skills to use Creo user interface, sketching tools; create the following features: extrusions, revolves, holes, fillets and chamfers, ribs, sweeps, shells, blends; setup datum references, edit sketches and features and create detail drawings from Creo models. PREREQUISITES: 10606140 Drafting Parametrics-SolidWorks or 10606196 Working Drawings Using SolidWorks

PARAMETRIC DRAFTING USING SOLIDWORKS...provides the learner with the skills to use SolidWorks user interface, sketching tools; create the following features: extrusions, revolves, cuts, holes, fillets and chamfers, ribs, sweeps, shells, lofts; setup reference geometry, edit sketches and features and create detail drawings from SolidWorks models. COREQUISITE: 10606105 Introduction to Working Drawings (AutoCAD)

WORKING DRAWINGS USING CREO...provides the learner with the skills to create different types of assemblies using Creo, insert standard components from vendor websites, apply classes of fits to mating parts, determine interference and clearance between parts, specify annotation notes to drawings, insert a Bill-of-Material into an assembly drawing, and apply reverse engineering. COREQUISITE: 10606191 or 10606195 Parametric Drafting Using Creo

WORKING DRAWINGS USING SOLIDWORKS...will provide the learner with the skills to create different types of assemblies using SolidWorks, insert standard components from toolbox and vendor websites, apply classes of fits to mating parts, determine interference and clearance between parts, specify annotation notes to drawings, insert a Bill-of-Material into an assembly drawing, and apply reverse engineering. COREQUISITE: 10606140 Drafting Parametric Using Solidworks

ABOUT THE PROGRAM

Mechanical design and engineering technicians help develop and test products, calculate strength and cost of materials, make drawings to scale, and work on prototypes and product improvement. Students work on acquiring high-level drafting skills and utilize a variety of Computer-Aided Drafting (CAD) software. They learn to construct and revise engineering working drawings and tooling drawings; research and apply information for parts and materials; and specify appropriate tolerances, materials, and other engineering data. Mechanical designers work on teams that focus on continuous improvement, Six Sigma initiatives, and lean manufacturing efforts.

PROGRAM OUTCOMES

- Prepare detail and assembly drawings for documentation of mechanical components and products.
- Create CAD geometry, parts and assemblies.
- Design mechanical components and products.
- Analyze mechanical engineering problems.
- Select purchased parts.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This program can also be completed by attending evenings.

CONTACT

LTC Admissions Advisor
920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10606101	Basic Mechanical Drafting	2
10606103	Intermediate Mechanical Drafting (AutoCAD)	2
10606105	Introduction to Working Drawings (AutoCAD)	3
10606160	Manufacturing Processes & Applications	3
10804113	College Technical Math 1A OR 10804198	3
	Calculus 1* (4 cr)	
10801196	Oral/Interpersonal Communication	3
		16
Term 2		
10606106	Geometric Dimensioning and Tolerancing	3
10606134	Statics	4
10606140	Drafting Parametric Using Solidworks	3
10606196	Working Drawings Using SolidWorks	3
10806154	General Physics 1	4
		17
Term 3		
10606117	Machine Elements	3
10606118	Kinematics	3
10606130	Strength of Materials	4
10606191	Parametric Drafting Using Creo	2
10606193	Working Drawings Using Creo	2
10620169	Robotic Maintenance	1
10444104	HSM for Solidworks	1
		16
Term 4		
10606112	Tool Design Basic	3
10606125	Design Problems	3
10606189	Intro to Current Manufacturing Trends	2
10801195	Written Communication	3
10809198	Introduction to Psychology	3
10809196	Introduction to Sociology OR 10809195	3
	Economics	
		17
		TOTAL 66

*Students who plan to also achieve a Bachelor's degree are encouraged to take this transferable course.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

BASIC MECHANICAL DRAFTING USING AUTOCAD...provides the learner with the skills to utilize AutoCAD's drawing editor, viewing commands; apply coordinate entry methods, AutoCAD file commands; utilize draw commands, modify commands; create and edit text, prints & plots; apply geometric construction to solve a drawing problem; utilize selection sets, duplicating modify commands, layers & objects properties, blocks; apply principles of orthographic and multi view projection.

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtn Tradcs Math or 31420320 Machine Tool Math or math placement assessment equivalent

DESIGN PROBLEMS...prepares the learner to use knowledge of machine elements to design a mechanical system based on specifications given in class; prepare a project time line; create all documentation for manufacturing, including detail and assembly drawings; perform all design calculations. PREREQUISITE: 10606117 Machine Elements; 10606118 Kinematics; 10606196 Working Drawings Using SolidWorks or 10606160 Manufacturing Processes & Applications

GENERAL PHYSICS 1...presents the applications and theory of basic physics principles. This course emphasizes problem-solving, laboratory investigation, and applications. Topics include unit conversions and analysis, vectors, translational and rotational kinematics, translational and rotational dynamics, heat and temperature, and harmonic motion and waves. PREREQUISITE: 10804113 College Tech Math 1A, 10804115 College Tech Math 1, or 10804118 Intermediate Algebra, or Math placement assessment equivalent.

GEOMETRIC DIMENSIONING AND TOLERANCING...provides the learner with the skills to apply and interpret geometric tolerancing (ASME 14.5M-2009) to part drawings, including form, profile, orientation, runout, and positional tolerances.

HSM FOR SOLIDWORKS...is a CAD software that is often used for mechanical design. HSM for Solidworks is an add-on to Solidworks for CAM processes, creating G&M code programs from the solid model. In this course you will explore the Solidworks interface and create face milling, end milling, and hole-producing tool paths for CNC machining centers. You will also be creating turning, boring, threading, and hole-producing tool paths for CNC turning centers.

INTERMEDIATE MECHANICAL DRAFTING (AUTOCAD)...provides the learner with the skills to create two dimensional section views, create two-dimensional auxiliary views, create prints/plots from paper space, modify and set dimension attributes, apply dimensioning symbols, and apply ASME Y14.5M standards for dimensioning and tolerancing. COREQUISITE: 10606101 Basic Mechanical Drafting

INTRO TO CURRENT MANUFACTURING TRENDS...introduces the learner to the theories and concepts of Statistical Process Control, Six Sigma and Lean Manufacturing. PREREQUISITES: 10804115 College Tech Math or 10804113 College Tech Math 1A

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO WORKING DRAWINGS (AUTOCAD)...provides the learner with the skill to create solid primitives, create a solid model from a two-dimensional closed profile, use Boolean operations, use modify options to existing solid models, create a detail drawing from a solid model and create assembly drawings from solid models. COREQUISITE: 10606103 Intermediate Mechanical Drafting (AutoCAD)

KINEMATICS...provides the student with the skills necessary to determine the motions required to accomplish the objective of a machine, calculate velocities and design gears. PREREQUISITE: 10804115 College Tech Math 1 or 10804113 College Technical Math 1A or 10804198 Calculus 1 or 10804118 Interm Algebra with Apps

MACHINE ELEMENTS...introduces the student to the various components found on machinery, including shafts, bearings, power transmissions, gears, and the selection of standard machine elements from manufacturers' catalogs, and the use of spreadsheet solutions. COREQUISITE: 10606130 Strength of Materials

MANUFACTURING PROCESSES AND APPLICATIONS...Introduces the learner to machining processes including, milling, turning, and drilling. The learner will also learn how to properly use and read dial and digital micrometers; dial, digital and vernier calipers; as well as height gages and angle measurement devices. In addition, the student will also explore metallurgy, computer-age machining and methods in advanced manufacturing technology.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PARAMETRIC DRAFTING USING CREO...provides the learner with the skills to use Creo user interface, sketching tools; create the following features: extrusions, revolves, holes, fillets and chamfers, ribs, sweeps, shells, blends; setup datum references, edit sketches and features and create detail drawings from Creo models. PREREQUISITES: 10606140 Drafting Parametrics-SolidWorks or 10606196 Working Drawings Using SolidWorks

PARAMETRIC DRAFTING USING SOLIDWORKS...provides the learner with the skills to use SolidWorks user interface, sketching tools; create the following features: extrusions, revolves, cuts, holes, fillets and chamfers, ribs, sweeps, shells, lofts; setup reference geometry, edit sketches and features and create detail drawings from SolidWorks models. COREQUISITE: 10606105 Introduction to Working Drawings (AutoCAD)

ROBOTIC MECHANICAL MAINTENANCE...introduces the students to the robot teach pendant and robot jogging. Students will be taught to replace servo motors, recalibrate the robot and back up robot software and programs.

STATICS...covers the study of forces on and in structures that are at rest. Forces, vectors, resultants, moments, couples, equilibrium, free-body diagrams, friction, centroids, and centers of gravity, and moments of inertia are covered. COREQUISITE: 10804115 College Technical Math 1 or 10804113 College Technical Math 1A or 10804198 Calculus 1 or 10804118 Interm Algebra with Apps

STRENGTH OF MATERIALS...provides the learner with the skills to identify and calculate centers of gravity, moments of inertia, and stresses induced in force-bearing elements for the purpose of sizing the material in that element, specifically studying shear, axial, bending, torsional, and combined stresses. PREREQ: 10606134 Statics

TOOL DESIGN BASIC...provides the basic principles needed to design the tools commonly used in manufacturing. Principal topics include drill jigs and milling fixtures. The classroom work is done on CAD, and students are encouraged to research and select standard components from tooling company catalogs. PREREQUISITE: 10606196 Working Drawings Using SolidWorks or 10606160 Manufacturing Processes & Applications

WORKING DRAWINGS USING CREO...provides the learner with the skills to create different types of assemblies using Creo, insert standard components from vendor websites, apply classes of fits to mating parts, determine interference and clearance between parts, specify annotation notes to drawings, insert a Bill-of-Material into an assembly drawing, and apply reverse engineering. COREQUISITE: 10606191 or 10606195 Parametric Drafting Using Creo

WORKING DRAWINGS USING SOLIDWORKS...will provide the learner with the skills to create different types of assemblies using SolidWorks, insert standard components from toolbox and vendor websites, apply classes of fits to mating parts, determine interference and clearance between parts, specify annotation notes to drawings, insert a Bill-of-Material into an assembly drawing, and apply reverse engineering. COREQUISITE: 10606140 Drafting Parametric Using Solidworks

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 50-620-1
5-Year Contract

Work Hours (including related instruction): 10,000
Related Instruction: 864 hours • Night School: 8 hours

ABOUT APPRENTICESHIP

Apprenticeships are employer-sponsored training programs. You must have a contract before being invited to school. A special application process is used for these programs. Please contact the Apprenticeship Office for the proper forms. Apprenticeship means you earn while you learn. If you want a career in a skilled trade, apprenticeship is the best way to get there. You'll combine on-the-job training with on-campus learning—you'll have the best of both worlds when it comes to learning the skills you need to get ahead. And even better, you'll earn a paycheck while you learn those skills.

ABOUT THE CAREER

This occupation requires combined knowledge of electrical, electronic and mechanical systems used in industrial plants. Workers frequently support automation and robotic technologies. Work processes include installing, repairing, and maintaining equipment/devices. Troubleshooting systems involved in manufacturing and process control are critical requirements for workers in these occupations. Workers typically operate and debug industrial computer and communication systems including PLC's, PC's, and HMI technologies. Workers machine metal and other materials; fabricate parts and weld/join components. Documenting work performed, maintaining accurate records, and working in a collaborative environment are critical interpersonal skills. Employees in some, but not all plants, support facilities, utilities and grounds.

INDUSTRIAL APPRENTICE APPLICATION REQUIREMENTS

- Determined by employer
- Wisconsin Apprentice Contract

PROGRAM OUTCOMES

- Perform work safely.
- Install mechanical equipment.
- Install electrical equipment.
- Maintain mechanical equipment.
- Troubleshoot mechatronic systems.
- Operate machine shop tools and machines.
- Weld and fabricate parts.
- Maintain automation systems.
- Modify devices and systems.
- Maintain documents and records.
- Local options and work processes.

APPROXIMATE COSTS

Contact the LTC Apprenticeship Office or visit www.gotoltc.edu/apprenticeship for detailed information.

SPECIAL NOTE

You must have a sponsoring employer and contract before attending school.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

Catalog No.	Class Title	Credit(s)
Term 1		
50620701	Trades Math Review for Mechatronics	1
50620703	DC Electricity for Mechatronics	1
50620704	AC Electricity for Mechatronics	1
50620706	Electrical Codes for Mechatronics	1
		4
Term 2		
50620707	Welding Basics for Mechatronics	1
50620702	Mechatronics Principles	2
50620710	Power Transmission Systems for Mechatronics	1
		4
Term 3		
50620708	Fluid Power Systems for Mechatronics	2
50620705	Motors & Motor Control for Mechatronics	2
		4
Term 4		
50620711	Machining Concepts for Mechatronics	2
50620712	Introduction to PLC's	2
		4
Term 5		
50620714	HMI Technologies & PLC Applications for Mechatronics	2
50620715	Introduction to Robotic Systems for Mechatronics	2
		4
Term 6		
50620716	Introduction to Robotic Integration	3
50620709	Servos and Drives for Mechatronics	1
		4
		TOTAL 24

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with the Apprenticeship Office for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AC ELECTRICITY FOR MECHATRONICS...is designed to introduce the mechatronic technician apprentice to the basic concepts of alternating current. Emphasis is placed on circuit analysis and the problem-solving skills necessary for the maintenance of mechatronic systems and manufacturing equipment. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

DC ELECTRICITY FOR MECHATRONICS...introduces the fundamental concepts and computations related to DC electricity. Emphasis is placed on circuit analysis and the problem-solving skills necessary for the maintenance of mechatronic systems and manufacturing equipment. Competencies related to metering and safe use of measuring devices are included. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

ELECTRICAL CODES FOR MECHATRONICS...examines the National Electric Code and applies information to work practices involving mechatronic systems. Terminology needed to communicate and coordinate electrical work with other trades will be explored. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

FLUID POWER SYSTEMS FOR MECHATRONICS...include inspecting, testing, servicing, and troubleshooting hydraulic, pneumatic, compressed air, and vacuum systems. Apprentices will review safety procedures for various common maintenance tasks. CONDITION: 506201 Mechatronics Technician Apprentice program reqs met

HMI TECHNOLOGIES AND PLC APPS FOR MECHATRONICS...examines human machine interface devices, software and technologies for mechatronic systems. Apprentices will work in a lab/shop/training center setting to create touchscreens, set-up networks, and configure systems. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

INTRO TO PROGRAMMABLE LOGIC CONTROLLERS...is designed to teach the fundamentals of programmable logic controller and its programming software. The course will introduce terminology, concepts, schematic reading and basic programming. Technologies and PLC use in manufacturing and mechatronic systems will be emphasized. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

INTRO TO ROBOTIC SYSTEMS FOR MECHATRONICS...introduces the apprentice to the robot teach pendant and methods of robot jogging. Learners will be taught to replace servo motors, re-master the robot, and back up robot software and programs. Maintenance, servicing and safety will be emphasized. Cable management systems will be examined. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

INTRODUCTION TO ROBOTIC INTEGRATION...explores offsets, vision systems and system integration using robotic simulation and capstone project. The project will tie everything learned during their apprenticeship together – safety, machine integration, vision systems, CNC, machine applications for robotics, troubleshooting, and work documentation. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

MACHINING CONCEPTS FOR MECHATRONICS...introduces cutting, drilling, lathes, and milling operations to apprentices in mechatronics. Course topics also include work holding devices, measuring tools and measurement, safety, machine guards, tooling, print reading, and speeds & feeds. Math skills will be applied to machining related work practices. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

MECHATRONIC PRINCIPLES...will examine both introductory mechanical & electrical concepts as a foundation for future coursework and on-the-job learning. Troubleshooting principles associated with mechatronics will also be introduced. Apprentices will explore safety, rigging, measurement, mechanical principles, electrical principles, mechanisms, metallurgy, and troubleshooting. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

MOTOR AND MOTOR CONTROL FOR MECHATRONICS...examines the fundamentals of electric motors and motor control. Apprentices will learn to recognize and draw basic symbols, use the language of motor control, and apply these in industry formats. Apprentices will also learn to draw and read ladder and wiring diagrams, and be introduced to the logic used in motor control. Learners will apply this logic to correctly interpret, install, service, and wire control circuits. Wiring of panels, machines, and systems will also be examined. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

POWER TRANSMISSION SYSTEMS FOR MECHATRONICS...includes examining mechanical power transmission systems and components. Belts, chain drives, gears and gear drives, couplings, and clutches and brakes will be examined. Apprentices will develop skills inspecting, installing, and maintaining power transmission systems and troubleshooting failures. Apprentices will also learn about safety, documenting work performed, communicating the status of work, and working collaboratively. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

SERVOS AND DRIVES FOR MECHATRONICS...introduces concepts, terminology, and safety associated with drives and servos used in industry and manufacturing. Course is designed to give the apprentice the knowledge required to program, service and maintain variable frequency drives and related equipment. Course learning outcomes include setting up and programming drives in a lab, shop or training center setting. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

TRADE MATH REVIEW FOR MECHATRONICS...includes building skills working with fractions, decimals, formulas and ratios used by the trade. Measurement, tolerances and interpreting trade related information will help apply math concepts to industrial and manufacturing work processes. Basic algebra, geometry and trigonometry will be applied to job duties and tasks. Converting between US and metric units is also included. Provides a foundation for mechanical and electrical problem-solving involving math. CONDITION: 506201 Mechatronics Technician Apprentice program reqs met

WELDING BASICS FOR MECHATRONICS...compares common welding processes and develops apprentice skills related to welding, cutting, heating and using oxy-gas. Welding with arc and MIG will help develop competency working with metal. Additional course learning outcomes may include common cutting and joining techniques associated with applicable trade work processes. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

Program Number 31-509-1
Technical Diploma • Two Terms (30 weeks)

ABOUT THE PROGRAM

The Medical Assistant program prepares individuals to assist physicians in their offices or other medical settings. Before you see your physician, during an office visit, it is very likely that you interact with a Medical Assistant first. Medical Assistants serve an important role on the healthcare team by providing a wide variety of clinical, administrative, and laboratory skills. The Medical Assistant is responsible for medical and surgical asepsis, taking vital signs, assisting the physician with examinations and surgery, administering EKGs and administering medications. The business/administrative duties include patient reception, appointment making, record keeping, filing, bookkeeping, insurance handling, typing medical correspondence and transcription and electronic medical record applications. Laboratory functions include specimen collection, performance of basic laboratory tests and microscopic work. If you want a career that places you at the heart of healthcare, medical assisting may be just what you are looking for. This is a blended program (online and face-to-face components).

PROGRAM OUTCOMES

- Perform medical office administrative functions.
- Provide patient care in accordance with regulations, policies, laws, and patient rights.
- Perform medical laboratory procedures.
- Demonstrate professionalism in a health care setting.
- Demonstrate safety and emergency practices in a health care setting.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

Medical Assistant graduates may bridge into the evening Licensed Practical Nursing program (LPN) by becoming a Certified Medical Assistant, having 3,000 hours worked in the field, and meeting all pre-reqs for the PN program.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Read and acknowledge understanding of the Medical Assistant Program Handbook.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire, review and submit signed program handbook signature page.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- The Medical Assistant program is accredited by the Accrediting Bureau of Health Education Schools (ABHES).
- CPR and First Aid certification must be current throughout the entire Practicum.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10501101	Medical Terminology	3
10501104	Culture of Healthcare	2
10501107	Digital Literacy for Healthcare	2
31509301	Medical Assistant Administrative Procedures	2
31509302	Human Body in Health & Disease	3
31509303	Medical Assistant Laboratory Procedures 1	2
31509304	Medical Assistant Clinical Procedures 1	4
		18
Term 2		
10501102	Health Insurance and Reimbursement OR 31509307 Medical Office Insurance & Finance (2 cr)	3
31509305	Medical Assistant Laboratory Procedures 2	2
31509306	Medical Assistant Clinical Procedures 2	3
31501308	Pharmacology for Allied Health	2
31509309	Medical Law, Ethics & Professionalism	2
31509310	Medical Assistant Practicum	3
		15
		TOTAL 33

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

CULTURE OF HEALTHCARE...is an introduction to the culture of healthcare for students interested in working in various healthcare settings. Learners examine professionalism, interpersonal and written communication skills, problem-solving skills, patient privacy, and confidentiality issues as they relate to healthcare.

DIGITAL LITERACY FOR HEALTHCARE...focuses on the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined.

HUMAN BODY IN HEALTH & DISEASE...students learn to recognize human body structure and function in health and disease states. Students explore the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis, and prevention of diseases commonly diagnosed and treated in the medical office setting. COREQUISITE: 10501101 Medical Terminology and Reading placement assessment equivalent

MEDICAL ASSISTANT ADMINISTRATIVE PROCEDURES...introduces medical assistant students to office management, business administration, and the electronic medical record (EMR) in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical office staff, and keep an inventory of supplies. CONDITION: Reading placement assessment and 315091 Medical Assistant program requirements met and COREQUISITE: 10501107 Digital Literacy for Healthcare

MEDICAL ASSISTANT CLINICAL PROCEDURES 1...introduces medical assistant students to the clinical procedures performed in the medical office setting. Students perform basic examining room skills including screening, vital signs, patient history, minor surgery and patient preparation for routine and specialty exams in the ambulatory care setting. Learner explores communication principles and psychology theories related to patient care. COREQUISITE: 31509302 Human Body in Hlth & Dis and 31509303 Med Assist Lab Proc 1 & CONDITION: Reading placement assessment and 315091 Med Assist program requirements met

MEDICAL ASSISTANT CLINICAL PROCEDURES 2...prepares medical assistant students to perform patient care skills in the medical office setting. Students perform clinical procedures including administering medications, performing an electrocardiogram, assisting with respiratory testing, coaching patients, and assisting with emergency situations in an ambulatory care setting. Students learn preventive care and principles of nutrition. PREREQUISITES: 31509304 Medical Assistant Clinical Procedures 1 and 31509303 Medical Assistant Lab Procedures 1 and COREQUISITE: 31509305 Medical Assistant Laboratory Procedures 2

MEDICAL ASSISTANT LAB PROCEDURES 1...introduces medical assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform Clinical Laboratory Improvement Amendment (CLIA) waived routine laboratory procedures commonly performed in the ambulatory care setting. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing, microbiology and urinalysis testing. COREQUISITE: 31509304 Medical Assistant Clinical Procedures 1 and CONDITION: Reading placement assessment and 315091 Medical Assistant program requirements met

MEDICAL ASSISTANT LAB PROCEDURES 2...prepares students to perform phlebotomy and Clinical Laboratory Improvement Amendment (CLIA) waived hematology, chemistry, immunology and laboratory procedures commonly performed by medical assistants in the ambulatory care setting. PREREQUISITE: 31509303 Medical Assistant Lab Procedures 1 and COREQUISITE: 31509306 Medical Assistant Clinical Procedures 2

MEDICAL ASSISTANT PRACTICUM...requires medical assistant students to integrate and apply knowledge and skills from all previous medical assistant courses in acute ambulatory health care settings. Learners perform medical assistant administrative, clinical, and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. This is a supervised, unpaid, clinical experience. This 216-hour clinical experience begins 3 days/week starting mid-semester and may extend beyond the date of graduation. Student's CPR and First Aid certification must be current throughout the entire Practicum. CONDITION: 315091 Medical Assistant and Health Form completed and PREREQUISITES: 31509301 MA-Adm Prc, 10501104 Cult of Hlthcare, 31509302 Human Body Hlth Diseas and COREQUISITES: 31509306 MA Cl Prc 2, 31509305 MA Lab Prc 2, 31501308 Phrm-Allied Hlth, 10501102 Hlth Ins/Reimb, 31509309 Med Law/Ethcs/Prof

MEDICAL LAW, ETHICS & PROFESSIONALISM...prepares students to display professionalism and perform within ethical and legal boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of ambulatory healthcare, perform quality improvement procedures, examine legal and bioethical issues, and demonstrate awareness of diversity. CONDITION: 315091 Medical Assistant or 315164 Ophthalmic Medical Assistant program requirements met

MEDICAL OFFICE INSURANCE & FINANCE...introduces learners to health insurance and finance in the medical office. Students learn to perform bookkeeping procedures, apply managed care guidelines, and complete insurance claim forms. Learners use medical coding and managed care terminology to perform insurance-related duties. COREQUISITES: 10501101 Medical Terminology, or 10806105 Medical Terminology, 31509302 Human Body in Health & Disease and 10501107 Computing for Healthcare and CONDITION: 315091 Medical Assistant

MEDICAL TERMINOLOGY...focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

PHARMACOLOGY FOR ALLIED HEALTH...introduces students to medication classification, basic pharmacology principles, and supplements. Students apply basic pharmacodynamics to identify common medications and calculate dosages in preparation for medication administration. COREQUISITES: 31509302 Human Body in Hlth & Disease and 31509306 Medical Assist Clinical Proc 2 or 31509302 Human Body in Health and Disease and CONDITION: 315164 Ophthalmic Medical Assistant program requirements met

ABOUT THE PROGRAM

The Medical Coding Specialist program prepares individuals for employment as entry-level coding specialists in health care facilities such as hospitals, clinics, physician practice groups, surgery centers, long-term care facilities, and home healthcare agencies. Coding specialists are also employed in consulting firms, coding and billing services, insurance companies, governmental agencies, and computer software companies. The medical coding specialist reviews medical documentation provided by physicians and other health care providers and translates this into numerical codes. The coding specialist assigns and sequences diagnostic and procedural codes using universally recognized coding systems. Several uses of coded data are for payment of health care claims, statistics, and medical research.

PROGRAM OUTCOMES

- Assign diagnostic and procedure codes using the ICD coding system.
- Assign procedure codes using the HCPCS/CPT coding system.
- Adhere to security/privacy/confidentiality policies.
- Use computers to process information.
- Support data collection and reimbursement system.
- Communicate in a professional manner.
- Model professional behaviors, ethics, and appearance.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Read program handbook and submit the signed signature page.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
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Catalog No.	Class Title	Credit(s)
Term 1		
10501101	Medical Terminology	3
10501107	Digital Literacy for Healthcare	2
10530162	Foundations of HIM	3
10530182	Human Diseases for Health Professions	3
10806189	Basic Anatomy OR 10806177 General Anatomy & Physiology (4 cr)	3
10103101	Access - Level 1	1
		15
Term 2		
10530184	CPT Coding	3
10530197	ICD Diagnosis Coding	3
10530199	ICD Procedure Coding	2
10530165	Intermediate Coding	3
10530191	HIM/Coding Practicum 1	2
10530159	Healthcare Revenue Management	3
		16

TOTAL 31

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ACCESS - LEVEL 1...introduces students to the process of creating a database, building and populating a table, establishing table relationships, and creating queries, forms, and reports.

BASIC ANATOMY...examines concepts of anatomy and physiology as they relate to health careers. Learners correlate anatomical and physiological terminology to all body systems. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

CPT CODING...prepares learners to assign CPT codes, supported by medical documentation, with entry-level proficiency. Learners apply CPT instructional notations, conventions, rules, and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation. COREQ: 10530182 Human Dis for Hlth Prof and 10530159 Healthcare Revenue Mgmt and PREREQUISITE: 10501101 Med Term and 10530162 Found of HIM and CONDITION: 315302 Medical Coding Spec or 105304 Health Information Mgmt program requirements met

DIGITAL LITERACY FOR HEALTHCARE...focuses on the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined.

FOUNDATIONS OF HIM...introduces learners to the healthcare delivery system, and the external forces that influence healthcare delivery. Sets an understanding for the expectations and standards related to professional ethics, confidentiality and security of health information. Differentiates the use and structure of healthcare data elements, data standards, and the relationships between them. Prepares learners to collect and maintain health data to ensure a complete and accurate health record. COREQUISITE: 10501107 Digital Literacy for Healthcare

HEALTHCARE REVENUE MANAGEMENT...prepares learners to compare and contrast health care payers, illustrate the reimbursement cycle, and to comply with regulations related to fraud and abuse. Learners assign payment classifications with entry level proficiency using computerized encoding and grouping software. PREREQUISITE: 10530162 Foundations of HIM and COREQUISITES: 10530184 CPT Coding, 10530197 ICD Diagnosis Coding, and 10530199 ICD Procedure Coding

HIM/CODING PRACTICUM 1...applies previously acquired skills and knowledge by means of clinical experiences in the technical procedures of health record systems and discussion of clinical situations. PREREQ: 10530162 Found of HIM, COREQS: 10530165 Intermediate Coding, 10530197 ICD Diagnosis Coding, 10530199 ICD Procedure Coding, 10530184 CPT Coding, CONDITION: 315302 Medical Coding Spec or 105304 Health Information Management program requirements met

HUMAN DISEASE FOR HEALTH PROFESSIONS...prepares learners to interpret clinical documentation that they will encounter in a variety of healthcare settings. Emphasis is placed on understanding the common disorders and diseases of each body system to include the etiology (cause), signs and symptoms, diagnostic tests and results, and medical treatments and surgical procedures. COREQUISITES: 10501101 Med Term

ICD DIAGNOSIS CODING...prepares students to assign ICD diagnosis codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation. PREREQUISITE: 10501101 Medical Terminology and 10530162 Found of HIM and COREQUISITES: 10530182 Human Diseases for the Health Professions and 10530159 Healthcare Revenue Management or 10501102 Health Ins and Reimbursement

ICD PROCEDURE CODING...prepares students to assign ICD procedure codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation. PREREQUISITE: 10501101 Medical Terminology and 10530162 Found of HIM and COREQUISITES: 10530182 Human Diseases for the Health Professions and 10530159 Healthcare Revenue Management or 10501102 Health Ins and Reimbursement

INTERMEDIATE CODING...prepares students to assign ICD and CPT/HPCS codes supported by medical documentation and official coding guidance to support appropriate reimbursement. Students will participate in CDI activities, including preparation of appropriate physician queries in accordance with compliance guidelines. PREREQUISITE: 10501101 Medical Terminology and 10530162 Found of HIM and COREQUISITES: 10530197 ICD Diagnosis Coding, 10530199 ICD Procedure Coding and 10530184 CPT Coding, 10530159 Healthcare Revenue Mgmt or 10501102 Health Ins and Reimbursement

MEDICAL TERMINOLOGY...focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

Program Number 10-624-1
Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

The Nuclear Technology program offers the student a unique opportunity to obtain the specialized training in demand by the nuclear power industry and organizations licensed to utilize radioactive materials. The increasing use of radiation and radioactive materials in today's world has created a demand for radiation protection technicians. This program can result in starting salaries higher than many four-year degree programs. It is also an excellent springboard for a four-year degree in the high-demand field of health physics and radiation safety.

PROGRAM OUTCOMES

- Work safely within industrial and radiological hazard areas.
- Understand and communicate nuclear technology-related concepts effectively in both oral and written formats.
- Diagnose equipment requiring electrical or mechanical repair and carry out preventive maintenance procedures.
- Perform radiological surveys for radiation and radioactive contamination.
- Follow procedures for operating and maintaining systems and equipment at nuclear facilities.
- Participate in applying nuclear technologies to a variety of industrial, medical, and research processes.
- Apply knowledge in a variety of related occupational jobs such as reactor plant operations, maintenance, quality assurance, etc.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- Lectures are taught at LTC's main campus and are accessible for distant students through synchronous videoconferencing via their computer and a 5Mb bandwidth. Labs are available at LTC's main campus and BTC's Milton campus.
- This program meets all the instructional standards and criteria of the Nuclear Uniform Curriculum Program (NUCP).
- Gaining employment in the nuclear, radiation safety, and health physics likely includes a very comprehensive background check of one's lifespan. This includes not only criminal activities, but likely also credit history, civil actions, and a psychological profile.
- Online Option: Available to working adults in the Nuclear/Radiation Safety/Health Physics industry. To register for online courses, search for the catalog numbers and the online option. Online courses have prerequisites. Online students work with their industry supervisor to identify suitable activities at their worksite to enhance their learning.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10624105	Health Physics Calculations and Statistics	3
10624110	Radioactivity and Regulations	3
10804113	College Technical Mathematics 1A OR 10804198 Calculus 1** (4 cr)	3
10103121	Excel – Level 1	1
10801195	Written Communication	3
		13
Term 2		
10624114	Nuclear Systems and Sources	3
10624122	Radiation Physics	3
10624123	Radiation Physics-Lab	2
10624103	Nuclear DC and AC Applications	3
10801196	Oral/Interpersonal Communications	3
		14
Summer		
10624118	Radiation Biology	3
10809122	Introduction to American Government	3
		6
Term 3		
10624138	Radioactive Materials Management	2
10624149	Reactor Plant Components	4
10482135	Energy Power and Force OR 10806154 General Physics 1 (4 cr)	3
10624145	Applied Health Physics	3
10624146	Applied Health Physics Lab OR 10624156	2
10809198	Radiation Safety Internship Introduction to Psychology	3
		17
Term 4		
10624140	Radiochemistry	3
10624148	Reactor Theory and Operation	3
10624133	Radiological Emergencies	3
10624134	Radiation Shielding	2
10624135	Radiation Shielding Lab	1
		12
		TOTAL 62

**Students who plan to also achieve a Bachelor's degree are encouraged to take this transferable course.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

APPLIED HEALTH PHYSICS... prepares learner to wear dosimeter, monitor personal exposure, calculate/estimate radioactive airborne activity concentration, issue respirators, determine contamination levels, don and remove protective clothing, reduce the spread of contamination, conduct an ALARA audit, reduce the total radiation exposure, maintain records and estimate skin dose, etc. PREREQUISITE: 10624122 Radiation Physics

APPLIED HEALTH PHYSICS-LAB... expands learner's ability to perform applied health physics tasks as covered in Applied Health Physics, 624-145 and should be completed within the same semester. COREQUISITE: 10624145 Applied Health Physics

COLLEGE TECHNICAL MATHEMATICS 1A... prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtrc Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

ENERGY POWER AND FORCE... studies the laws and theories of electric power generation that govern motion and how to apply them to a range of concepts including rotational inertia, acceleration, velocity, lift, force, torque, etc. Studies the law of Conservation of Energy and basic atomic theory and how these concepts apply to electric power generation. The use and function of simple machines, and how they relate to electric power generator function, is also explored.

EXCEL - LEVEL 1... introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

HEALTH PHYSICS CALCULATIONS AND STATISTICS... prepares the learner to solve linear and exponential equations, logarithms, plot graphs, determine counting statistics and instrument reliability, and work with geometry and trigonometry problems. COREQUISITE: 10624110 Radioactivity and Regulations

INTRODUCTION TO AMERICAN GOVERNMENT... introduces American political processes and institutions. It focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. It explores the role of the media, interest groups, political parties and public opinion in the political process. It also explores the role of state and national government in our federal system. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY... introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

NUCLEAR DC AND AC APPLICATIONS... prepares nuclear, radiation safety, and health physics learners to apply direct current (DC) and alternating current (AC) concepts and laws; perform calculations to identify basic electrical terms, symbols, units, etc.; to apply the electrical laws (such as, Ohm's law, Kirchhoff's voltage and current laws); to analyze DC/AC electronic circuit, power, etc.; to analyze AC waveform (including single-phase versus three-phase), batteries, chargers, etc. PREREQUISITE: 10624105 Health Physics Calcs & Stats

NUCLEAR SYSTEMS AND SOURCES... introduces the learner to the major components of natural/man-made background sources, x-ray tubes and applications, medical-used radioactive materials, accelerators, nuclear gauging devices, non-ionization radiations, and power/research nuclear reactors and associated health physics topics. PREREQUISITE: 10624110 Radioactivity and Regulations

ORAL/INTERPERSONAL COMMUNICATION... provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

RADIATION BIOLOGY... prepares the learner to convert measuring units and activity to dose rates, predict the effect of radiation on living cells and human organs, evaluate radiation risk, and calculate internal doses. PREREQUISITES: 10624110 Radioactivity and Regulations, 10624105 Health Phys Calc/Stats, 10624114 Nuclear Systems and Sources, 10624122 Rad Physics, 10624123 Rad Phys-Lab, and 10804113 College Tech Math 1A or 10804198 Calculus 1

RADIATION PHYSICS... introduces the learner to health physics-related physics, including the properties of radiation; interactions of radiation with matters; basic principles of radiation detection and measurement; and different kinds of radiation detectors; i.e., gas-filled and solid-state detectors. PREREQUISITE: 10624110 Radioactivity and Regulations, 10624105 Health Physics Calc & Stats, and 10804113 College Tech Math 1A or 10804198 Calculus 1

RADIATION PHYSICS-LAB... expands the learners ability to perform calculations, select instruments, and analyze radioactive samples. This course is associated with 624-122, Radiation Physics. COREQUISITE: 10624122 Radiation Physics and PREREQUISITE: 10801195 Written Communications and COREQUISITE: Radioactivity and Regulations

RADIATION SHIELDING... provides the learner with the skills to calculate radiation attenuation from various geometric radioactive sources, determine the effect of neutron radiation on materials, and estimate the exposure rate from various sources with or without shielding materials. PREREQUISITE: 10624122 Radiation Physics

RADIATION SHIELD-LAB... expands the learner's ability to perform shielding of ionizing radiation sources and to measure the penetration of beta and gamma radiation. COREQUISITE: 10624134 Radiation Shielding

RADIOACTIVE MATERIAL AND MANAGEMENT... introduces the learner to the proper methods used to dispose of radioactive waste in liquid, solid, gaseous forms; determine waste classification, evaluate methods used to process low-level and high-level waste, determine the package/label requirements, proper type of transport container, shipment quantity classification, storage distance from people and film during shipments by rail/vessel/public roads, proper shipping name and UN number; completion of proper shipping papers; document materials inventory/shipments. PREREQUISITES: 10624105 Health Physics Calc & Statistics, 10624110 Radioactivity and Regulations, 10624114 Nuclear Systems & Sources

RADIOACTIVITY AND REGULATIONS... introduces the learner to atomic and nuclear structure; radioactivity and basic dosimetry; regulation standards, including 10CFR 19, 20, etc. COREQUISITE: 10624105 Health Physics Calcs & Stats

RADIOCHEMISTRY... provides the student with the fundamentals of chemistry and the application of chemistry control to a nuclear facility. The course will cover basic water treatment principles, corrosion, reactor water chemistry control and chemical hazards. Prepares the learner to separate dissolved, suspended, liquid, and ionic radioactive components; perform qualitative and quantitative analysis of samples; and prevent the production of radioactive material by using proper chemical control. PREREQUISITE: 10624122 Radiation Physics or 10624122OL Radiation Physics

RADIOLOGICAL EMERGENCIES... teaches the learner to understand a radiological emergency, which is displaced radioactive substances in solid, liquid, or gaseous forms in amounts resulting in doses to workers, the public, or the environment, that exceeds company, state, and federal limits or regulations; how it is prevented and mitigated, the proper preparation and post-accident actions, as well as the regulations on radioactive releases, estimation of doses in an emergency, and the first response to an emergency. PREREQUISITES: 10624110 Nuclear Technology and Regulations, 10624105 Health Physics Calculations and Statistics and 10624114 Nuclear Systems and Sources

REACTOR PLANT COMPONENTS... provides the learner with the fundamentals of heat transfer and fluid flow, and properties of reactor plant materials. The course introduces basic mechanical and electrical components used in nuclear power plants such as different types of piping, valves, pumps, ejectors, filters, turbines, heat exchangers, compressors, lubrication systems, valve actuators, breakers, transformers, relays and other equipment. PREREQUISITES: 10624110 Radioactivity and Regulations, 10624105 Health Physics Calculations & Statistics, 10804113 College Technical Math 1A or 10804198 Calculus 1 and COREQUISITE: 10624114 Nuclear Systems and Sources

REACTOR THEORY AND OPERATION... introduces the learner to the basic reactor types, the fission process, reactivity/criticality, reactor kinetics, heat removal, residual/decay heat, basic reactor types, nuclear plant water chemistry, and reactor thermodynamics. PREREQUISITE: 10624122 Radiation Physics and 10624133 Radiological Emergencies

WRITTEN COMMUNICATION... teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-624-1
Associate Degree in Applied Science
ABOUT THE PROGRAM

The Nuclear Technology program offers the student a unique opportunity to obtain the specialized training in demand by the nuclear power industry and organizations licensed to utilize radioactive materials. The increasing use of radiation and radioactive materials in today's world has created a demand for radiation protection technicians. This program can result in starting salaries higher than many four-year degree programs. It is also an excellent springboard for a four-year degree in the high-demand field of health physics and radiation safety.

PROGRAM OUTCOMES

- Work safely within industrial and radiological hazard areas.
- Understand and communicate nuclear technology-related concepts effectively in both oral and written formats.
- Diagnose equipment requiring electrical or mechanical repair and carry out preventive maintenance procedures.
- Perform radiological surveys for radiation and radioactive contamination.
- Follow procedures for operating and maintaining systems and equipment at nuclear facilities.
- Participate in applying nuclear technologies to a variety of industrial, medical, and research processes.
- Apply knowledge in a variety of related occupational jobs such as reactor plant operations, maintenance, quality assurance, etc.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- Lectures are taught at LTC's main campus and are accessible for distant students through synchronous videoconferencing via their computer and a 5Mb bandwidth. Labs are available at LTC's main campus and BTC's Milton campus.
- This program meets all the instructional standards and criteria of the Nuclear Uniform Curriculum Program (NUCP).
- Gaining employment in the nuclear, radiation safety, and health physics likely includes a very comprehensive background check of one's lifespan. This includes not only criminal activities, but likely also credit history, civil actions, and a psychological profile.
- Online Option: Available to working adults in the Nuclear/Radiation Safety/Health Physics industry. To register for online courses, search for the catalog numbers and the online option. Online courses have prerequisites. Online students work with their industry supervisor to identify suitable activities at their worksite to enhance their learning.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10801195	Written Communication	3
10804113	College Technical Mathematics 1A OR 10804198 Calculus 1** (4 cr)	3
6		
Term 2 (Spring 2022)		
10801196	Oral/Interpersonal Communications	3
10809198	Introduction to Psychology	3
6		
Term 3 (Fall 2022)		
10624105	Health Physics Calculations and Statistics	3
10624110	Radioactivity and Regulations	3
6		
Term 4 (Spring 2023)		
10624114	Nuclear Systems and Sources	3
10624122	Radiation Physics	3
10624123	Radiation Physics-Lab	2
8		
Term 5 (Fall 2023)		
10103121	Excel – Level 1	1
10482135	Energy Power and Force	3
10624138	Radioactive Materials Management	2
6		
Term 6 (Spring 2024)		
10624103	Nuclear DC and AC Applications	3
10624140	Radiochemistry	3
6		
Term 7 (Summer 2024) (Nights)		
10624118	Radiation Biology	3
10809122	Introduction to American Government	3
6		
Term 8 (Fall 2024)		
10624149	Reactor Plant Components	4
10624145	Applied Health Physics	3
10624146	Applied Health Physics Lab OR Internship	2
9		
Term 9 (Spring 2025)		
10624148	Reactor Theory and Operation	3
10624133	Radiological Emergencies	3
10624134	Radiation Shielding	2
10624135	Radiation Shielding Lab	1
9		

TOTAL 62

**Students who plan to also achieve a Bachelor's degree are encouraged to take this transferable course.

APPLIED HEALTH PHYSICS...prepares the learner to wear dosimeter, monitor personal exposure, calculate/estimate radioactive airborne activity concentration, issue respirators, determine contamination levels, don and remove protective clothing, reduce the spread of contamination, conduct an ALARA audit, reduce the total radiation exposure, maintain records and estimate skin dose, etc. PREREQUISITE: 10624122 Radiation Physics

APPLIED HEALTH PHYSICS-LAB...expands the learner's ability to perform applied health physics tasks as covered in Applied Health Physics, 624-145 and should be completed within the same semester. COREQUISITE: 10624145 Appld Hlth Physics

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtrc Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

ENERGY POWER AND FORCE...studies the laws and theories of electric power generation that govern motion and how to apply them to a range of concepts including rotational inertia, acceleration, velocity, lift, force, torque, etc. Studies the law of Conservation of Energy and basic atomic theory and how these concepts apply to electric power generation. The use and function of simple machines, and how they relate to electric power generator function, is also explored.

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

HEALTH PHYSICS CALCULATIONS AND STATISTICS...prepares the learner to solve linear and exponential equations, logarithms, plot graphs, determine counting statistics and instrument reliability, and work with geometry and trigonometry problems. COREQUISITE: 10624110 Radioactivity and Regulations.

INTRODUCTION TO AMERICAN GOVERNMENT...introduces American political processes and institutions. It focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. It explores the role of the media, interest groups, political parties and public opinion in the political process. It also explores the role of state and national government in our federal system. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

NUCLEAR DC AND AC APPLICATIONS...prepares nuclear, radiation safety, and health physics learners to apply direct current (DC) and alternating current (AC) concepts and laws; perform calculations to identify basic electrical terms, symbols, units, etc.; to apply the electrical laws (such as, Ohm's law, Kirchhoff's voltage and current laws); to analyze DC/AC electronic circuit, power, etc.; to analyze AC waveform (including single-phase versus three-phase), batteries, chargers, etc. PREREQUISITE: 10624105 HealthPhysics Calcs & Stats

NUCLEAR SYSTEMS AND SOURCES...introduces the learner to the major components of natural/man-made background sources, x-ray tubes and applications, medical-use radioactive materials, accelerators, nuclear gauging devices, non-ionization radiations, and power/research nuclear reactors and associated health physics topics. PREREQUISITE: 10624110 Radioactivity and Regulations.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

RADIATION BIOLOGY...prepares the learner to convert measuring units and activity to dose rates, predict the effect of radiation on living cells and human organs, evaluate radiation risk, and calculate internal doses. PREREQUISITES: 10624110 Radioactivity and Regulations, 10624105 Health Phys Calc/Stats, 10624114 Nuclear Systems & Sources, 10624122 Rad Physics, 10624123 Rad Phys-Lab, and 10804113 College Tech Math 1A

RADIATION PHYSICS...introduces learner to health physics-related physics, including properties of radiation; interactions of radiation with matters; basic principles of radiation detection and measurement; and different kinds of radiation detectors; i.e., gas-filled and solid-state detectors. PREREQUISITE: 10624110 Radioactivity and Regulations, 10624105 Hlth Physics Calc & Stats, & 10804113 College Tech Math 1A

RADIATION PHYSICS-LAB...expands the learners ability to perform calculations, select instruments, and analyze radioactive samples. This course is associated with 624-122, Radiation Physics. COREQUISITE: 10624122 Radiation Physics and PREREQUISITE: 10801195 Written Communications and COREQUISITE: Radioactivity and Regulations

RADIATION SHIELDING...provides the learner with the skills to calculate radiation attenuation from various geometric radioactive sources, determine the effect of neutron radiation on materials, and estimate the exposure rate from various sources with or without shielding materials. PREREQUISITE: 10624122 Radiation Physics

RADIATION SHIELD-LAB...expands the learner's ability to perform shielding of ionizing radiation sources and to measure the penetration of beta and gamma radiation. COREQUISITE: 10624134 Radiation Shielding

RADIOACTIVE MATERIAL AND MANAGEMENT...introduces the learner to the proper methods used to dispose of radioactive waste in liquid, solid, gaseous forms; determine waste classification, evaluate methods used to process low-level and high-level waste, determine the package/label requirements, proper type of transport container, shipment quantity classification, storage distance from people and film during shipments by rail/vessel/public roads, proper shipping name and UN number; completion of proper shipping papers; document materials inventory/shipments. PREREQUISITES: 10624105 Health Physics Calc & Statistics, 10624110 Radioactivity and Regulations, 10624114 Nuclear Systems & Sources

RADIOACTIVITY AND REGULATIONS...introduces the learner to atomic and nuclear structure; radioactivity and basic dosimetry; regulation standards, including 10CFR 19, 20, etc. COREQUISITE: 10624105 Health Physics Calcs & Stats

RADIOCHEMISTRY...provides the student with the fundamentals of chemistry and the application of chemistry control to a nuclear facility. The course will cover basic water treatment principles, corrosion, reactor water chemistry control and chemical hazards. Prepares the learner to separate dissolved, suspended, liquid, and ionic radioactive components; perform qualitative and quantitative analysis of samples; and prevent the production of radioactive material by using proper chemical control. PREREQUISITE: 10624122 Radiation Physics or 10624122OL Radiation Physics

RADIOLOGICAL EMERGENCIES...teaches the learner to understand a radiological emergency, which is displaced radioactive substances in solid, liquid, or gaseous forms in amounts resulting in doses to workers, the public, or the environment, that exceeds company, state, and federal limits or regulations; how it is prevented and mitigated, the proper preparation and post-accident actions, as well as the regulations on radioactive releases, estimation of doses in an emergency, and the first response to an emergency. PREREQUISITES: 10624110 Nuclear Technology and Regulations, 10624105 Health Physics Calculations and Statistics and 10624114 Nuclear Systems and Sources

REACTOR PLANT COMPONENTS...provides the learner with the fundamentals of heat transfer and fluid flow, and properties of reactor plant materials. The course introduces basic mechanical and electrical components used in nuclear power plants such as different types of piping, valves, pumps, ejectors, filters, turbines, heat exchangers, compressors, lubrication systems, valve actuators, breakers, transformers, relays and other equipment. PREREQUISITES: 10624110 Radioactivity and Regulations, 10624105 Health Physics Calculations & Statistics, 10804113 College Technical Math 1A and COREQUISITE: 10624114 Nuclear Systems and Sources

REACTOR THEORY AND OPERATION...introduces the learner to the basic reactor types, the fission process, reactivity/criticality, reactor kinetics, heat removal, residual/decay heat, basic reactor types, nuclear plant water chemistry, and reactor thermodynamics. PREREQUISITE: 10624122 Radiation Physics and 10624133 Radiological Emergencies

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro Rdg & Study Skills or Reading placement assessment equivalent

Program Number 30-543-1
Technical Diploma • One Term

ABOUT THE PROGRAM

Nursing assistants play an important role in basic patient/resident care activities in hospitals, nursing homes, and other healthcare settings, including home healthcare. If you're a good communicator, compassionate, and interested in caring for people, becoming a nursing assistant may be a rewarding career choice for you.

PROGRAM OUTCOMES

- Communicate effectively with clients, family and co-workers.
- Protect rights of clients.
- Demonstrate ethical and legal responsibilities.
- Work cooperatively in a team environment.
- Provide holistic, safe care to diverse populations.
- Demonstrate reporting and documentation.
- Assist clients with rehabilitation and restorative care.
- Provide safe care for clients with acute and chronic health conditions.
- Complete educational requirements for the WI NA competency evaluation.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Review and complete Nursing Assistant Handbook.
- Complete health requirements.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

The Nursing Assistant program meets state and federal requirements for training and testing. Upon completion, the graduate will be eligible to sit for the State of Wisconsin Nursing Assistant Competency Examination. The Nursing Assistant program is open to eligible individuals including high school students who are at least 16 years of age or older. This program is not eligible for financial aid.

Lakeshore Technical College's Nursing Assistant program courses prepare students to obtain state certification to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examinations, or licensure for other states.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
30543300	Nursing Assistant OR 30543200 Nursing Assistant (2 cr)	3

TOTAL 3

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

NURSING ASSISTANT...prepares students for employment as nursing assistants. The program also prepares students for other health-related programs. During the 120 hour course, students will be required to demonstrate the following skills under the supervision of a licensed nurse: communication, basic nursing assistant and personal care skills, attention to client's rights, and care of clients with dementias. The program is recognized by the Wisconsin Department of Health Services as a nurse-aide training program. Upon successful completion of the program, the student is eligible to take the Wisconsin Nursing Assistant competency evaluation for inclusion on the Wisconsin Nurse Aide Registry and employment in nursing homes, hospitals, home health agencies, hospices, CBRF's, assisted living centers and homes for the developmentally disabled.

Alternate 2 credit course:

NURSING ASSISTANT LIMITED TERM...is designed to prepare learners for employment in home care agencies, nursing homes, and hospitals. Learners are supervised by qualified RNs. Classes utilize virtual, online, and face-to-face instruction. Lab activities and Clinical are scheduled at designated locations in Manitowoc and Sheboygan Counties. Upon successful completion, the graduate will be able to sit for the State of Wisconsin Nursing Assistant Competency Examination. **CONDITION:** 305431 Nursing Assistant Admission requirements met

Program Number 10-543-1
Associate Degree in Applied Science
ABOUT THE PROGRAM

If you're ill or injured, it's comforting to know you're in the care of highly skilled, well-educated healthcare professionals. At the core of that healthcare team are registered nurses whose mission is to assess and care for the ill and injured as well as to maintain health and prevent illness of individuals across the lifespan. If you work well under pressure; like math, science, communications, and problem solving; are independent; and have a strong desire to work with and help people—success may be yours as a registered nurse.

PROGRAM OUTCOMES

- Integrate professional nursing identity reflecting integrity, responsibility, and nursing standards.
- Communicate comprehensive information using multiple sources in nursing practice.
- Integrate theoretical knowledge to support decision making.
- Integrate the nursing process into client care across diverse population.
- Function as a healthcare team member to provide safe and effective care.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Submit high school transcripts.
- *Submit college transcripts and test scores (optional, highly recommended): College transcripts, along with test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Read the Nursing Program Handbook and submit the signed signature page.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

FUTURE SEMESTER ENROLLMENT STEPS

- Pass HESI exam (Health Occupations Entrance assessment) with a 75% or higher.
- Complete and submit health form.
- Complete chemistry requirement.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- High school Chemistry may fulfill admission requirement.
- CPR BLS Healthcare Provider certification is required prior to starting clinicals.
- Nursing Assistant skills must be attained within one semester prior to starting clinicals.
- LTC's Nursing—Associate Degree program is accredited by the Accreditation Commission for Education in Nursing, 3390 Peachtree Road N.E., Suite 1400, Atlanta, Georgia 30326. 404-975-5000 Fax 404-975-5020. www.acenursing.org

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10806177	General Anatomy & Physiology	4
10809198	Introduction to Psychology	3
10801195	Written Communications	3
		10
Term 2		
10806179	Advanced Anatomy & Physiology	4
10801196	Oral/Interpersonal Communications	3
10809188	Developmental Psychology	3
		10
Term 3		
10806197	Microbiology	4
10809172	Introduction to Diversity Studies OR 10809196 Introduction to Sociology	3
		7
Term 4		
10543101	Nursing Fundamentals	2
10543102	Nursing Skills	3
10543103	Nursing Pharmacology	2
10543104	Nsg: Intro to Clinical Practice	2
		9
Term 5		
10543105	Nursing Health Alterations	3
10543106	Nursing Health Promotions	3
10543107	Nsg: Clinical Care Across Lifespan	2
10543108	Nsg: Intro Clinical Care Management	2
		10
Term 6		
10543109	Nsg: Complex Health Alterations 1	3
10543110	Nsg: Mental Health Community Concepts	2
10543111	Nsg: Intermediate Clinical Practice	3
10543112	Nsg: Advanced Skills	1
		9
Term 7		
10543113	Nsg: Complex Health Alterations 2	3
10543114	Nsg: Management & Professional Concepts	2
10543115	Nsg: Advanced Clinical Practice	3
10543116	Nursing Clinical Transition	2
		10
		TOTAL 65
Recommended Support		
10-543-124	Virtual Clinical for 2nd Semester Nursing	1
10-543-125	Virtual Clinical for 3rd Semester Nursing	1

Lakeshore Technical College's Nursing-Associate degree program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examination, or licensure for other states.

ADVANCED ANATOMY AND PHYSIOLOGY...is the second semester in a two-semester sequence in which normal human anatomy and physiology are studied using a body systems approach with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Instructional delivery within a classroom and laboratory setting. Experimentation within a science lab will include analysis of cellular metabolism, the individual components of body systems such as the nervous, neuro-muscular, cardiovascular, and urinary. Continued examination of homeostatic mechanisms and their relationship to fluid, electrolyte, acid-base balance and blood. Integration of genetics to human reproduction and development are also included in this course. **PREREQUISITE:** 10806177 General Anatomy & Physiology or equivalent and Reading placement assessment equivalent

DEVELOPMENTAL PSYCHOLOGY...introduces the student to the study of human development throughout the lifespan. This course explores developmental theory and research with an emphasis on the interactive nature of the biological, cognitive, and psychosocial changes that affect the individual from conception to death. Application activities and critical thinking skills will enable students to gain an increased knowledge and understanding of themselves and others. **COREQUISITE:** 10838105 Intro Reading & Study Skills or Reading placement assessment equiv

GENERAL ANATOMY AND PHYSIOLOGY...examines basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare health care professionals who need to apply basic concepts of whole body anatomy and physiology to informed decision-making and professional communication with colleagues and patients. **PREREQUISITE:** 10806134 General Chemistry or equivalent

INTRODUCTION TO DIVERSITY STUDIES...introduces learners to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the learner to work in a diverse environment. In addition to an analysis of majority/minority relations in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability, religion are explored. **COREQUISITE:** 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. **PREREQUISITE:** Reading placement assessment equivalent or **COREQUISITE:** 10838105 Intro to Reading and Study Skills

MICROBIOLOGY...introduces the learner to examine microbial structure, metabolism, genetics, growth and relationship between humans and microorganisms. Addresses disease production, epidemiology, host defense mechanisms and the medical impact of microbes. Examines the role of microbes in the environment, industry, and biotechnology. **PREREQUISITE:** 10806177 Gen Anatomy and COREQ: 10838105 Intro to Reading & Study Skills or Reading placmt asst equiv

NSG: ADVANCED CLINICAL PRACTICE...requires the student to integrate concepts from all previous courses in the management of groups of clients facing complex health alterations. Students will have the opportunity to further develop critical thinking skills using the nursing process in making clinical decisions. Continuity of care through interdisciplinary collaboration is emphasized. Students need current professional AHA CPR card (1 and 2 person, adult, infant, and child, AED), TB test, and flu vaccine. Student must have completed third semester courses. Course requires a minimum grade of "C" or better. **COREQUISITE:** 10543113 Nursing Complex Health Alterations II and **CONDITION:** 105431 Nursing - Associate Degree enrollment requirements met

NSG: CLINICAL CARE ACROSS LIFESPAN...applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized. Student must have completed all first semester courses. Student needs a current TB test, AHA CPR card (1 and 2 person, adult, infant, and child, AED), and flu vaccine. Course requires a minimum grade of "C" or better. **CONDITION:** 105431 Nursing - Associate Degree enrollment requirements met and **COREQUISITE:** 10543106 Nursing Health Promotion

NSG: COMPLEX HEALTH ALTERATIONS 1...prepares the learner to provide and evaluate care for patients across the lifespan with alterations in cardiovascular, respiratory, endocrine, and hematologic systems as well as patients with fluid/electrolyte and acid-base imbalance, and alterations in comfort. Student must have completed all second semester courses. Course requires a minimum grade of "C" or better. **PREREQ:** 10543105 Nrsng Hlth Alt, 10543106 Nrsng Hlth Promotion, 10543107 Clin Care Across Lifespan, 10543108 Intro Clin Care Mgmt and **CONDITION:** 105431 Nursing-Assoc Degree enrollment req met

NSG: COMPLEX HEALTH ALTERATIONS 2...prepares the learner to provide and evaluate care for patients across the lifespan with alterations in the immune, neuro-sensory, musculoskeletal, gastrointestinal, hepatobiliary, renal/urinary, reproductive systems and shock-burns and trauma. The learner will also focus on management of care for patients with high-risk perinatal conditions and high-risk newborns. This course requires a minimum grade of "C" or better. **PREREQUISITE:** 10543109 Nrsng Complex Hlth Alt 1 and 10543112 Nrsng Adv Skills and 10543110 Nrsng Mental Hlth Comm Concepts and 10543111Nrsng Intern Clin Prac and **CONDITION:** 105431 Nursing-Associate Degree enrollment requirements met

NSG: INTERMEDIATE CLINICAL PRACTICE...develops the RN role when working with clients with complex health care needs. A focus of the course is developing skills needed for managing multiple clients across the lifespan and priorities. Using the nursing process students will experience adapting nursing practice to meet the needs of clients with diverse needs and backgrounds. Student must have completed all second semester courses. Student needs a current TB test, AHA CPR card (1 and 2 person, adult, infant, and child, AED), and flu vaccine. Course requires a minimum grade of "C" or better. **COREQUISITE:** 10543112 Nursing Advanced Skills and 10543109 Nursing Complex Health Alterations I and 10543110 Nursing Mental Health Community Concepts and **CONDITION:** 105431 Nursing - Associate Degree enrollment reqs met

NSG: INTRO CLINICAL CARE MANGEMENT...applies nursing concepts and therapeutic nursing interventions to groups of clients across the lifespan. It also provides an introduction to leadership, management, and teambuilding. Student must have completed all first semester courses. Student needs a current TB test, AHA CPR card (1 and 2 person, adult, infant & child, AED), and flu vaccine. Course requires a minimum grade of "C" or better. **CONDITION:** 105431 Nursing - Associate Degree enrollment requirements met and **COREQUISITE:** 10543105 Nursing Health Alterations

NSG: INTRO CLINICAL PRACTICE...is an introductory clinical course that emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients across the lifespan. Emphasis is placed on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation, and medication administration. Student needs a current TB test, AHA CPR card (1 & 2 person, adult, infant, and child, AED), and flu vaccine. Student needs to be enrolled in the Nursing program. Course requires a minimum grade of "C" or better. **CONDITION:** 105431 Nursing-Assoc Degree Enrollment Reqs Met and **COREQUISITE:** 10543101 Nursing Fund & 10543102 Nursing Skills & 10543103 Nursing Pharm

NSG: MENTAL HEALTH COMMUNITY CONCEPTS...cover topics related to the delivery of community and mental health care. Specific health needs of individuals, families, and groups will be addressed across the lifespan. Attention will be given to diverse and at-risk populations. Mental health concepts will concentrate on adaptive/maladaptive behaviors and specific mental health disorders. Community resources will be examined in relation to specific types of support offered to racial, ethnic, and economically diverse individuals and groups. Student must have completed all second semester courses. Course requires a minimum grade of "C" or better. **PREREQ:** 10543105 Nrsng Hlth Alt, 10543106 Nrsng Hlth Promo, 10543107 Clin Care Lifespan, 10543108 Intro Clin Care Mgt, and **CONDITION:** 105431 Nursing-Assoc Degree enrollment req met

NSG: MANAGEMENT & PROFESSIONAL CONCEPTS...covers nursing management and professional issues related to the role of the registered nurse. Emphasis is placed on preparing for practice as a registered nurse. This course requires a minimum grade of "C" or better. **PREREQUISITE:** 10543109 Nrsng Complex Hlth Alterations 1 and 10543112 Nursing Advanced Skills and 10543110 Nrsng Mental Hlth Comm Concepts and 10543111 Nrsng Intern Clin Practice and **CONDITION:** Nursing-Associate Degree enrollment requirements met

NURSING ADVANCED SKILLS...focuses on the development of advanced clinical skills across the lifespan. Content includes advanced IV skills, blood product administration, chest tube systems, basic EKG interpretation and nasogastric/feeding tube insertion. This course requires a minimum grade of "C" or better. **PREREQ:** 10543105 Nrsng Hlth Alt, 10543106 Nrsng Hlth Promotion, 10543107 Clin Care Across Lifespan, 10543108 Intro Clin Care Mgmt, and **CONDITION:** 105431 Nursing-Assoc Degree enrollment requirements met

NURSING CLINICAL TRANSITION...integrates all knowledge learned in the previous courses in transitioning to the role of the graduate nurse. The course promotes relatively independent clinical decisions, delegation, and works collaboratively with others to achieve client and organizational outcomes. Continued professional development is fostered. Student needs a current professional AHA CPR card, TB test, and flu vaccine. Student must have completed all third semester courses. Course requires a minimum grade of "C" or better. **COREQUISITE:** 10543115 Nrsng Advanced Clinical Practice and 10543114 Nursing Management Concepts and 10543113 Nursing Complex Health Alterations II and **CONDITION:** 105431 Nursing - Associate Degree enrollment requirements met

NURSING FUNDAMENTALS...focuses on basic nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients. This course requires a minimum grade of "C" or better. **COREQUISITE:** 10806177 or 10806177SA Gen Anatomy and Physiology, 10801195 Written Comm or 10801195OL Written Comm-Online and **CONDITION:** 105431 Nursing-Associate Degree

NURSING HEALTH ALTERATIONS...elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of clients through the lifespan, utilizing problem solving and critical thinking. This course will provide opportunity to study conditions affecting different body systems and apply evidence-based nursing interventions. It will also introduce concepts of leadership and management. Course requires a minimum grade of "C" or better. **PREREQUISITE:** 10543101 Nrsng Fund and 10543102 Nrsng Skills and 10543103 Nrsng Pharm and 10543104 Nrsng: Intro to Clin Practice and **CONDITION:** 105431 Nursing-Associate Degree enrollment requirements met

NURSING HEALTH PROMOTION...focuses on topics related to health promotion in for individuals and families throughout the lifespan. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. Recognizing the spectrum of healthy families we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyle choices for individuals of all ages. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development. Course requires a minimum grade of "C" or better. **PREREQ:** 10543101 Nrsng Fundamentals, 10543102 Nrsng Skills, 10543103 Nrsng Pharmacology, 10543104 Nrsng Intro Clinical Prac, and **CONDITION:** 105431 Nrsng-Associate Degree enrollment requirements met

NURSING PHARMACOLOGY...introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis on the use of the components of the nursing process when administering medications. Student must be enrolled in the Nursing program. Course requires a min grade of "C" or better. Do not register for this class until you are assigned a clinical slot in 543-104 in current or next semester. **CONDITION:** 105431 Nursing-Assoc Degree Enrollment Reqs Met and **COREQ:** 10806177 or 10806177OL or 10806177SA Gen Anat & Phys

NURSING SKILLS...focuses on development of evidence-based clinical skills and physical assessment across the lifespan. Content includes mathematical calculations and conversions related to clinical skills. In addition the course includes techniques related to obtaining a current health history and basic physical assessment skills using a body systems approach. Course requires a min grade of "C" or better. **CONDITION:** 105431 Nursing-Assoc Degree Enrollment Reqs Met and **COREQUISITE:** 10806177 or 10806177OL or 10806177SA Gen Anat & Physiology

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. **COREQUISITE:** 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. **PREREQUISITE:** 10831103 Intro to College Wrng or Writing placement assessment equiv and **COREQUISITE:** 10838105 Intro Rdg & Study Skills or Reading placement assessment equivalent

Program Number 31-106-1 Technical Diploma • Two Terms

ABOUT THE PROGRAM

Today's businesses realize it takes efficiency and effectiveness on the part of the office staff to be successful. If your ideal work environment includes using high-tech equipment, working well with people, being organized and attentive to detail, and handling a variety of different tasks, a career as an office assistant may be a satisfying choice.

PROGRAM OUTCOMES

- Perform accurate workplace communications.
- Use technology skills for business tasks.
- Perform routine office procedures.
- Demonstrate professionalism and effective workplace relationships.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

RELATED PROGRAMS

- Administrative Professional Associate Degree

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10103121	Excel - Level 1	1
10103161	PowerPoint - Level 1	1
10103191	Word - Level 1	1
10106101	Document Formatting	1
10106110	Records Management	2
10106107	Office Technology	2
10106132	Keyboard Speedbuilding	1
10801195	Written Communication	3
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
		15
Term 2		
10103101	Access - Level 1	1
10103122	Excel - Level 2	1
10103192	Word - Level 2	1
10106124	eCommunications	3
10106130	Office Professionalism	3
10106138	Web Technologies	2
10116129	Professional Career Search Techniques OR 10106106 Internship-Office Assistant	1
		12
		TOTAL 27

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

ACCESS - LEVEL 1...introduces students to the process of creating a database, building and populating a table, establishing table relationships, and creating queries, forms, and reports.

DOCUMENT FORMATTING...prepares the learner to keyboard and format business memorandums, letters and reports, and other business documents. Emphasis will be placed on proofreading and editing skills. COREQUISITES: 10103191 Word - Level 1 or equivalent

ECOMMUNICATIONS...prepares the learner to apply proofreading skills -- punctuation, grammar, spelling, word usage, capitalization, number usage--to edit or compose error-free business documents; transcribe and correctly format business documents from dictation, dictate podcasts and other items; exposure to speech recognition functions; take and key meeting minutes; and facilitation of meetings. PREREQUISITE: 10106101 Document Formatting and 10103191 Word - Level 1 or equivalent

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

EXCEL - LEVEL 2...will explore Excel tables and charts, working with multiple worksheets and workbooks at once, creating applications and rules, protecting worksheets and workbooks and learning about macros and comments. PREREQUISITE: 10103121 Excel - Level 1 or equivalent

KEYBOARD SPEEDBUILDING...prepares the learner with the skills to keyboard text with speed and accuracy using the "touch" method.

OFFICE PROFESSIONALISM...prepares the learner to identify positive attitudes and personality development; develop self-awareness of elements affecting personal and work relationships. Prepares the learner to apply communication and conflict resolution skills; demonstrate effective/efficient work habits and self-management skills; apply business protocol in a culturally diverse international market. Areas of study will also include telephone and customer service techniques, ethics, etiquette and ergonomics.

OFFICE TECHNOLOGY...provides the learner with introductory knowledge and skills relating to technology in an office environment including digital file management, understanding how computers and the internet work, and basic office equipment. Emphasis on hands-on skilldemonstrations of operating a computer on a network, computer storage and processing, and evaluating internet service providers.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects.

PROFESSIONAL CAREER SEARCH TECHNIQUES...focuses on the process of researching and pursuing professional career opportunities. Students will develop resume and cover letter documentation to accurately reflect personal, academic, and professional accomplishments and the connection that these elements have to various positions with employers. Interviewing skills will be a significant aspect of this experience with a focus on interviews for potential internship opportunities.

RECORDS MANAGEMENT...introduces the student to basic terms, concepts, filing rules, systems (alphabetic and numeric), non-correspondence filing, new methods of storing and recording records.

WEB TECHNOLOGIES...provides a basic understanding of the Web as well as the tools used to create Web pages, blogs, and other features. Reviews social and business Web tools and components.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WORD - LEVEL 2...introduces the student to multi-column documents, templates, and the mail merge feature while applying WordArt, themes, styles, quick parts, and other advanced document formatting features. PREREQUISITE: 10103191 Word - Level 1 or equivalent

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 61-106-6
Certificate • 10 credits

ABOUT THE PROGRAM

Businesses depend on high-quality, accurate information. If you value organization, care about details, and understand the importance of clear communication and current technology skills, developing those talents with the Office Technology certificate may be just what you need to succeed.

PROGRAM OUTCOMES

- Perform accurate workplace communications.
- Use technology skills for business tasks.
- Perform routine office procedures.
- Demonstrate professionalism and effective workplace relationships.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10103191	Word - Level 1	1
10106101	Document Formatting	1
10106107	Office Technology	2
10106132	Keyboard Speedbuilding	1
		5
Term 2		
10103121	Excel - Level 1	1
10103161	PowerPoint - Level 1	1
10103192	Word - Level 2	1
10106138	Web Technologies	2
		5

TOTAL 10

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

DOCUMENT FORMATTING...prepares the learner to keyboard and format business memorandums, letters and reports, and other business documents. Emphasis will be placed on proofreading and editing skills. COREQUISITES: 10103191 Word - Level 1 or equivalent

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

KEYBOARD SPEEDBUILDING...prepares the learner with the skills to keyboard text with speed and accuracy using the "touch" method.

OFFICE TECHNOLOGY...provides the learner with introductory knowledge and skills relating to technology in an office environment including digital file management, understanding how computers and the internet work, and basic office equipment. Emphasis on hands-on skilldemonstrations of operating a computer on a network, computer storage and processing, and evaluating internet service providers.

POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects. This course is offered in a self-paced format.

WEB TECHNOLOGIES...provides a basic understanding of the Web as well as the tools used to create Web pages, blogs, and other features. Reviews social and business Web tools and components.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WORD - LEVEL 2...introduces the student to multi-column documents, templates, and the mail merge feature while applying WordArt, themes, styles, quick parts, and other advanced document formatting features. This course is offered in a self-paced format. PREREQUISITE: 10103191 Word - Level 1 or equivalent

Career certificates allow you to study a concentrated area—with just a few courses and a limited time commitment—that can prepare you for a brand new career or give you the skills you need to advance in your current career. OnTarget certificates cover a wide range of careers so you can find the area of study that's right for you, whether this will be your first college experience or you already have a degree. Each certificate is streamlined to give you laser-focused skills that open up new job possibilities if you are looking to quickly enter a new career, want to advance your current technical skills, or are looking for an edge in addition to another college degree. Many of the certificate classes you take apply to an LTC degree program.

ADMISSION STEPS

- Submit online application

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

TECHNICAL STANDARDS

Technical standards are the basic duties that a student must be able to perform with or without reasonable accommodations. At the postsecondary level, students must meet these requirements, and they cannot be modified.

NOTE

Catalog numbers assigned to “elective” classes are for administrative use only. Consult with program advisor/counselor regarding your elective selection. Program start dates vary; check with your program counselor for details. Curriculum and program acceptance requirements are subject to change.

ACCOUNTING

19-101-2 Tax Preparer (10 credits)

The Tax Preparer Certificate will give job seekers an expertise in tax preparation procedures and provide related accounting skills which will make them more employable.

AGRICULTURE & HORTICULTURE

19-006-7 Ag Ed Plus (4 credits)

This series of 4 one-credit courses provides continuing education focusing on farm and business management for farm operators, agriculturists, and others seeking to stay current and to advance their knowledge and skills. These four courses are also part of the Wisconsin Farm Service Agency's agreement with the WTCS for continuing education of loan participants. All classes are available in person and online.

19-006-9 Ag Ed Plus - Management (4 credits)

This certificate brings the opportunity for agriculturists, farm operators, and others to continue their education in business management topics. This certificate focuses on management areas of marketing and sales, farm economics, legal considerations, estate planning, livestock management, human resource management, and record keeping software - all of which are critical concepts for making informed management decisions. All classes are available in person and online.

19-006-8 Ag Ed Plus - Production (6 credits)

This certificate brings the opportunity for agriculturists, farm operators, and others to continue their education in the production topics of soils/agronomy, animal breeding, livestock nutrition, and the exploration of new technologies - all of which continue to be just-in-time concepts for making informed production and management decisions. All classes are available in person and online.

19-006-5 Dairy Worker Training (9 credits)

This certificate teaches the learner the basics of cow reproduction, reproductive system, identifying cows in heat, sync protocols, and the basics of A.I. The learner becomes proficient in caring for fresh and sick cows including a step-by-step approach for examinations of fresh-pen cows, selecting cows for examination based on behavior, calving history, and diagnostic tests. Calf care covers newborns, developing rumen, best practices colostrum handling, processing newborns, and disease prevention.

19-001-3 Plants - Production & Care (15 credits)

This certificate introduces the learner to the science and practical aspects of working in a greenhouse or nursery. The learner receives insight into and experience with growing plants in greenhouses and nursery settings.

ADVANCED MANUFACTURING

19-457-4 Advanced Fabrication (6 credits)

In this 6 credit, 192-hour certificate, the learner will design and produce steel fabrications from working drawings. They will be exposed to the many fabrication techniques and equipment that are used in industry. By developing measurement and layout skills, the learner will produce steel fabrications by the use of manual and CNC steel processing equipment (shear, CNC Plasma and Fiber Laser) as well as Sheet Metal forming equipment. Projects will be completed using welding and finishing techniques.

19-442-3 Advanced Pipe Welding (4 credits)

This certificate provides an opportunity for welders to grow in the pipe welding field. In this certificate series the learner will weld pipe in the 1G, 2G, 5G, and 6G positions while using the SMAW, FCAW, and GTAW welding processes. The learner will create pipe fabrications that are used in the industry. The learner will have the opportunity to gain state certification in the 5G position using the SMAW, GTAW/FCAW, GTAW/SMAW welding process.



19-404-3 Automotive Electrical Certificate (11 credits)

This certificate provides a nighttime option for the Year 1 electrical-related courses of the Automotive Maintenance Technician program. These night classes provide the opportunity for working adults to enhance their skills and knowledge of the primary electrical skills of an automotive technician. This certificate student has the additional option to complete the Automotive Mechanical Certificate at night. Certificate students who wish to graduate from the Automotive Maintenance Technician Technical Diploma will enroll in day courses upon completion of the night certificates.

19-404-2 Automotive Mechanical Certificate (14 credits)

This certificate provides a nighttime option for the Year 1 mechanical-related courses of the Automotive Maintenance Technician program. These night classes provide the opportunity for working adults to enhance their skills and knowledge of the primary mechanical skills of an automotive technician. This certificate student has the additional option to complete the Automotive Electrical Certificate at night. Certificate students who wish to graduate from the Automotive Maintenance Technician Technical Diploma will enroll in day courses upon completion of the night certificates.

19-405-2 Automotive Refinishing Certificate (13 credits)

Automotive refinishing is a highly in-demand skill within the automotive repair industry. Start your career path as a professional Automotive Refinisher at LTC. In the certificate classes, you will learn the steps and develop the skills to paint vehicles and related parts from start to finish. Automotive refinishers generally earn the highest wages when compared with other jobs in the automotive repair industry.

19-457-2 Certified Welding Inspector (CWI) Prep Certificate (4 credits)

In this 4 credit, 128-hour certificate, the learner will develop advanced weld quality inspection skills through the eyes of a Certified Welding Inspector (CWI). This certificate prepares the learner for the three levels of the CWI Exam, which include Part A - Welding Fundamentals, Part B - Practical inspection of weld samples and Part C - the navigation and interpretation of the AWS D1.1 Structural Steel Code.

19-620-1 Industrial Technician-Automation (13 credits)

Designed for persons employed, or who are experienced in production work and who need to gain skills in the foundations of automation. It's perfect for industrial apprentices or Journeyworkers who would like to learn robotic automation while working full time. The 13 credits are offered in sequential order, and will provide knowledge and skill development in PLC's, Robotic Programming, Touch Screen Applications and Industrial Networks.

19-457-3 Robotic Weld Technician (4 credits)

In this 4 credit, 128-hour certificate, the learner will understand and demonstrate robotic safety, programming, maintenance and operation. Skills include: editing programs, understanding limits, use of teach pendant for movement and operation. The robotic skills are then used to create and program a welding robot to weld different steel structural shapes to industry standards.

BUSINESS MANAGEMENT & ADMINISTRATION

19-116-6 Compensation and Benefits (11 credits)

This certificate provides the skills necessary to function in a payroll and compensation support position in a human resources department or in an accounting department.

19-109-1A Customer Service Skills (5 credits)

This certificate is designed to provide the training and preparation to be successful in all aspects of customer service. Developing long term relationships with consumers is critical to remain competitive in business today. This certificate will assist managers, marketers, and employees in developing customer service skills to meet the needs of consumers in the service sector.

19-116-5 Employee Selection and Development (14 credits)

This certificate provides the skills necessary supporting the personnel development, recruitment and retention functions in a human resources department.

19-145-2 Entrepreneurship and Business (13 credits)

Introduces the fundamental facets of business such as creating a business plan, marketing, accounting, and to develop entrepreneurial skills in the learner. The curriculum includes an introduction into the skills and characteristics of the entrepreneur and explores what is necessary to put business skills into successful entrepreneurial efforts.

19-116-4 HR Basics (8 credits)

This certificate provides the learner with the basic skills needed to join the ranks of human resources professionals in a basic, entry level position. It introduces the learner to the human resources environment, the legal issues surrounding HR and the information systems used to support HR functions.

19-623-8 ISO 9001 Internal Auditor (3 credits)

This certificate is designed to introduce participants to the current QS/ISO 9001 and ISO 19011 standards. The course is structured to provide a detailed review of the standards, how to document procedures, and how to perform audits. Students will practice preparation for and conducting audits in a local business.

19-182-7 Logistics & Distribution (9 credits)

Designed for the employed adult who wishes to gain skills in the principles of logistics and distribution and includes study related to transportation modes, costing, policy, and planning as well as considerations for operating globally. Those already in the fields of supply chain management and quality assurance, as well as those anticipating a career change will benefit from this practical training.

19-182-5 Materials Management (9 credits)

Designed for the working adult who wishes to gain new skills related to the materials and inventory management functions. The material covered will provide the learner with practiced skills in production control, material planning, how ERP systems function, and forecasting for short and long term requirements. These skills will prepare the individual with some business experience for an entry-level position within the material management function, e.g., material analyst, material/resource planner, production planning specialist, or demand planner.

19-623-4 Project Management (6 credits)

This certificate program enables individuals to work with people, data, and project management tools, both internally and externally. Project managers are high-profile employees and particularly are viable assets in large corporations. This program is designed to enhance skills for the implementation for developing the activities, leading the teams, and tracking the progress of a specific project.

19-182-6 Purchasing (6 credits)

Designed for the working adult who wishes to gain new skills related to the purchasing function. The material covered will provide the learner with practiced skills in negotiating, basic material management, and purchasing fundamentals. These skills will prepare the individual with some business experience for an entry level position within the purchasing function, e.g., associate buyer, purchasing assistant, purchasing specialist, or purchasing analyst.

19-623-3 Six Sigma for Black Belt (4 credits)

Designed for those who wish to take a deeper dive into the concepts of lean manufacturing and six sigma at the black belt level. This course builds upon the learning that took place earning the Lean Six Sigma Certification for Green Belts. It provides added skills in the analysis of process data, building six sigma into design, the management of multiple six sigma projects, and teaching other team members how to use the lean and statistical tool boxes. Techniques for preventing quality problems utilizing the techniques of Design for Six Sigma (DFSS) will also be presented.

19-623-2 Six Sigma for Green Belt (11 credits)

Designed for those who wish to learn about the concepts of lean manufacturing and six sigma at the green belt level. Participants will learn tools and techniques from all aspects of the DMAIC process and participate on or lead a lean six sigma project team within a local business. The highlight of this program is the practical problem solving, team building, and use of continuous improvement tools while participating in the capstone team project.

19-196-8 Supervisory Essentials (9 credits)

This certificate program is designed for those wishing to enhance their interpersonal skills and understanding of leadership, supervision, and team building in their work place.

ENERGY

19-601-1 Residential HVAC Installer (18 credits)

This certificate provides students with the entry level knowledge and skills to gain employment as a residential HVAC installation technician. Students will learn the fundamentals of heating and cooling systems, airflow, sheet metal and pipe fitting work, as well as the steps necessary for performing a residential heating and cooling system installation.

19-624-1 Radiation Safety Technician (28 credits)

Radiation Safety Technician is an occupational field that specializes in the control and proper use of radiation and radioactive materials in order to protect fellow workers from ionizing radiation. Radiation safety in today's health care, energy, manufacturing, defense, and research fields depends on qualified technicians to perform many technical duties. Technicians play a vital role in the health, safety, and well being of their coworkers, patients, the public, and the environment by implementing compliance with state and federal laws regulating the use of radioactive materials. All of the classes are offered online and include web stream lectures.

HEALTH

19-536-1 Employed Pharmacy Technician (17 credits)

Designed for pharmacy technicians who have been trained on the job and have worked for at least two years. These courses offer broad information in key areas that will help you understand and perform better in your work role. Completion of the certificate offers confidence when taking the national certification exam. Classes are completed online. Take one or all six courses. Start dates vary.

HOSPITALITY & TOURISM

19-109-1 Foundation of Meeting and Event Planning (15 credits)

This certificate is designed to provide the training and preparation to be successful in meetings and events. You'll learn how to plan, promote and conduct effective meetings, conferences and special events, manage financials, address security issues and other risk factors so you can put on fantastic events for your employer. Earn a valuable certificate in just fifteen credits, which can make you even more attractive to potential employers or advancement opportunities.

19-109-2 Hospitality Management Professional (19 credits)

This is designed for people who wish to receive education/training in a management career within the hotel/hospitality industry. The coursework emphasizes theory and application of skills needed for mid-management and supervisory level of employment in food and lodging facilities.

19-109-11 Foundation of Food and Beverage Management (16 credits)

This Foundation of Food & Beverage Management certificate is designed for people entering/preparing for a career managing restaurants and other food and beverage facilities. The course work emphasizes theory and application of skills needed for an entry supervisory level position in the food and beverage industry.

19-109-10 Foundation of Hotel Management (17 credits)

This Foundation of Hotel Management certificate is designed for people entering/preparing for a career managing hotels and other lodging facilities. The course work emphasizes theory and application of skills needed for an entry supervisory level position in the hotel industry.

INFORMATION TECHNOLOGY

19-150-1 Industrial Networking (13 credits)

Trains the student to understand data networks and understand programmable controllers in a manufacturing setting. The value of this certificate is that it allows the student to understand both the data network side of manufacturing and the networked machinery that relies heavily on IT infrastructure.

19-150-2 Servers and Networking (20 credits)

Introduces the student to Cisco networks, the Microsoft server operating system and virtualization systems. This certificate prepares the student well to take the Cisco CCENT certification exam.

LEGAL

19-110-2 Paralegal Post-Baccalaureate (21 credits)

You'll learn to provide assistance to lawyers by performing specifically designated legal work in various fields of law, analyze and solve legal procedural problems, resolve ethical issues by applying legal rules of professional responsibility, analyze and draft legal documents, locate legal research material using both traditional and computerized techniques, explain and use proper citation format, generate work product using a variety of computer software typical in a modern law office, apply substantive legal knowledge to solve legal problems, and locate facts and evidence through interviews and investigations.



MARKETING & GRAPHIC DESIGN

19-201-1 Adobe Creative Cloud (14 credits)

This certificate focuses on the Adobe Suite software. Courses include Photoshop, Illustration, InDesign and Multimedia Concepts.

19-201-2 Digital Media (14 credits)

This certificate focuses on the creation and maintenance of web sites/pages. The courses in this certificate include Design Fundamentals, Photoshop, Web Development 1, Web Development Advanced and Multimedia Concepts.

19-201-3 Digital Print Design (14 credits)

This certificate focuses on the creation of brochures, packaging, signage, etc. The courses in this certificate include Design Fundamentals, Photoshop, Illustration, InDesign and Typography.

SOFTWARE LEARNING CENTER

19-103-2 Microsoft® Office Integration (9 credits)

You can earn a 9-credit certificate designed to develop specialized skills that can be a real advantage in the workplace. This real-world credential will prove your proficiency in a multitude of Microsoft Office programs and will be a big bonus on your resume.

19-109-3 Microsoft® Office Introduction (4 credits)

The Microsoft Office Introduction Certificate is designed for students who wish to demonstrate to employers that they have a basic knowledge of the core Microsoft Office software programs. This certificate will provide knowledge in creating a basic document, workbook, presentation, and database; and modifying existing files. A grade of C or better is required in each class. The software is available for free after registration in the course. You will need to purchase the Cengage Unlimited access code which is needed for the course.

PUBLIC SAFETY

19-531-1 Registered Nurse to EMT (2 credits)

Designed for the Wisconsin licensed Registered Nurses to complete the training required to be eligible for challenging the National Registry of EMTs basic level examination. This course focuses on the prehospital environment and the techniques and skills needed to assess and manage acute medical and trauma emergencies.

ABOUT THE PROGRAM

The Ophthalmic Medical Assistant program allows students to work at their own pace to gain the skills and knowledge necessary for employment in ophthalmic practices, optometric practices, and retail optical settings. Students apply technical skills to perform prescreening and specialty testing, assist with dispensing glasses and contact lenses, and perform office management duties including maintaining patient information, and billing and insurance processes.

PROGRAM OUTCOMES

- Apply technical skills to perform eye care prescreening and specialty testing procedures on patients accurately and efficiently.
- Apply technical skills to educate and assist patients with glasses and/or contact lenses to meet their eye health and visual needs.
- Perform business office procedures such as maintaining appointment schedules, maintaining patient records, processing insurance reimbursement, and billing patients.
- Demonstrate professional ethics, honesty, and respect when dealing with doctors, patients, and co-workers.
- Communicate clearly and professionally in both written and oral formats.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- This program is Competency-Based. Competency-Based Education (CBE) is learning at your own pace by mastering competencies through demonstration. Once all competencies for a program have been assessed and mastered, students will earn a certificate, diploma, or degree.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
31516320	Basic Optical Concepts	1
31516316	Frame Characteristics	1
31516317	Eyewear Adjustment	1
31516318	Ophthalmic Lens Selections	1
31516319	Frame Styling and Purchasing	1
31516321	Lens Power and Protection	1
31516322	Compare Multifocal Lenses	1
		7
Term 2		
31516349	Ophthalmic Prism	1
31516331	Front Desk and Patient Triage	1
31516351	Administration Clinical	1
31509316	Medical Law - Part 1	1
31509317	Medical Law - Part 2	1
10501115	Medical Terminology - Part 1	1
10501116	Medical Terminology - Part 2	1
10501117	Medical Terminology - Part 3	1
31509311	Human Body - Part 1	1
31509312	Human Body - Part 2	1
31509313	Human Body - Part 3	1
31501305	Pharmacology - Part 1	1
31501306	Pharmacology - Part 2	1
		13
Term 3		
31516307	Ocular Diseases and Treatment	1
31516332	Patient History and Vision	1
31516333	Functional Vision	1
31516334	Refractometry	1
31516308	Cornea Evaluation	1
31516309	Tear Evaluation	1
31516352	Patient Pre-testing Clinical	1
31516341	Intraocular Pressure	1
31516342	Specialty Glaucoma Testing	1
31516336	Soft Contact Lens Wear	1
31516337	Rigid Contact Lens Wear	1
31516344	Specialty Tests and Education	1
		12

TOTAL 32

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

ADMINISTRATION CLINICAL...prepares the learner to demonstrate practice administration. PREREQUISITES: 31516331 Front Desk and Patient Triage and 31516317 Eyewear Adjustment and CONDITION: CBE Ophthalmic Assessment

BASIC OPTICAL CONCEPTS...prepares the learner to evaluate basic optical concepts. CONDITION: CBE Ophthalmic Assessment

COMPARE MULTIFOCAL LENSES...prepares the learner to measure and compare multifocal lenses. CONDITION: CBE Ophthalmic Assessment

CORNEA EVALUATION...prepares the learner to evaluate the cornea. CONDITION: CBE Ophthalmic Assessment

EYEWEAR ADJUSTMENT...prepares the learner to demonstrate eyewear alignment and adjustment. CONDITION: CBE Ophthalmic Assessment

FRAME CHARACTERISTICS...prepares the learner to assess frame characteristics. CONDITION: CBE Ophthalmic Assessment

FRAME STYLING AND PURCHASING...prepares the learner to demonstrate frame styling and purchasing while operating a dispensary. CONDITION: CBE Ophthalmic Assessment

FRONT DESK AND PATIENT TRIAGE...prepares the learner to investigate front desk responsibilities and role in patient triage. CONDITION: CBE Ophthalmic Assessment

FUNCTIONAL VISION...prepares the learner to measure functional vision. CONDITION: CBE Ophthalmic Assessment

HUMAN BODY - PART 1...prepares the learner to explore the structural organization of the human body by analyzing the causes, signs, symptoms, diagnosis, treatment and prevention of diseases and disorders of the digestive system, urinary system, reproductive system, nervous system, and mental health. CONDITION: CBE Ophthalmic Assessment

HUMAN BODY - PART 2...prepares the learner to analyze the causes, signs, symptoms, diagnosis, treatment and prevention of diseases and disorders of the cardiovascular system, respiratory system, lymph and immune system. COREQUISITE: 31509311 Human Body - Part 1 and CONDITION: CBE Ophthalmic Assessment

HUMAN BODY - PART 3...prepares the learner to analyze the causes, signs, symptoms, diagnosis, treatment and prevention of diseases and disorders of the musculoskeletal system, integumentary system, special senses, and endocrine system. COREQUISITE: 31509312 Human Body - Part 2

INTRAOCULAR PRESSURE...prepares the learner to measure intraocular pressure. CONDITION: CBE Ophthalmic Assessment

LENS POWER AND PROTECTION...prepares the learner to measure ophthalmic lens power and the importance of ocular protection. CONDITION: CBE Ophthalmic Assessment

MEDICAL LAW - PART 1...prepares the learner to explain ethical and legal principles as they apply to medical legislation and regulation. CONDITION: CBE Ophthalmic Assessment

MEDICAL LAW - PART 2...prepares the learner to create policies and procedures of a medical organization that follows the AAMA guidelines. COREQUISITE: 31509316 Medical Law - Part 1 and CONDITION: CBE Ophthalmic Assessment

MEDICAL TERMINOLOGY - PART 1...apply the rules of Medical Language as they relate to the body as a whole, as well as the digestive, urinary, reproductive, and neurologic systems. CONDITION: CBE Ophthalmic Assessment

MEDICAL TERMINOLOGY - PART 2...apply the rules of Medical Language as they relate to the circulatory, respiratory, and immunologic systems. COREQUISITE: 10501116 Medical Terminology - Part 1 and CONDITION: CBE Ophthalmic Assessment

MEDICAL TERMINOLOGY - PART 3...apply the rules of Medical Language as they relate to musculoskeletal, integumentary, sensory, and endocrine systems. COREQUISITE: 10501116 Med Term - Part 2 and CONDITION: CBE Ophthalmic Assessment

OCULAR DISEASES AND TREATMENT...prepares the learner to differentiate ocular diseases, pharmaceuticals and therapeutics. CONDITION: CBE Ophthalmic Assessment

OPHTHALMIC LENS SELECTIONS...prepares the learner to compare ophthalmic lens selections. CONDITION: CBE Ophthalmic Assessment

OPHTHALMIC PRISM...prepares the learner to measure ophthalmic prism and its ocular purpose. CONDITION: CBE Ophthalmic Assessment

PATIENT HISTORY AND VISION...prepares the learner to collect baseline patient history and visual acuity. CONDITION: CBE Ophthalmic Assessment

PATIENT PRE-TESTING CLINICAL...prepares the learner to demonstrate patient pre-testing. PREREQUISITE: 31516351 Administration Clinical and CONDITION: CBE Ophthalmic Assessment

PHARMACOLOGY - PART 1...prepares the learner to apply pharmacology principles to therapeutic medications used to treat musculoskeletal, endocrine, nervous, integumentary, sensory, mental, and behavior health systems. CONDITION: CBE Ophthalmic Assessment

PHARMACOLOGY - PART 2...prepares the learner to apply pharmacology principles to therapeutic medications used to treat gastrointestinal, cardiovascular, respiratory, urinary, reproductive, lymphatic, immune systems and blood. COREQUISITE: 31501305 Pharmacology - Part 1 and CONDITION: CBE Ophthalmic Assessment

REFRACTOMETRY...prepares the learner to measure refractive error.

RIGID CONTACT LENS WEAR...prepares the learner to justify rigid contact lens wear. CONDITION: CBE Ophthalmic Assessment

SOFT CONTACT LENS WEAR...prepares the learner to justify soft contact lens wear. CONDITION: CBE Ophthalmic Assessment

SPECIALTY GLAUCOMA TESTING...prepares the learner to assess specialty glaucoma testing. CONDITION: CBE Ophthalmic Assessment

SPECIALTY TESTS AND EDUCATION...prepares the learner to demonstrate specialty testing and patient education. COREQUISITE: 31516352 Patient Pre-testing Clinical and CONDITION: CBE Ophthalmic Assessment

TEAR EVALUATION...prepares the learner to evaluate tear quality. CONDITION: CBE Ophthalmic Assessment

Program Number 10-531-1
Associate Degree in Applied Science • Varies

ABOUT THE PROGRAM

Life can bring about unfortunate events of medical or traumatic emergency; a Paramedic is a highly trained and skilled medical professional ready to assist those in need. Paramedics integrate Advanced Life Support treatment measures into the challenging acute care environment. The Associate Degree Paramedic (ADP) is the individual that has exceeded minimum professional requirements and has furthered their education beyond the entry level technical diploma to gain additional knowledge and capabilities to better serve their region.

PROGRAM OUTCOMES

- Prepare for incident response and EMS operations.
- Integrate pathophysiological principles and assessment findings for a variety of patient encounters.
- Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters.
- Communicate effectively with others.
- Demonstrate professional behavior.
- Meet state and national competency requirements for paramedic credentialing.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned advisor to discuss motor vehicle record, plan your first semester schedule, review your entire plan of study, and discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

FUTURE SEMESTER ENROLLMENT STEPS

- Submit Wisconsin Emergency Medical Technician License.

APPROXIMATE COSTS

• \$136.50 per credit tuition (WI resident) plus \$8.10 per credit student activity fee. \$10 per credit online or hybrid fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Students successfully completing Terms 1 and 2 coursework of the program are able to sit for the National Registry Paramedic exam. The remaining general education and science courses can be completed afterwards to complete the Associate Degree requirements for graduation. The Lakeshore Technical College Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). 25400 US Highway 19 N., Suite 158, Clearwater, FL 33756. Phone: 727-210-2350. Web: www.caahep.org.

Lakeshore Technical College's Paramedic Technician program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examination, or licensure for other states.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
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Term 1

10531911	EMS Fundamentals	2
10531912	Paramedic Medical Principles	4
10531913	Advanced Patient Assessment Principles	3
10531914	Advanced Prehospital Pharmacology	3
10531915	Paramedic Respiratory Management	2
10531916	Paramedic Cardiology I	1
10531926	Paramedic Essentials 1	1
10531930	Paramedic Clinical I	1
		17

Term 2 (Summer)

10531932	Paramedic Cardiology 2	3
10531918	Advanced Emergency Resuscitation	1
10531922	EMS Operations	1
10531920	Paramedic Trauma	3
10531928	Paramedic Clinical 2	2
10531927	Paramedic Essentials 2	1
		11

Term 3

10531919	Medical Emergencies	4
10531921	Special Patient Populations	3
10531923	Paramedic Capstone	1
10531933	Paramedic Essentials 3	1
10531929	Paramedic Field Clinical	2
10531931	Paramedic Internship	1
		12

Term 4

10804107	College Mathematics	3
10806177	General Anatomy & Physiology	4
10801195	Written Communication	3
10809198	Introduction to Psychology	3
		13

Term 5

10806179	Advanced Anatomy & Physiology	4
10801196	Oral/Interpersonal Communication	3
		7

TOTAL 60

To contact CoAEMSP:
 8301 Lakeview Parkway
 Suite 111-312
 Rowlett, TX 75088
 214-703-8445
 Fax 214-703-8992
www.coaemsp.org

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ADVANCED ANATOMY AND PHYSIOLOGY...is the second semester in a two-semester sequence in which normal human anatomy and physiology are studied using a body systems approach with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Instructional delivery within a classroom and laboratory setting. Experimentation within a science lab will include analysis of cellular metabolism, the individual components of body systems such as the nervous, neuromuscular, cardiovascular, and urinary. Continued examination of homeostatic mechanisms and their relationship to fluid, electrolyte, acid-base balance and blood. Integration of genetics to human reproduction and development are also included in this course. PREREQUISITE: 10806177 General Anatomy & Physiology or equivalent

ADVANCED EMERGENCY RESUSCITATION...provides ACLS and PALS knowledge and skills preparing the student in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri-arrest with intervention to prevent respiratory and/or cardiac arrest if possible. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531916 Paramedic Cardiology

ADVANCED PATIENT ASSESSMENT PRINCIPLES...provides knowledge of scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531912 Paramedic Medical Principles

ADVANCED PREHOSPITAL PHARMACOLOGY...provides student with comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the health of the patient. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531913 Advanced Patient Assessment Principles

COLLEGE MATHEMATICS...is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic and algebra; 2) geometry and trigonometry; and 3) probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent

EMS FUNDAMENTALS...provides comprehensive knowledge of EMS systems, safety, well-being, legal issues and ethical issues with intended outcome of improving EMS personnel, patients and the community. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and PREREQUISITES: 10531102 EMT Basic or 30531301 EMT Part 1 or EMT WI License

EMS OPERATIONS...provides the knowledge of operational roles and responsibilities to ensure patient, public and EMS personnel safety. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531918 Advanced Emergency Resuscitation

GENERAL ANATOMY AND PHYSIOLOGY...examines basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare health care professionals who need to apply basic concepts of whole body anatomy and physiology to informed decision-making and professional communication with colleagues and patients. PREREQUISITE: 10806134 General Chemistry or equivalent and Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

MEDICAL EMERGENCIES...provides the student the skills to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a treatment plan for an acutely injured patient. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531918 Advanced Emergency Resuscitation

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PARAMEDIC CAPSTONE...provides the final opportunity to incorporate knowledge and skills through labs and scenario-based practice and evaluations prior to taking the NREMT written and practical exams. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531922 EMS Operations

PARAMEDIC CARDIOLOGY 1...provides the principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and a plan for a patient with a cardiovascular complaint. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531915 Paramedic Respiratory Management

PARAMEDIC CARDIOLOGY 2...continues the paramedic's knowledge of cardiology. Incorporates basic and advanced electrocardiogram rhythm interpretation as well as introduces students to Advanced Cardiovascular Life Support (ACLS).

PARAMEDIC CLINICAL 1...allows paramedics their first experiences providing advanced level skills and assessments on patients in a healthcare setting. Students will be assigned to an area hospital to begin their clinical training and meeting their assigned clinical competencies. Activities may include rotations within hospital emergency departments, operating rooms, intensive care units, and/or rotations with lab or respiratory staff. COREQUISITE: 10531911 EMS Fundamentals and CONDITION: 15311 Paramedic Technician or 105312 Fire Medic or 315311 EMT Paramedic program admission requirements met

PARAMEDIC CLINICAL 2...provides student with the opportunity to enhance their learning through the skills practice in a health care environment experience with actual patients under the supervision of approved preceptors or high-fidelity human patient simulator. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic Program Requirements Met and COREQUISITE: 10531930 Paramedic Clinical 1

PARAMEDIC ESSENTIALS 1...reinforces student learning through practice of paramedicine in a controlled supervised environment utilizing hands on skills performed on simulated live patients and high-fidelity manikins and anatomy models. The student will apply assessment and skill knowledge while demonstrating paramedic level skills in a variety of scenarios and environments.

PARAMEDIC ESSENTIALS 2...reinforces student learning through practice of paramedicine in a controlled supervised environment utilizing hands on skills performed on simulated live patients and high-fidelity manikins and anatomy models. The student will evaluate patient presentations in short scenarios, formulate and reassess treatment plans while performing skills need to carry out patient treatments. Students will participate in learning and demonstrate first responder health and wellbeing during this section. CONDITION: 105311 Paramedic Technician or 105312 Fire Medic or 315311 EMT Paramedic program admission requirements met

PARAMEDIC ESSENTIALS 3...provides a continued growth in patient assessment, treatment plans and skills working toward the mastery of paramedic level patient care. The focus of this sections will include complete patient care, team management, responder health and wellbeing, and daily operations. Students will demonstrate mastery of knowledge and skills in classroom activities and extended scenarios.

PARAMEDIC FIELD CLINICAL...provides student with the opportunity to enhance their learning through the practice in the prehospital environment with actual patients under the supervision of approved preceptors. Students will be assigned to an area Paramedic ambulance service provider to incorporate their previously acquired capabilities into prehospital patient care. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic Program Requirements Met and COREQUISITE: 10531918 Advanced Emergency Resuscitation

PARAMEDIC INTERNSHIP...demonstrates to paramedic students their team leadership capabilities while assessing, formulating treatments plans, and delegating tasks to their EMS team members. Students will be assigned to an area paramedic ambulance service to complete requirements during this capstone field internship.

PARAMEDIC MEDICAL PRINCIPLES...provides the knowledge of anatomy, physiology and pathophysiology of major human systems while also introducing the students to shock, immunology and bleeding. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531911 EMS Fundamentals

PARAMEDIC RESPIRATORY MANAGEMENT...provides specific knowledge pertaining to the respiratory system and to ensure the student is prepared to formulate a field impression and implement a comprehensive treatment plan for a respiratory complaint. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531914 Advanced Prehospital Pharmacology

PARAMEDIC TRAUMA...provides the student the skills to integrate assessment findings with principles of anatomy, physiology, epidemiology and pathophysiology to formulate a field impression and implement a treatment plan for an acutely injured patient. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met

SPECIAL PATIENT POPULATIONS...provides the student the skills to integrate assessment findings with principles of anatomy, physiology, epidemiology and pathophysiology to formulate a field impression and implement a treatment plan for patient with special needs. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531920 Paramedic Trauma

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 61-509-2
Certificate • 7 credits

ABOUT THE PROGRAM

The Patient Services Specialist Certificate prepares students to perform medical support duties using specific knowledge of medical terminology, customer service, and technology within a hospital, clinic, or laboratory. Duties may include scheduling appointments, billing patients, compiling and recording medical charts, reports and correspondence as well as schedule and confirm patient diagnostic appointments, surgeries, or medical consultations.

PROGRAM OUTCOMES

- Communicate professionally with clients, families and co-workers
- Perform basic computer functions utilized in the healthcare setting
- Demonstrate understanding of medical terminology and the language of medicine

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete Student Success Questionnaire.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
COURSES		
10501101	Medical Terminology	3
10501104	Culture of Healthcare	2
10501107	Digital Literacy for Healthcare	2
TOTAL		7

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.



CULTURE OF HEALTHCARE...is an introduction to the culture of healthcare for students interested in working in various healthcare settings. Learners examine professionalism, interpersonal and written communication skills, problem-solving skills, patient privacy, and confidentiality issues as they relate to healthcare.

DIGITAL LITERACY FOR HEALTHCARE...focuses on the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined.

MEDICAL TERMINOLOGY...focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

ABOUT THE PROGRAM

The Associate Degree in Pharmacy Services Management prepares individuals to advance their roles as Pharmacy Technicians or to transition into related roles in the work place. Pharmacy Technicians are able to provide a wide range of duties in the pharmacy, and will enhance their technical skills through additional knowledge in third party payment processing and related reimbursement issues, staff scheduling processes, customer service, and enhancing store sales. Marketing, management, and business operations are also introduced in this degree. The program culminates in a capstone course that provides the student with the opportunity to apply their education to a real-life situation through increasing store sales, creating efficient operations, improving management practices, or enhancing service to patients. Graduates will find positions as Senior Pharmacy Technicians, Assistant Store Managers, Trainers, Pharmacy Technician Managers, and many related positions in hospital or retail pharmacies or related organizations.

PROGRAM OUTCOMES

- Perform all pharmacy technician functions.
- Incorporate into practice professional ethics, laws, regulations, and policies established by the licensing state and regulatory agencies (Pharmacy Examining Board, FDA, DEA).
- Pursue lifelong professional growth and development through self-directed learning, participation in professional organizations, and continuing education.
- Maintain an awareness of developments in the pharmacy and management fields as they relate to job responsibilities.
- Manage human resources and employee development.
- Resolve conflict and build teams.
- Implement a mission and goals.
- Demonstrate critical thinking and problem solving skills.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Pharmacy Technician Program Handbook form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
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Catalog No.	Class Title	Credit(s)
Term 1		
10501101	Medical Terminology	3
10501102	Health Insurance and Reimbursement	3
10536110	Pharmaceutical Calculations	3
10536113	Pharmacy Business Applications	3
10536115	Pharmacy Law	2
10536120	Fundamentals of Reading Prescriptions	1
10536122	Pharmacology	3
		18
Term 2		
10536125	Pharmacy Drug Distribution Systems	2
10536126	Pharmacy Parenteral Admixtures	3
10801196	Oral/Interpersonal Communication	3
10536143	Pharmacy Hospital Clinical OR 10536142	2
	Pharmacy Community Clinical-Adv (2 cr)	
10536141	Pharmacy Computer Lab	2
10536138	Pharmacy Community Clinical	2
		14
Term 3		
10104102	Principles of Marketing OR 10182108	3
	Purchasing	
10801195	Written Communication OR 10801141	3
	Introduction to Mass Communications OR	
	10801136 English Composition 1	
10809198	Introduction to Psychology	3
10809195	Economics	3
10806112	Principles of Sustainability	3
10103121	Excel - Level 1	1
		16
Term 4		
10182102	Service Operations Management OR	3
	10102110 Introduction to Business 3 (cr)	
10196191	Supervision	3
10536150	Advanced Pharmacy Services Applications	3
10809166	Introduction to Ethics: Theory & Application	3
	OR 10809172 Introduction to Diversity	
	Studies	
		12
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ADVANCED PHARMACY SERVICES APPLICATIONS...allows the learner to integrate skills learned in the Pharmacy Services Management courses and apply them to the pharmacy workplace. Areas include staff training, development, supervision, and scheduling; customer service; PBM processing and claims rejection management; and improving efficiency of operations, maximizing profits, and increasing sales. PREREQUISITE: All courses in the Associate Degree plan need to be completed prior to this course. PREREQUISITES: 10536143 Pharmacy Hospital Clinical and 10536138 Pharmacy Community Clinical and CONDITION: 105361 Pharmacy Services Mng

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

FUNDAMENTALS OF READING PRESCRIPTIONS...prepares the learner to work in a community or hospital pharmacy by exploring the role of a pharmacy technician within the healthcare team; examining each step in the prescription filling process; and identifying the key top 200 drugs by brand and generic name and therapeutic class. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Mng admission requirements met and Reading placement assessment equivalent

HEALTH INSURANCE AND REIMBURSEMENT...provides the learner with an understanding of the various types of insurance and managed care plans, and the cycle of medical claims processing. The learner will review cases, develop critical thinking skills in analyzing information, and selecting processes for reimbursement success.

INTRODUCTION TO ETHICS: THEORY AND APPLICATION...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

MARKETING, PRINCIPLES OF...introduces the student to the consumer decision process model, the bases used to segment a market, basic concepts about goods, services, and ideas, the nature of supply chain and distribution, integrated marketing communications, and the stages of the product life cycle and their impact on the marketing mix. COREQUISITE: 10104104 Selling Strategies or CONDITION: 101023 Business Management enrollment requirements met

MEDICAL TERMINOLOGY...focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PHARMACEUTICAL CALCULATIONS...prepares the learner to enlarge and reduce formulas and solve proportions, dilutions, allegations, and other calculations pertinent to the preparation of pharmaceuticals using metric, apothecary, avoirdupois, and household measuring systems. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management or 195316 Employed Pharmacy Technician admission requirements met

PHARMACOLOGY...enhances the learner's ability to act and react appropriately in the pharmacy by learning how drugs work through examination of the anatomy, physiology, pathophysiology, and drug therapy for each of the major systems. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management or 615361 Community Retail Pharmacy Technician or 195361 Employed Pharmacy Technician admissions requirements met and Reading placement assessment equivalent

PHARMACY BUSINESS APPLICATIONS...prepares the learner to utilize pharmaceutical business terminology, procedures, customer service, record keeping, purchasing procedures, inventory control systems, pricing, merchandising, reference materials, ethics, roles, responsibilities, and relationships with patients and coworkers. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management program requirements met and Reading placement assessment equivalent

PHARMACY COMMUNITY CLINICAL...provides hands-on experience in a community pharmacy for 108 hours during quarter two. Areas of instruction include interpretation of prescriptions, entering prescriptions on computer, patient profiles, correctly filling and labeling prescriptions, billing patient and third parties, customer service, over-the-counter medications, purchasing, checking in deliveries, and inventory control, compounding and patient confidentiality. PREREQUISITES: 10536120 Fund of Rdg Prescr, 10536113 Pharm Bus Appls, 10501102 Hlth Ins & Reim, and 10536110 Pharm Calc, and CONDITION: 315361 Pharmacy Tech, 105361 Pharmacy Services Mgmt or 615361 Community Retail Pharmacy Tech admission requirements met

PHARMACY COMPUTER LAB...expands the learner's ability to enter prescription orders and familiarizes learner with a variety of pharmacy software features, including updating pharmacy databases, running reports, and billing. This course is offered in a self-paced format. PREREQUISITES: 10536120 Fundamentals of Reading Prescriptions and CONDITION 315361 Pharmacy Technician or 105361 Pharmacy Services Management admissions requirements met

PHARMACY DRUG DISTRIBUTION SYSTEMS...is an introductory study of the basic drug distribution systems used in community and institutional pharmacy, including automation technology, pharmacist and pharmacy technician roles, and dispensing considerations. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management admission requirements met

PHARMACY HOSPITAL CLINICAL...provides the learner with the skills to prepare parenteral admixtures, fill medication carts and unit-dose drawers, control inventory, package medications, and maintain patient records in the hospital setting. PREREQUISITES: 10536110 Pharmacy Calc; COREQUISITES: 10536138 Pharmacy Community Clinical, 10536141 Pharmacy Computer Lab; 10536126 Pharmacy Parenteral Admixtures and CONDITION 315361 Pharmacy Tech or 105361 Pharmacy Svcs Management admission req met

PHARMACY LAW...introduces the learner to federal and state regulations that apply to pharmacy practice. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management or 195361 Employed Pharmacy Technician admissions requirements met and Reading placement assessment equivalent

PHARMACY PARENTERAL ADMIXTURES...provides the learner with the skills to utilize aseptic technique in vertical and horizontal laminar flow hoods for preparation of solutions and medications to be administered intravenously, intramuscularly, subcutaneously, and intradermally to patients. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management or 195361 Employed Pharmacy Technician admission requirements met

PRINCIPLES OF SUSTAINABILITY...prepares students to develop sustainable literacy, analyze interconnections among physical and biological sciences and environmental systems, summarize effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal/recycling in the U.S., and analyze approaches used by your community. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

SERVICE OPERATIONS MANAGEMENT...introduces the student to the basic coverage of the concepts and current issues in service operation management. Topics include the value equation in operations management; understanding services; building the service system; operating the service system; enterprise resource management (ERP) and supply chain management concepts in the service sector.

SUPERVISION...allows the learner to apply the skills and tools necessary to perform the functions of a frontline leader. Students learn the application of strategies and transition to a contemporary supervisory role including day-to-day operations, controlling, staffing, leadership, problem-solving, team skills, motivation, and training.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

If you are ill or injured, you have access to an enormous variety of therapeutic medications, and you trust your pharmacy to correctly interpret and fill your prescriptions. Pharmacy technicians contribute to our safety by assisting pharmacists in a variety of technical tasks. If you are attentive to detail, organized, a good communicator, and like math, science, and working with people, a career as a pharmacy technician may be your prescription for success.

PROGRAM OUTCOMES

- Demonstrate personal/interpersonal knowledge and skills in the practice of pharmacy.
- Demonstrate foundational professional knowledge and skills for the practice of pharmacy.
- Prepare prescriptions/medication orders and pharmaceutical products for dispensing, distribution, and disposal.
- Compound sterile and nonsterile medications.
- Follow established policies and procedures for procurement, billing, reimbursement and inventory management.
- Utilize pharmacy technology and informatics.
- Adhere to state and federal regulations governing the practice of pharmacy.
- Apply the principles of quality assurance to the practice of pharmacy.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Pharmacy Technician Program Handbook form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- LTC offers its Pharmacy Technician program in cooperation with technical colleges across the state. As a pharmacy technician student, you will attend live, interactive TV classes sent from LTC to your local technical college or home computer; receive laboratory training in local pharmacies; participate in real-world, hands-on training during a 8-week clinical program; and take general studies classes at your local technical college.
- The Pharmacy Technician program conducted at Lakeshore Technical College, Cleveland, WI is accredited by the American Society of Health-System Pharmacists.
- Must have reliable internet service.

RELATED PROGRAMS

- Pharmacy Services Management Associate Degree

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10501101	Medical Terminology	3
10501102	Health Insurance and Reimbursement	3
10536110	Pharmaceutical Calculations	3
10536113	Pharmacy Business Applications	3
10536115	Pharmacy Law	2
10536120	Fundamentals of Reading Prescriptions	1
10536122	Pharmacology	3
		18
Term 2		
10536125	Pharmacy Drug Distribution Systems	2
10536126	Pharmacy Parenteral Admixtures	3
10801196	Oral/Interpersonal Communication	3
10536143	Pharmacy Hospital Clinical OR 10536142	2
	Pharmacy Community Clinical-Adv (2cr)	
10536141	Pharmacy Computer Lab	2
10536138	Pharmacy Community Clinical	2
		14
		TOTAL 32

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

FUNDAMENTALS OF READING PRESCRIPTIONS...prepares the learner to work in a community or hospital pharmacy by exploring the role of a pharmacy technician within the healthcare team; examining each step in the prescription filling process; and identifying the key top 200 drugs by brand and generic name and therapeutic class. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management admission requirements met and Reading placement assessment equivalent

HEALTH INSURANCE AND REIMBURSEMENT...provides the learner with an understanding of the various types of insurance and managed care plans, and the cycle of medical claims processing. The learner will review cases, develop critical thinking skills in analyzing information, and selecting processes for reimbursement success.

MEDICAL TERMINOLOGY...focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PHARMACEUTICAL CALCULATIONS...prepares the learner to enlarge and reduce formulas and solve proportions, dilutions, allegations, and other calculations pertinent to the preparation of pharmaceuticals using metric, apothecary, avoirdupois, and household measuring systems. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management or 195316 Employed Pharmacy Technician admission requirements met

PHARMACOLOGY...enhances the learner's ability to act and react appropriately in the pharmacy by learning how drugs work through examination of the anatomy, physiology, pathophysiology, and drug therapy for each of the major systems. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management or 615361 Community Retail Pharmacy Technician or 195361 Employed Pharmacy Technician admissions requirements met and Reading placement assessment equivalent

PHARMACY BUSINESS APPLICATIONS...prepares the learner to utilize pharmaceutical business terminology, procedures, customer service, record keeping, purchasing procedures, inventory control systems, pricing, merchandising, reference materials, ethics, roles, responsibilities, and relationships with patients and coworkers. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management program requirements met and Reading placement assessment equivalent

PHARMACY COMMUNITY CLINICAL...provides hands-on experience in a community pharmacy for 108 hours during quarter two. Areas of instruction include interpretation of prescriptions, entering prescriptions on computer, patient profiles, correctly filling and labeling prescriptions, billing patient and third parties, customer service, over-the-counter medications, purchasing, checking in deliveries, and inventory control, compounding and patient confidentiality. PREREQUISITES: 10536120 Fund of Rdg Prescr, 10536113 Pharm Bus Appls, 10501102 Hlth Ins & Reim, and 10536110 Pharm Calc, and CONDITION: 315361 Pharmacy Tech, 105361 Pharmacy Services Mgmt or 615361 Community Retail Pharmacy Tech admission requirements met

PHARMACY COMPUTER LAB...expands the learner's ability to enter prescription orders and familiarizes learner with a variety of pharmacy software features, including updating pharmacy databases, running reports, and billing. This course is offered in a self-paced format. PREREQUISITES: 10536120 Fundamentals of Reading Prescriptions and CONDITION 315361 Pharmacy Technician or 105361 Pharmacy Services Management admissions requirements met

PHARMACY DRUG DISTRIBUTION SYSTEMS...is an introductory study of the basic drug distribution systems used in community and institutional pharmacy, including automation technology, pharmacist and pharmacy technician roles, and dispensing considerations. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management admission requirements met

PHARMACY HOSPITAL CLINICAL...provides the learner with the skills to prepare parenteral admixtures, fill medication carts and unit-dose drawers, control inventory, package medications, and maintain patient records in the hospital setting. PREREQUISITES: 10536110 Pharmacy Calc; COREQUISITES: 10536138 Pharmacy Community Clinical, 10536141 Pharmacy Computer Lab; 10536126 Pharmacy Parenteral Admixtures and CONDITION 315361 Pharmacy Tech or 105361 Pharmacy Services Management admission requirements met

PHARMACY LAW...introduces the learner to federal and state regulations that apply to pharmacy practice. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management or 195361 Employed Pharmacy Technician admissions requirements met and Reading placement assessment equivalent

PHARMACY PARENTERAL ADMIXTURES...provides the learner with the skills to utilize aseptic technique in vertical and horizontal laminar flow hoods for preparation of solutions and medications to be administered intravenously, intramuscularly, subcutaneously, and intradermally to patients. CONDITION: 315361 Pharmacy Technician or 105361 Pharmacy Services Management or 195361 Employed Pharmacy Technician admission requirements met

Program Number 31-543-1
Technical Diploma
ABOUT THE PROGRAM

If you're ill or injured, it's comforting to know you're in the care of highly skilled, well-educated healthcare professionals. If you work well under pressure; like math, science, communications, and problem solving; are independent; and have a strong desire to work with and help people—a career as a practical nurse may be the choice for you.

PROGRAM OUTCOMES

- Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving identity as a nurse committed to caring, advocacy, and quality care while adhering to evidence-based practice.
- Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts.
- Integrate knowledge of social, mathematical, and physical sciences, pharmacology, and disease processes while participating in clinical decision making.
- Provide patient centered care under supervision by participating in the nursing process across diverse populations and health care settings.
- Minimize risk of harm to patients, members of the health care team, and self through safe individual performance and participation in system effectiveness.
- Collaborate as an active member of the multidisciplinary health care team to provide effective patient care throughout the lifespan.
- Use information and technology to communicate, manage data, mitigate error, and support decision making.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer. Graduates may bridge into the Associate Degree Nursing (ADN) program by passing the PN-NCLEX and completing pre-reqs for the ADN program. The bridge pathway consists of two 1-credit courses (Bridge Skills and Bridge Clinical) taken over the summer. Students would then start the 6th semester ADN courses in fall.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Submit high school transcripts.
- *Submit college transcripts and test scores (optional, highly recommended): College transcripts, along with test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Read the Nursing Program Handbook and submit the signed signature page.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

FUTURE SEMESTER ENROLLMENT STEPS

- Pass HESI (Health Occupations Entrance assessment) with a 70% or higher.
- Complete and submit health form.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- Nursing Assistant skills must be attained within one semester prior to starting clinicals.
- CPR BLS Healthcare Provider certification is required prior to starting clinicals.
- Classes may run 3 to 4 evenings per week and some Saturdays.
- In order to facilitate the evening hours, the theory classes will extend to a 17 week semester in the final term of the program.
- This program has been approved by the Wisconsin Board of Nursing.
- LTC's Practical Nursing program is accredited by the Accreditation Commission for Education in Nursing, 3390 Peachtree Road N.E., Suite 1400, Atlanta, Georgia 30326, 404-975-5000 Fax 404-975-5020. www.acenursing.org

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

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Catalog No.	Class Title	Credit(s)
Term 1 (Fall)		
10809188	Developmental Psychology	3
10801195	Written Communication	3
6		
Term 2 (Spring)		
10806103	Body Structure and Function OR 31509302 Human Body in Health and Disease OR 10806177 General Anatomy & Physiology (4 cr)	3
10801196	Oral/Interpersonal Communications	3
6		
Term 3 (Summer)		
31543301	Nursing Fundamentals	2
2		
Term 4 (Fall)		
31543302	Nursing Skills	3
31543303	Nursing Pharmacology	2
31543304	Nsg: Intro Clinical Practice	2
7		
Term 5 (Spring)		
31543305	Nursing Health Alterations*	3
31543306	Nursing Health Promotions*	3
31543307	Nsg: Clinical Care Across Lifespan	2
31543308	Nsg: Intro Clinical Care Management	2
10		
		TOTAL 31

*Begins prior to start of semester.

Lakeshore Technical College's Practical Nursing program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examination, or licensure for other states.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

2021-22

BODY STRUCTURE AND FUNCTION...introduces the learner to the structures and functions of the integumentary, musculoskeletal, nervous, sensory, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

DEVELOPMENTAL PSYCHOLOGY...introduces the student to the study of human development throughout the lifespan. This course explores developmental theory and research with an emphasis on the interactive nature of the biological, cognitive, and psychosocial changes that affect the individual from conception to death. Application activities and critical thinking skills will enable students to gain an increased knowledge and understanding of themselves and others. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

NSG: CLINICAL CARE ACROSS LIFESPAN...applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized. Student must have completed all first semester and general education courses. Student needs a current TB test, flu vaccine, and professional AHA CPR card (1 and 2 person, adult, infant, and child, AED). Course requires a minimum grade of "C" or better. Some Saturday hours are required. COREQUISITE: 31543306 Nursing Health Promotion and CONDITION: 315431 Practical Nursing admission requirements met

NSG: INTRO CLINICAL CARE MANAGEMENT...applies nursing concepts and therapeutic nursing interventions to groups of clients across the lifespan. It also provides an introduction to leadership, management, and teambuilding. Student must have completed all first semester and general education courses. Student needs a current TB test, flu vaccine, and professional AHA CPR card (1 and 2 person, adult, infant, and child, AED). Course requires a minimum grade of "C" or better. COREQUISITE: 31543305 Nursing Health Alterations and CONDITION: 315431 Practical Nursing admission requirements met

NSG: INTRO CLINICAL PRACTICE...is an introductory clinical course that emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients across the lifespan. Emphasis is placed on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation, and medication administration. Student needs a current TB test, flu vaccine, and professional AHA CPR card (1 and 2 person, adult, infant, and child, AED). Student needs to be admitted to the Practical Nursing program. Course requires a minimum grade of "C" or better. CONDITION: 315431 Practical Nursing Admissions Requirements Met; and COREQUISITE: 31543301 Nursing Fundamentals and 31543302 Nursing Skills and 31543303 Nursing Pharmacology

NURSING FUNDAMENTALS...focuses on basic nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients. This course requires a minimum grade of "C" or better. PREREQUISITES: 10806103 Body Struc Func or 10806177 Gen Anatomy and Phys or 31509302 Human Body in Health & Disease, 10809188 Develop Psych, 10801196 Oral Interpersonal Comm, and 10801195 Written Comm and CONDITION: 315431 Practical Nursing Admission Requirements Met.

NURSING HEALTH ALTERATIONS...elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of clients through the lifespan, utilizing problem solving and critical thinking. This course will provide an opportunity to study conditions affecting different body systems and apply evidence-based nursing interventions. It will also introduce concepts of leadership and management. Course requires a minimum grade of "C" or better. PREREQUISITES: 31543301 Nursing Fundamentals and 31543302 Nursing Skills and 31543304 Nursing: Intro to Clinical Practice and CONDITION: 315431 Practical Nursing admission requirements met

NURSING HEALTH PROMOTION...focuses on topics related to health promotion for individuals and families throughout the lifespan. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. Recognizing the spectrum of healthy families we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyle choices for individuals of all ages. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development. Course requires a minimum grade of "C" or better. PREREQUISITES: 31543301 Nursing Fundamentals, 31543303 Nursing Pharmacology, and 31543304 Nursing: Intro to Clinical Practice and CONDITION: 315431 Practical Nursing admission requirements met

NURSING PHARMACOLOGY...introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications. Student must be admitted to the Practical Nursing program. Course requires a minimum grade of "C" or better. Do not register for this class until you are assigned a clinical slot in 543-304 in current or next semester. PREREQUISITES: 10806103 Body Struc Func or 10806177 Gen Anatomy and Phys or 31509302 Human Body in Health & Disease, 10809188 Develop Psych, 10801196 Oral Interpersonal Comm, and 10801195 Written Comm and CONDITION: 315431 Practical Nursing Admission Requirements Met

NURSING SKILLS...focuses on development of evidence-based clinical skills and physical assessment across the lifespan. Content includes mathematical calculations and conversions related to clinical skills. In addition the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach. This course requires a minimum grade of "C" or better. PREREQUISITES: 10806103 Body Struc Func or 10806177 Gen Anatomy and Phys or 31509302 Human Body in Health & Disease, 10809188 Develop Psych, 10801196 Oral Interpersonal Comm, and 10801195 Written Comm and CONDITION: 315431 Practical Nursing Admission Requirements Met

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro Rdg & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

Quality Assurance is a program for the systematic monitoring and evaluation of the various aspects of a project, service, or facility to ensure that standards of quality are being met. In simple business terms, quality assurance is the difference between success and failure. If you believe in the idea of “quality in, quality out,” and you want to play a vital role in helping an organization achieve success through quality, LTC’s Quality Assurance Technician program is the way to realize your goal.

PROGRAM OUTCOMES

- Define the operations of a business across functional areas.
- Measure the current state of an organization’s quality system.
- Analyze data and processes to meet organizational goals.
- Improve the quality system and processes.
- Control business processes.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
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Catalog No.	Class Title	Credit(s)
Term 1		
10103191	Word - Level 1	1
10103121	Excel - Level 1	1
10182131	Supply Chain Management	3
10623101	Quality Concepts	3
10623118	Lean Manufacturing Overview	3
10801195	Written Communication OR 10801136 English Composition 1	3
10809198	Introduction to Psychology OR 10809188 Developmental Psychology	3
		17
Term 2		
10809166	Introduction to Ethics OR 10806112 Principles of Sustainability	3
10801198	Speech OR 10801196 Oral/Interpersonal Communication	3
10804123	Math with Business Applications	3
10623193	ISO 9001 Internal Auditor OR 10623195 ISO 9001 Concepts	3
10809195	Economics	3
		15
Term 3		
10101155	Accounting for Professionals	3
10105128	Personal Branding	2
10196188	Project Management	3
10623110	Lean Six Sigma - Measure and Analyze	4
10623111	Lean Six Sigma - Improve & Control	4
		16
Term 4		
10182102	Service Operations Management	3
10623112	Lean Six Sigma - Implementation	3
10623114	Lean Six Sigma - Black Belt	4
10623123	Blueprint Reading and Metrology	3
		13
		TOTAL 61

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQUISITE: 10804123 Math w Business Applications or CONDITION: 101101 Paralegal program requirements met

BLUEPRINT READING AND METROLOGY...provides knowledge and skill in the understanding of quality measurement, quality measurement devices and their proper application. Quality measurement topics include precision, accuracy, control of variation, gage R/R, calibration techniques and blueprint/specification reading. The quality measurement devices portion of this course provides hands-on use of common measurement and test equipment.

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

Introduction to Ethics: Theory and Application...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

ISO 9001 INTERNAL AUDITOR...is designed to introduce participants to the current ISO 9001 standard. The course is structured to provide a detailed review of the standards, how to document procedures, and how to perform audits. Students will practice preparation for and conducting audits in a local business. Successful completion of this course qualifies the student to receive the ISO 9001 Internal Auditor certificate (19-623-8).

LEAN MANUFACTURING OVERVIEW...expands the learner's ability to develop skills to prioritize and sequence work, execute work plans, implement controls, and create and analyze performance evaluations. It allows the student to explore the execution of quality initiatives and continuous improvement plans in addition to the control and handling of inventories.

LEAN SIX SIGMA - IMPLEMENTATION...introduces the student to the implementation of a Six Sigma project. Students apply the techniques used in prior Lean Six Sigma courses to a real problem in their place of employment. An emphasis is placed on team skills required to successfully implement the project. Skills demonstrated include project initiation, time management, and constraint management. Student final projects demonstrate their mastery of both DMAIC and Lean methodologies. PREREQUISITE: 10623111 Lean Six Sigma-Improve& Control

LEAN SIX SIGMA - IMPROVE & CONTROL...provides the student with the skills and tools to select and implement solutions to solve problems and improve processes. An emphasis is placed on the use of statistical techniques in solution selection including correlation, regression, and statistical process control. Lean manufacturing methods including SMED, POUS, cellular manufacturing, mistake proofing, TPM, 5S and visual management are practiced. Students learn how to create a control plan. COREQUISITE: 10623110 Lean Six Sigma -Measure & Analyze

LEAN SIX SIGMA - MEASURE AND ANALYZE...provides the student with skills and tools to collect and analyze data to solve problems and improve processes within an organization. Various techniques for process mapping are explored including SIPOC, FMEA, VSM, standard work sheets, and spaghetti diagrams. Statistical tools are explored including probability, confidence intervals, measurement systems analysis, hypothesis testing, and TAKT time analysis to create and implement a data collection plan.

LEAN SIX SIGMA TOOLS - BLACK BELT...provides the student with the knowledge to achieve Lean Six Sigma - Black Belt. Students demonstrate additional proficiency in high level statistical analysis including reliability, hypothesis testing, ANOVA, DOE, failure rates and MTBF. Project management through the DMAIC process is examined. Students learn how to "build quality in" at the design stage by use of the concepts of design for six sigma (DFSS). COREQUISITES: 10623112 Lean Six Sigma-Implementation

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

PERSONAL BRANDING...focuses on the importance of developing a strong brand identity for yourself as a professional. As a prospective employee, you are constantly selling yourself from how you talk, walk, dress, your facial expressions, and your body language; people are always forming impressions of you. In this course, you will develop a professional resume, cover letter, practice interview skills, and learn the role of social media in career development.

PROJECT MANAGEMENT...introduces the learner to explore the relationship of existing and emerging processes and technologies to manufacturing strategy and supply chain-related functions. This course addresses three main topics: aligning resources with the strategic plan, configuring and integrating operating processes to support the strategic plan, and implementing change.

QUALITY CONCEPTS...provides an overview of quality systems, methods and analysis. Basic quality philosophies such as Deming's principles, continuous improvement, quality costs, supplier relations and inspection theory will be presented. The components of a basic quality system compatible with ISO 9000 and Six Sigma will be explored. Techniques such as pareto, trend analysis, histograms, cause and effect diagrams and corrective/preventive action techniques will be applied to the data in order to address problems and improve processes.

SERVICE OPERATIONS MANAGEMENT...introduces the student to the basic coverage of the concepts and current issues in service operation management. Topics include the value equation in operations management; understanding services; building the service system; operating the service system; enterprise resource management (ERP) and supply chain management concepts in the service sector.

SPEECH...explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

SUPPLY CHAIN MANAGEMENT...has been developed to provide a basic understanding of the planning and control of materials into, through, and out of organizations. In addition, those who want to become certified by APICS need a fundamentals course to learn about the material planning and control system. This course will provide a basis for further study leading to certification.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-623-2
Associate Degree in Applied Science
ABOUT THE PROGRAM

Quality Assurance is a program for the systematic monitoring and evaluation of the various aspects of a project, service, or facility to ensure that standards of quality are being met. In simple business terms, quality assurance is the difference between success and failure. If you believe in the idea of “quality in, quality out,” and you want to play a vital role in helping an organization achieve success through quality, LTC’s Quality Assurance Technician program is the way to realize your goal.

PROGRAM OUTCOMES

- Define the operations of a business across functional areas.
- Measure the current state of an organization’s quality system.
- Analyze data and processes to meet organizational goals.
- Improve the quality system and processes.
- Control business processes.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10623118	Lean Manufacturing Overview	3
10103191	Word - Level 1	1
10804123	Math with Business Applications	3
10809195	Economics	3
10182131	Supply Chain Management	3
10103121	Excel - Level 1	1
		14
Term 2 (Spring 2022)		
10623193	ISO 9001 Internal Auditor OR 10623195 ISO 9001 Concepts	3
10623101	Quality Concepts	3
10809198	Introduction to Psychology	3
10623110	Lean Six Sigma - Measure and Analyze	4
		13
Term 3 (Summer 2022)		
10801195	Written Communication	3
10623111	Lean Six Sigma - Improve and Control	4
		7
Term 4 (Fall 2022)		
10623112	Lean Six Sigma - Implementation	3
10809166	Introduction to Ethics OR 10809112 Principles of Sustainability	3
10623114	Lean Six Sigma - Black Belt	4
10101155	Accounting for Professionals	3
		13
Term 5 (Spring 2023)		
10623123	Blueprint Reading and Metrology	3
10105128	Personal Branding	2
10196188	Project Management	3
10182102	Service Operations Management	3
		11
Term 6 (Summer 2023)		
10801196	Oral/Interpersonal Communications	3
		3
		TOTAL 61

ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQUISITE: 10804123 Math w Business Applications or CONDITION: 101101 Paralegal program requirements met

BLUEPRINT READING AND METROLOGY...provides knowledge and skill in the understanding of quality measurement, quality measurement devices and their proper application. Quality measurement topics include precision, accuracy, control of variation, gage R/R, calibration techniques and blueprint/specification reading. The quality measurement devices portion of this course provides hands-on use of common measurement and test equipment.

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks. Introduction to Ethics: Theory and Application...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

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LEAN MANUFACTURING OVERVIEW...expands the learner's ability to develop skills to prioritize and sequence work, execute work plans, implement controls, and create and analyze performance evaluations. It allows the student to explore the execution of quality initiatives and continuous improvement plans in addition to the control and handling of inventories.

LEAN SIX SIGMA - IMPLEMENTATION...introduces the student to the implementation of a Six Sigma project. Students apply the techniques used in prior Lean Six Sigma courses to a real problem in their place of employment. An emphasis is placed on team skills required to successfully implement the project. Skills demonstrated include project initiation, time management, and constraint management. Student final projects demonstrate their mastery of both DMAIC and Lean methodologies. PREREQUISITE: 10623111 Lean Six Sigma-Improve& Control

LEAN SIX SIGMA - IMPROVE & CONTROL...provides the student with the skills and tools to select and implement solutions to solve problems and improve processes. An emphasis is placed on the use of statistical techniques in solution selection including correlation, regression, and statistical process control. Lean manufacturing methods including SMED, POU, cellular manufacturing, mistake proofing, TPM, 5S and visual management are practiced. Students learn how to create a control plan. COREQUISITE: 10623110 Lean Six Sigma -Measure & Analyze

LEAN SIX SIGMA - MEASURE AND ANALYZE...provides the student with skills and tools to collect and analyze data to solve problems and improve processes within an organization. Various techniques for process mapping are explored including SIPOC, FMEA, VSM, standard work sheets, and spaghetti diagrams. Statistical tools are explored including probability, confidence intervals, measurement systems analysis, hypothesis testing, and TAKT time analysis to create and implement a data collection plan.

LEAN SIX SIGMA TOOLS - BLACK BELT...provides the student with the knowledge to achieve Lean Six Sigma - Black Belt. Students demonstrate additional proficiency in high level statistical analysis including reliability, hypothesis testing, ANOVA, DOE, failure rates and MTBF. Project management through the DMAIC process is examined. Students learn how to "build quality in" at the design stage by use of the concepts of design for six sigma (DFSS). COREQUISITES: 10623112 Lean Six Sigma-Implementation

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

PERSONAL BRANDING...focuses on the importance of developing a strong brand identity for yourself as a professional. As a prospective employee, you are constantly selling yourself from how you talk, walk, dress, your facial expressions, and your body language; people are always forming impressions of you. In this course, you will develop a professional resume, cover letter, practice interview skills, and learn the role of social media in career development.

PROJECT MANAGEMENT...introduces the learner to explore the relationship of existing and emerging processes and technologies to manufacturing strategy and supply chain-related functions. This course addresses three main topics: aligning resources with the strategic plan, configuring and integrating operating processes to support the strategic plan, and implementing change.

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SERVICE OPERATIONS MANAGEMENT...introduces the student to the basic coverage of the concepts and current issues in service operation management. Topics include the value equation in operations management; understanding services; building the service system; operating the service system; enterprise resource management (ERP) and supply chain management concepts in the service sector.

SPEECH...explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

SUPPLY CHAIN MANAGEMENT...has been developed to provide a basic understanding of the planning and control of materials into, through, and out of organizations. In addition, those who want to become certified by APICS need a fundamentals course to learn about the material planning and control system. This course will provide a basis for further study leading to certification.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 31-623-2
Technical Diploma • Two Terms

ABOUT THE PROGRAM

This technical diploma, Quality Process Improvement, provides you with the basic skills for quality assurance work. This credential 'ladders' up to the full two-year associate degree, Quality Assurance Technician. Quality Assurance is a program for the systematic monitoring and evaluation of the various aspects of a project, service, or facility to ensure that standards of quality are being met. In simple business terms, quality assurance is the difference between success and failure. If you believe in the idea of "quality in, quality out," and you want to play a vital role in helping an organization achieve success through quality, LTC's Quality Process Improvement technical diploma is the way to get you started in this field.

PROGRAM OUTCOMES

- Define the operations of a business across functional areas.
- Measure the current state of an organization's quality system.
- Analyze data and processes to meet organizational goals.
- Improve the quality system and processes.
- Control business processes.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This credential, the Quality Process Improvement technical diploma, is part of the quality assurance career pathway and can serve as a step to the higher credential, the Quality Assurance Technician Associate Degree. The associate degree provides further in-depth training in quality, management, and in "soft" skills.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10623101	Quality Concepts	3
10623110	Lean Six Sigma - Measure and Analyze	4
10623111	Lean Six Sigma - Improve & Control	4
10623118	Lean Manufacturing Overview	3
		14
Term 2		
10623112	Lean Six Sigma - Implementation	3
10623193	ISO 9001 Internal Auditor	3
10623123	Blueprint Reading and Metrology	3
10801195	Written Communication	3
		12
		TOTAL 26

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

BLUEPRINT READING AND METROLOGY...provides knowledge and skill in the understanding of quality measurement, quality measurement devices and their proper application. Quality measurement topics include precision, accuracy, control of variation, gage R/R, calibration techniques and blueprint/specification reading. The quality measurement devices portion of this course provides hands-on use of common measurement and test equipment.

ISO 9001 INTERNAL AUDITOR...is designed to introduce participants to the current ISO 9001 standard. The course is structured to provide a detailed review of the standards, how to document procedures, and how to perform audits. Students will practice preparation for and conducting audits in a local business. Successful completion of this course qualifies the student to receive the ISO 9001 Internal Auditor certificate (19-623-8).

LEAN MANUFACTURING OVERVIEW...expands the learner's ability to develop skills to prioritize and sequence work, execute work plans, implement controls, and create and analyze performance evaluations. It allows the student to explore the execution of quality initiatives and continuous improvement plans in addition to the control and handling of inventories.

LEAN SIX SIGMA - IMPLEMENTATION...introduces the student to the implementation of a Six Sigma project. Students apply the techniques used in prior Lean Six Sigma courses to a real problem in their place of employment. An emphasis is placed on team skills required to successfully implement the project. Skills demonstrated include project initiation, time management, and constraint management. Student final projects demonstrate their mastery of both DMAIC and Lean methodologies. PREREQUISITE: 10623111 Lean Six Sigma-Improve& Control

LEAN SIX SIGMA - IMPROVE & CONTROL...provides the student with the skills and tools to select and implement solutions to solve problems and improve processes. An emphasis is placed on the use of statistical techniques in solution selection including correlation, regression, and statistical process control. Lean manufacturing methods including SMED, POUS, cellular manufacturing, mistake proofing, TPM, 5S and visual management are practiced. Students learn how to create a control plan. COREQUISITE: 10623110 Lean Six Sigma -Measure & Analyze

LEAN SIX SIGMA - MEASURE AND ANALYZE...provides the student with skills and tools to collect and analyze data to solve problems and improve processes within an organization. Various techniques for process mapping are explored including SIPOC, FMEA, VSM, standard work sheets, and spaghetti diagrams. Statistical tools are explored including probability, confidence intervals, measurement systems analysis, hypothesis testing, and TAKT time analysis to create and implement a data collection plan.

QUALITY CONCEPTS...provides an overview of quality systems, methods and analysis. Basic quality philosophies such as Deming's principles, continuous improvement, quality costs, supplier relations and inspection theory will be presented. The components of a basic quality system compatible with ISO 9000 and Six Sigma will be explored. Techniques such as pareto, trend analysis, histograms, cause and effect diagrams and corrective/preventive action techniques will be applied to the data in order to address problems and improve processes.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-526-1
Associate Degree in Applied Science • Six Terms

ABOUT THE PROGRAM

The program prepares individuals for a career as a radiographer in diagnostic imaging (x-ray). The radiographer produces images of the human body in order to aid healthcare providers in the diagnosis of injuries and diseases.

Graduates of the program are eligible to take the certification examination administered by the American Registry of Radiologic Technologists (ARRT) and may obtain employment in imaging departments to include hospitals, medical clinics, surgery centers, and private offices.

Program curriculum focuses on theory and application, which includes a clinical experience in an imaging department. Students learn to use equipment to demonstrate body parts for diagnostic purposes. The Joint Review Committee on Education in Radiologic Technology (JRCERT) accredits the program.

PROGRAM GOALS

- Students/Graduates will demonstrate critical thinking.
- Students/Graduates will demonstrate good communication skills.
- Students/Graduates will possess the knowledge and skills of an entry level radiographer and are able to perform competently in the clinical setting.
- Students/Graduates will model professional and ethical behavior.
- Graduates will successfully complete the ARRT Certification Examination and enter the field to meet the needs of the community.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.
- Complete 4 hours of clinical observation and submit form.
- Complete CPR BLS Healthcare Provider certification.
- Complete CNA course within the past 10 years prior to clinical start or be on current registry.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

- LTC offers its Radiography program in cooperation with Nicolet Technical College. As a radiography student, you'll attend live or interactive TV classes and take general studies classes at your local technical college.
- LTC's Radiography program is accredited by The Joint Review Committee on Education in Radiologic Technology, 20 North Wacker Drive, Suite 2850, Chicago, Illinois 60606-3182. Phone: 1.312.704.5300.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
10806177	General Anatomy and Physiology	4
Term 1		
10526149	Radiographic Procedures 1	5
10526158	Introduction to Radiography	3
10526159	Radiographic Imaging	3
10526168	Radiography Clinical 1	2
		13
Term 2 (Summer)		
10526192	Radiography Clinical 2	3
10804107	College Mathematics	3
		6
Term 3		
10526230	Advanced Radiographic Imaging	2
10526191	Radiographic Procedures 2	5
10526193	Radiography Clinical 3	3
10801196	Oral/Interpersonal Communication	3
		13
Term 4		
10526194	Imaging Equipment Operation	3
10526231	Imaging Modalities	2
10526199	Radiography Clinical 4	3
10526189	Radiographic Pathology	1
10809198	Introduction to Psychology	3
		12
Term 5 (Summer)		
10526190	Radiography Clinical 5	2
10801195	Written Communication	3
		5
Term 6		
10526174	ARRT Certification Seminar	2
10526195	Radiographic Image Analysis	2
10526197	Radiation Protection & Biology	3
10526198	Radiography Clinical 6	2
10809196	Introduction to Sociology	3
		12
		TOTAL 65

Prerequisites: Chemistry and Medical Terminology

Lakeshore Technical College's Radiography program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examination, or licensure for other states.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ADVANCED RADIOGRAPHIC IMAGING...explores factors that impact image acquisition, display, archiving and retrieval. Guidelines for selecting exposure factors and evaluating images within digital systems are discussed. Principles of digital system quality assurance and maintenance are presented. PREREQ: 10526159 Radiographic Imaging

ARRT CERTIFICATION SEMINAR...provides preparation for the national certifying examination prepared by the American Registry of Radiologic Technologists. Emphasis is placed on the weak areas of the individual students. Simulated registry examinations are utilized. Successful completion of the Radiography program requirements is required to enroll in this course. PREREQUISITE: 10526190 Radiography Clinical 5 and CONDITION: 105261 Radiography admissions requirements met

COLLEGE MATHEMATICS...is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic and algebra; 2) geometry and trigonometry; and 3) probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent

GENERAL ANATOMY AND PHYSIOLOGY...examines basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare health care professionals who need to apply basic concepts of whole body anatomy and physiology to informed decision-making and professional communication with colleagues and patients. PREREQUISITE: 10806134 General Chemistry or equivalent and Reading placement assessment equivalent

IMAGING EQUIPMENT OPERATION...introduces radiography students to the principles and application of x-ray technology. Students analyze how x-rays are produced and determine the corrective actions necessary for common equipment malfunctions. PREREQUISITE: 10526230 Advanced Radiographic Imaging and CONDITION: 105261 Radiography admissions requirements met

IMAGING MODALITIES...introduces radiography students to imaging modalities with an emphasis in computed tomography and cross-sectional anatomy. PREREQUISITES: 10526191 Radiographic Procedures 2 and CONDITION: 105261 Radiography admissions requirements met

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO RADIOGRAPHY...introduces students to the role of radiography in health care. Students apply legal and ethical considerations to patient care and pharmacology in the radiologic sciences. PREREQUISITE: 10501101 Medical Terminology and CONDITION: 105261 Radiography admissions requirements met

INTRODUCTION TO SOCIOLOGY...introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

RADIATION PROTECTION & BIOLOGY...prepares radiography students to protect themselves and others from exposure to radioactivity. Students examine the characteristics of radiation and how radiation affects cell biology. Students apply standards and guidelines for radiation exposure. PREREQUISITE: 10526194 Imaging Equip Operation and CONDITION: 105261 Radiography admissions requirements met

RADIOGRAPHIC IMAGE ANALYSIS...prepares radiography students to analyze radiographic images for quality. Students apply quality control tests to determine the causes of image problems including equipment malfunctions and procedural errors. CONDITION: 105261 Radiography admissions requirements met and PREREQUISITE: 10526194 Imaging Equipment Operation

RADIOGRAPHIC IMAGING...introduces radiography students to the process and components of imaging. Students determine the factors that affect image quality including contrast, receptor exposure, spatial resolution and distortion. PREREQUISITES: 10806174 General Chemistry or 10806143 General Chemistry and CONDITION: 105261 Radiography admission requirements met

RADIOGRAPHIC PATHOLOGY...prepares radiography students to determine the basic radiographic manifestations of pathological conditions. Students classify trauma related to site, complications, and prognosis and locate the radiographic appearance of pathologies. CONDITION: 105261 Radiography admissions requirements met

RADIOGRAPHIC PROCEDURES 1...prepares radiography students to perform routine radiologic procedures on various parts of the body including the upper body, hip, pelvis and ankle. Students apply knowledge of human anatomy to position the patient correctly to achieve the desired result. CONDITION: 105261 Radiography admissions requirements met and PREREQUISITES: 10806177 Gen Anatomy & Physiology or 10806177OL Gen Anatomy & Physiology

RADIOGRAPHIC PROCEDURES 2...prepares radiography students to perform routine radiologic procedures on various parts of the body including the skull and spine. Students apply knowledge of human anatomy to position the patient correctly to achieve the desired result. PREREQUISITE: 10526149 Radiographic Procedures 1

RADIOGRAPHY CLINICAL 1...is a beginning level clinical course that prepares radiography students to perform radiologic procedures on patients with extensive supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the development of communication and critical thinking skills appropriate to the clinical setting. CONDITION: 105261 Radiography admissions requirements met and COREQUISITE: 10526149 Radio Proc 1, 10526158 Intro to Radio, 10526159 Radiographic Imaging, and PREREQUISITE: 10806177 Gen A&P or 10806196 A&P II

RADIOGRAPHY CLINICAL 2...is the second level clinical course that prepares radiography students to perform radiologic procedures on patients with extensive supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the development of communication and critical thinking skills appropriate to the clinical setting. COREQUISITE: 10526168 Radiography Clinical 1

RADIOGRAPHY CLINICAL 3...is the third level clinical course which prepares radiography students to perform radiologic procedures on patients with supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the demonstration of communication and critical thinking skills appropriate to the clinical setting. PREREQUISITE: 10526192 Radiographic Clinical 2

RADIOGRAPHY CLINICAL 4...is the fourth level clinical course that prepares radiography students to perform radiologic procedures on patients with supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies. PREREQUISITE: 10526193 Radiographic Clinical 3

RADIOGRAPHY CLINICAL 5...is the fifth level clinical course that prepares radiography students to perform radiologic procedures on patients with some supervision. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies. COREQUISITE: 10526199 Radiographic Clinical 4

RADIOGRAPHY CLINICAL 6...is the final clinical course which requires students to integrate and apply all knowledge learned in previous courses to the production of high quality radiographs in the clinical setting. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies. PREREQUISITE: 10526190 Radiography Clinical 5

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

RADIATION SAFETY/HEALTH PHYSICS

Program Number 10-624-2
Associate Degree in Applied Science

ABOUT THE PROGRAM

Radiation safety in today's healthcare, energy, manufacturing, defense, and pharmaceutical research fields depends on qualified experts to perform technical duties in areas using radioisotopes. These radiation safety/health physics experts play a vital role in the health, safety, and well-being of their coworkers, patients, the public, and the environment. If you have a strong interest in science, thrive on precision, are attentive to details, have the ability to follow exact instructions, and are comfortable working with technology and people, becoming a radiation safety technician is an ideal way to maximize your talents. This program is an excellent springboard for a four-year degree in the high-demand field of health physics.

PROGRAM OUTCOMES

- Provide radiological safety in the workplace.
- Understand the natural laws of ionizing radiation.
- Maintain control over radioactive materials in compliance with regulatory requirements and accepted industry practices.
- Perform surveys to detect contamination, radiation safety, radiation levels, and assess hazards.
- Mitigate hazards associated with the use of radioactive materials and devices that produce ionizing radiation.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

- \$138.90 per credit tuition (WI resident) plus \$8.33 per credit student activity fee. \$10 per credit online, iFlex or hybrid fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Career Coach about how to apply for aid.

SPECIAL NOTE

- Classes are offered at LTC's main campus with videoconferencing to NWTc's Green Bay Campus, BTC's Milton campus and for other students, you may attend class via your computer.
- Gaining employment in the radiation safety and health physics field likely includes a very comprehensive background check of one's lifespan. This includes not only criminal activities, but likely also civil actions.
- **ONLINE OPTION:** Available to working adults in the Radiation Safety/Health Physics industry. To register for online courses, search for the catalog numbers and the online option. Online courses have prerequisites. Online students work with their industry supervisor to identify suitable activities at their worksite to enhance their learning.

CONTACT

LTC Career Coach
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10801195	Written Communication	3
10804113	College Technical Mathematics 1A OR 10804198 Calculus 1** (4 cr)	3
6		
Term 2 (Spring 2022)		
10801196	Oral/Interpersonal Communications	3
10809122	Introduction to American Government	3
6		
Term 3 (Fall 2022)		
10624105	Health Physics Calculations and Statistics	3
10624110	Radioactivity and Regulations	3
6		
Term 4 (Spring 2023)		
10624114	Nuclear Systems and Sources	3
10624122	Radiation Physics	3
10624123	Radiation Physics-Lab	2
8		
Term 5 (Fall 2023)		
10103121	Excel - Level 1	1
10482135	Energy Power and Force	3
10624138	Radioactive Materials Management	2
6		
Term 6 (Spring 2024)		
10624103	Nuclear DC and AC Applications	3
10624140	Radiochemistry	3
10624133	Radiological Emergencies	3
9		
Term 7 (Summer 2024) (Nights)		
10624118	Radiation Biology	3
3		
Term 8 (Fall 2024)		
10624145	Applied Health Physics	3
10624146	Applied Health Physics Lab	2
10809198	Introduction to Psychology	3
8		
Term 9 (Spring 2025)		
10529150	Hazardous Waste Site Worker-40 Hr*	2
10624144	Environmental HP & Decommissioning	3
10624134	Radiation Shielding	2
10624135	Radiation Shielding Lab	1
8		
TOTAL 60		

*This class is offered in a two-week-long, in-person seminar format outside of the traditional semester and is not available online. However, online students who have completed this 40-hour training may provide their transcript to their program advisor for these credits.

**Students who plan to also achieve a Bachelor's degree are encouraged to take this transferable course.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

2021-22



APPLIED HEALTH PHYSICS...prepares the learner to wear dosimeter, monitor personal exposure, calculate/estimate radioactive airborne activity concentration, issue respirators, determine contamination levels, don and remove protective clothing, reduce the spread of contamination, conduct an ALARA audit, reduce the total radiation exposure, maintain records and estimate skin dose, etc. PREREQUISITE: 10624122 Radiation Physics

APPLIED HEALTH PHYSICS-LAB...expands the learner's ability to perform applied health physics tasks as covered in Applied Health Physics, 624-145 and should be completed within the same semester. COREQUISITE:10624145 Applied Health Physics

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtrc Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

ENERGY POWER AND FORCE...studies the laws and theories of electric power generation that govern motion and how to apply them to a range of concepts including rotational inertia, acceleration, velocity, lift, force, torque, etc. Studies the law of Conservation of Energy and basic atomic theory and how these concepts apply to electric power generation. The use and function of simple machines, and how they relate to electric power generator function, is also explored.

ENVIRONMENTAL HP AND DECOMMISSIONING...prepares the student to deal with issues associated with the environmental radiation, radiation accidents, environmental restoration, clean-up remediation, facility decommissioning, decontamination and the introduction of MARSSIM. PREREQUISITES: 10624138 Radioactive Materials Management, 10624133 Radiological Emergencies, and 10624134 Radiation Shielding

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

HAZARDOUS WASTE SITE WORKER...provides training to respond to a hazardous material incident both in an industrial setting and field setting. Student will receive hazardous waste site worker certificate upon successful completion of the class.

HEALTH PHYSICS CALCULATIONS AND STATISTICS...prepares the learner to solve linear and exponential equations, logarithms, plot graphs, determine counting statistics and instrument reliability, and work with geometry and trigonometry problems. COREQUISITE: 10624110 Radioactivity and Regulations

INTRODUCTION TO AMERICAN GOVERNMENT...introduces American political processes and institutions. It focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. It explores the role of the media, interest groups, political parties and public opinion in the political process. It also explores the role of state and national government in our federal system. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

NUCLEAR DC AND AC APPLICATIONS...prepares nuclear, radiation safety, and health physics learners to apply direct current (DC) and alternating current (AC) concepts and laws; perform calculations to identify basic electrical terms, symbols, units, etc., to apply the electrical laws (such as, Ohm's law, Kirchhoff's voltage and current laws); to analyze DC/AC electronic circuit, power, etc.; to analyze AC waveform (including single-phase versus three-phase), batteries, chargers, etc. PREREQUISITE: 10624105 Health Physics Calcs & Stats

NUCLEAR SYSTEMS AND SOURCES...introduces the learner to the major components of natural/man-made background sources, x-ray tubes and applications, medical-used radioactive materials, accelerators, nuclear gauging devices, non-ionization radiations, and power/research nuclear reactors and associated health physics topics. PREREQUISITE: 10624110 Radioactivity and Regulations

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

RADIATION BIOLOGY...prepares the learner to convert measuring units and activity to dose rates, predict the effect of radiation on living cells and human organs, evaluate radiation risk, and calculate internal doses. PREREQUISITES: 10624110 Radioactivity and Regulations, 10624105 Health Phys Calc/Stats, 10624114 Nuclear Systems and Sources, 10624122 Rad Physics, 10624123 Rad Phys-Lab, and 10804113 College Tech Math 1A or 10804198 Calculus 1

RADIATION PHYSICS...introduces the learner to health physics-related physics, including the properties of radiation; interactions of radiation with matters; basic principles of radiation detection and measurement; and different kinds of radiation detectors; i.e., gas-filled and solid-state detectors. PREREQUISITE: 10624110 Radioactivity and Regulations, 10624105 Health Physics Calc & Stats, and 10804113 College Tech Math 1A or 10804198 Calculus 1

RADIATION PHYSICS-LAB...expands the learners ability to perform calculations, select instruments, and analyze radioactive samples. This course is associated with 624-122, Radiation Physics. COREQUISITE: 10624122 Radiation Physics and PREREQUISITE: 10801195 Written Communications and COREQUISITE: Radioactivity and Regulations

RADIATION SHIELDING...provides the learner with the skills to calculate radiation attenuation from various geometric radioactive sources, determine the effect of neutron radiation on materials, and estimate the exposure rate from various sources with or without shielding materials. PREREQUISITE: 10624122 Radiation Physics

RADIATION SHIELD-LAB...expands the learner's ability to perform shielding of ionizing radiation sources and to measure the penetration of beta and gamma radiation. COREQUISITE: 10624134 Radiation Shielding

RADIOACTIVE MATERIAL AND MANAGEMENT...introduces the learner to the proper methods used to dispose of radioactive waste in liquid, solid, gaseous forms; determine waste classification, evaluate methods used to process low-level and high-level waste, determine the package/label requirements, proper type of transport container, shipment quantity classification, storage distance from people and firm during shipments by rail/vessel/public roads, proper shipping name and UN number; completion of proper shipping papers; document materials inventory/shipments. PREREQUISITES: 10624105 Health Physics Calc & Statistics, 10624110 Radioactivity and Regulations, 10624114 Nuclear Systems & Sources

RADIOACTIVITY AND REGULATIONS...introduces the learner to atomic and nuclear structure; radioactivity and basic dosimetry; regulation standards, including 10CFR 19, 20, etc. COREQUISITE: 10624105 Health Physics Calcs & Stats

RADIOCHEMISTRY...provides the student with the fundamentals of chemistry and the application of chemistry control to a nuclear facility. The course will cover basic water treatment principles, corrosion, reactor water chemistry control and chemical hazards. Prepares the learner to separate dissolved, suspended, liquid, and ionic radioactive components; perform qualitative and quantitative analysis of samples; and prevent the production of radioactive material by using proper chemical control. PREREQUISITE: 10624122 Radiation Physics or 10624122OL Radiation Physics

RADIOLOGICAL EMERGENCIES...teaches the learner to understand a radiological emergency, which is displaced radioactive substances in solid, liquid, or gaseous forms in amounts resulting in doses to workers, the public, or the environment, that exceeds company, state, and federal limits or regulations; how it is prevented and mitigated, the proper preparation and post-accident actions, as well as the regulations on radioactive releases, estimation of doses in an emergency, and the first response to an emergency. PREREQUISITES: 10624110 Nuclear Technology and Regulations, 10624105 Health Physics Calculations and Statistics and 10624114 Nuclear Systems and Sources

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 61-316-2
Certificate • 5 credits

ABOUT THE PROGRAM

Provides an introduction to the growing Culinary/Hospitality industry and prepare the learner for an entry level position in the hospital and restaurant industry. Students will learn how to serve food & beverages, assist other kitchen workers, maintain sanitation standards and work with diverse food inventories.

PROGRAM OUTCOMES

- Apply principles of safety and sanitation in food service operations.
- Demonstrate front of the house food service and customer service skills.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

SPECIAL NOTE

Entry into courses requires permission of instructor.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10109112	Sanitation	1
10109108	Dining Room and Beverage	2
10316101	Product Identification	2

TOTAL 5

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.



DINING ROOM AND BEVERAGE SERVICE...introduces learners to dining room and beverage service including wine, spirits, beer, mixology, and non-alcoholic drinks. Helps learners refine their customer service and meal delivery skills through the study and application of proper, customer-oriented dining room service environments including etiquette, dining room safety, set-up, American and French table service, and menu knowledge skills. Concepts include histories of table service, psychology of the customer, and service sequence.

PRODUCT IDENTIFICATION AND PURCHASING...through identification, the study of origins and seasonality, discussion of quality, use, safe handling and fabrication, learners will explore vegetables, seafood, meats, fruits, herbs, spices, oils, vinegar and the nature of taste and flavor. The USDA grading system and butchery concepts are included. Safety, sanitation and cost control concepts are applied.

SANITATION FOR FOOD SERVICE...provides face to face food safety training, testing and materials to food service managers. The Serv Safe Manager certification test is included and a passing score earns the Serv Safe Food Protection Manager Certification.

Program Number 50-432-1
5-Year Contract

Work Hours (including related instruction): 9000
Related Instruction Hours: 512 • Night School Hours: 250

ABOUT APPRENTICESHIP

Apprenticeships are employer-sponsored training programs. You must have a contract before being invited to school. A special application process is used for these programs. Please contact the Apprenticeship Office for the proper forms. Apprenticeship means you earn while you learn. If you want a career in a skilled trade, apprenticeship is the best way to get there. You'll combine on-the-job training with on-campus learning—you'll have the best of both worlds when it comes to learning the skills you need to get ahead. And even better, you'll earn a paycheck while you learn those skills.

ABOUT THE CAREER

Sheet metal workers plan and lay out work from blueprints and sketches, fabricate parts using hand and power equipment, assemble HVAC (Heating, Ventilation, and Air Conditioning) and architectural units, and install the assembled units in the final structure. The Sheet Metal Apprenticeship program is an employer-sponsored, hands-on training program. If you like to work on projects from start to finish, using a variety of skills, check out a career as a journey-level sheet metal worker.

CAREERS

Graduates of LTC's Sheet Metal Apprenticeship program work as journey-level sheet metal workers in a variety of workplace settings.

CONSTRUCTION APPRENTICE APPLICATION REQUIREMENTS

- Apprentice Application
- Proof of Age
- Accuplacer Entrance Assessment or ACT test
- High School Transcripts or Equivalent
- Advisory Committee Interview

PROGRAM OUTCOMES

- Work safely in a variety of work situations.
- Demonstrate proficiency in welding.
- Install sheet metal components according to industry standards.
- Lay out sheet metal components according to specifications.
- Fabricate sheet metal components using a variety of metal fabricating machinery.
- Interpret trade-related documents.
- Demonstrate proficiency using acetylene and hand plasma cutting.

APPROXIMATE COSTS

Contact the LTC Apprenticeship Office or visit www.gotoltc.edu/apprenticeship for detailed information.

MINIMUM PLACEMENT SCORES

Accuplacer: Arithmetic-250, Reading-239, QAS-216
 ACT: Mathematics-16, Reading-15

SPECIAL NOTE

Upon completion of the apprentice requirements, you'll be issued a Letter of Introduction, which states your requirements have been met. You'll use this Letter of Introduction to apply for work in the trade. You must have a sponsoring employer before receiving a contract and being invited to school.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

Catalog No.	Class Title	Credit(s)
Term 1		
50432501	Sheet Metal Apprentice 1	2 2
Term 2		
50432502	Sheet Metal Apprentice 2	2 2
Term 3		
50432503	Sheet Metal Apprentice 3	2 2
Term 4		
50432504	Sheet Metal Apprentice 4	2 2
Term 5		
50432505	Sheet Metal Apprentice 5	2 2
Term 6		
50432506	Sheet Metal Apprentice 6	2 2
Term 7		
50432507	Sheet Metal Apprentice 7	2 2
Term 8		
50432508	Sheet Metal Apprentice 8	2 2
		TOTAL 16

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with the Apprenticeship Office for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

SHEET METAL APPRENTICE 1...introduces the apprentice to the sheet metal industry; learn craftsmanship; use drafting equipment and materials, The apprentice will learn trade overview and history; learn hand tools and their proper use; begin learning fundamentals of fabrication on metal; learn drafting tools and materials; learn lines and lettering; develop orthographic projections; begin layout techniques; learn layout tools and terms and principles; and begin fabricating fittings with metal. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met

SHEET METAL APPRENTICE 2...introduces the apprentice to parallel line, radial line, and triangulation pattern development. The apprentice will learn the following layout principles: Ogee offsets, parallel line layout, radial line layout, triangulation layout, and soldering. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met

SHEET METAL APPRENTICE 3...introduces the apprentice to the basics of organizing time; introduction to computers; the use of scientific calculators for trigonometry and everyday equations. The apprentice will revisit orthographic drawing development; learn pattern development and fabrication of the following - round tee's, round elbows, round tapers, roof jacks, square to rounds, and transitions. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met

SHEET METAL APPRENTICE 4...introduces the apprentice to the basics of Architectural Sheet Metal, describes the primary functions and forms of architectural sheet metal, including shelter, durability, and appearance. It also identifies the larger concepts of architectural sheet metal, including moisture control, expansion and contraction, roof and wall systems, shop layout and fabrication including soldering of architectural components, installation, safety, and project management. It also describes the contributions of architectural sheet metal to architecture, art, and design. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met

SHEET METAL APPRENTICE 5...provides the apprentice with skills to understand the concepts of HVAC systems. The apprentice will learn how to understand the different systems and components, heat transfer theories, refrigeration theories, electrical theories, automatic controls, and field installation roles and responsibilities. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met

SHEET METAL APPRENTICE 6...provides the apprentice with skills to understand the concepts of HVAC systems and reading plans and specs. Apprentices will interpret load calculations and sizing ductwork; understand test and balance (TAB) procedures, understand commissioning duties, become an effective project manager, interpret plans and specs, and create CAD drawings. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met

SHEET METAL APPRENTICE 7...introduces the apprentice to Industrial Sheet Metal skills. The apprentice will be able to identify types of materials used in industrial sheet metal work, understand the weldability of each of the types of materials used in industrial work, identify the primary steps of stock metal used in industrial sheet metal applications--plates, angles, bars, beams and channels, calculate the weight of stock metal components represented in a drawing, calculate the cost of stock metal components represented in a drawing, identify the welding and drawing symbols used in industrial sheet metal, understand where pipe welding is used, understand how to safely operate power equipment that is used for industrial work, and know the appropriate PPE to use for any given situation and how to use the equipment correctly. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met

SHEET METAL APPRENTICE 8...teaches the apprentice to become familiar with layout principles for sheet metal items commonly found in industrial environments. The apprentice will understand the difference between plan view and elevation view, understand how to lay out a project using a combination of two of the three methods of an industrial project, be familiar with the technical aspects related to cutting heavy metals, be familiar with common shop workflow procedures, be familiar with the types of job sites where industrial work might be performed, identify and describe the six steps used for field installation, be familiar with the challenges of scheduling an industrial job, understand the importance of communicating and cooperating with other trades, understand the overall purpose and function of an industrial ventilation/exhaust system, understand the principles of airflow and how it impacts industrial ventilation/exhaust system design, be familiar with basic rigging principles, and be familiar with hand signals used during hoisting operations. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met

Program Number 31-182-1
Technical Diploma • Two Terms

ABOUT THE PROGRAM

This technical diploma, Supply Chain Assistant, provides you with the basic skills needed to perform entry level work in supply chain management. This credential 'ladders' up the associate degree credential, Supply Chain Management. Words such as logistics, purchasing, or material management all encompass part of a supply chain. Supply chains are led and managed by people who enjoy working with others and analyzing data. Without supply chain management, you could not get the products or services you need every day. If you want to be a part of an ever-changing and growing field, supply chain management is for you, and this introductory credential, the Supply Chain Assistant Technical Diploma, can help get you started.

PROGRAM OUTCOMES

- Implement Supply Management practices in a global environment.
- Demonstrate operations management techniques across product and service industries.
- Analyze logistic interfaces and activities in a supply chain.
- Evaluate demand management techniques and customer service policies.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This technical diploma is part of the career pathway for supply chain management, and it can serve as a foundation for the higher level credential, the Supply Chain Management Associate Degree. The associate degree provides further in-depth training in quality, management, and in "soft" skills.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10182108	Purchasing	3
10182131	Supply Chain Management	3
10623118	Lean Manufacturing Overview	3
10182122	Logistics	3
		12
Term 2		
10182102	Service Operations Management	3
10623110	Lean Six Sigma - Measure and Analyze	4
10182115	Computer Simulation for Operational Management	3
10182114	Enterprise Resource Planning and Control	3
10801195	Written Communication	3
		16
		TOTAL 28

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

COMPUTER SIMULATION FOR OPERATIONAL MANAGEMENT...

introduces the student to simulation software. The course is structured to introduce basic simulation terminology, develop models, and analyze the information derived from modeling. Students will utilize a 3D simulation software to model, simulate, predict, and analyze systems in manufacturing and logistics organizations.

ENTERPRISE RESOURCE PLANNING AND CONTROL...

prepares the participant to interpret material requirements planning reports, build a master production schedule, construct capacity plans, and understand sales and operations planning. The curriculum is developed from the American Production and Inventory Controls exam certification's domain of knowledge. PREREQUISITE: 10182131 Supply Chain Management

LEAN MANUFACTURING OVERVIEW...

expands the learner's ability to develop skills to prioritize and sequence work, execute work plans, implement controls, and create and analyze performance evaluations. It allows the student to explore the execution of quality initiatives and continuous improvement plans in addition to the control and handling of inventories.

LEAN SIX SIGMA - MEASURE AND ANALYZE...

provides the student with skills and tools to collect and analyze data to solve problems and improve processes within an organization. Various techniques for process mapping are explored including SIPOC, FMEA, VSM, standard work sheets, and spaghetti diagrams. Statistical tools are explored including probability, confidence intervals, measurement systems analysis, hypothesis testing, and TAKT time analysis to create and implement a data collection plan.

LOGISTICS...

introduces the student to business logistics, including the efficient and effective flow of goods, services, and related information from the point of origin to the point of consumption and provides a summary of the role and importance of transportation and an overview of carriers, carrier management, and technology and strategies in logistics.

PURCHASING...

introduces the participant to basic purchasing, quality specifications, inventory control, supplier selection, price aspects, research and measurement, negotiation, and global purchasing. This course is exciting for anyone interested in working in a challenging and rewarding purchasing and supply chain management career.

SERVICE OPERATIONS MANAGEMENT...

introduces the student to the basic coverage of the concepts and current issues in service operation management. Topics include the value equation in operations management; understanding services; building the service system; operating the service system; enterprise resource management (ERP) and supply chain management concepts in the service sector.

SUPPLY CHAIN MANAGEMENT...

has been developed to provide a basic understanding of the planning and control of materials into, through, and out of organizations. In addition, those who want to become certified by APICS need a fundamentals course to learn about the material planning and control system. This course will provide a basis for further study leading to certification.

WRITTEN COMMUNICATION...

teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

ABOUT THE PROGRAM

Supply chains are everywhere in every business, service, or hospital. Other terms you may know describe specific parts of a supply chain. Words such as logistics, purchasing, or material management all encompass only a part of a supply chain. Supply chains are led and managed by people who enjoy working with others and analyzing data. Without supply chain management, you could not get the products or services you need every day. If you want to be a part of an ever-changing and growing field, supply chain management is for you.

PROGRAM OUTCOMES

- Implement Supply Management practices in a global environment.
- Demonstrate operations management techniques across product and service industries.
- Analyze logistic interfaces and activities in a supply chain.
- Evaluate demand management techniques and customer service policies.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10103121	Excel - Level 1	1
10103191	Word - Level 1	1
10182108	Purchasing	3
10182131	Supply Chain Management	3
10623118	Lean Manufacturing Overview	3
10801195	Written Communication OR 10801136 English Composition 1	3
		14
Term 2		
10105128	Personal Branding	2
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
10804123	Math with Business Applications	3
10809198	Introduction to Psychology OR 10809188 Developmental Psychology	3
10182160	Global Supply Chain Management	3
		14
Term 3		
10101155	Accounting for Professionals	3
10196188	Project Management	3
10623110	Lean Six Sigma - Measure and Analyze	4
10182114	Enterprise Resource Planning and Control	3
10182115	Computer Simulation for Operational Management	3
		16
Term 4		
10182102	Service Operations Management	3
10182122	Logistics	3
10182107	Portfolio Assessment-Supply Chain	1
10623193	ISO 9001 Internal Auditor OR 10623195 ISO 9001 Concepts	3
10809195	Economics	3
10806112	Principles of Sustainability OR 10809166 Introduction to Ethics	3
		16
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQUISITE: 10804123 Math w Business Applications or CONDITION: 101101 Paralegal program requirements met

COMPUTER SIMULATION FOR OPERATIONAL MANAGEMENT... introduces the student to simulation software. The course is structured to introduce basic simulation terminology, develop models, and analyze the information derived from modeling. Students will utilize a 3D simulation software to model, simulate, predict, and analyze systems in manufacturing and logistics organizations.

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

ENTERPRISE RESOURCE PLANNING AND CONTROL...prepares the participant to interpret material requirements planning reports, build a master production schedule, construct capacity plans, and understand sales and operations planning. The curriculum is developed from the American Production and Inventory Controls exam certification's domain of knowledge. PREREQUISITE: 10182131 Supply Chain Mng

EXCEL - LEVEL 1...introduces the student to spreadsheet features such as creating, saving, editing, navigating, formatting worksheets; entering formulas and functions; working with charts; and developing multiple-sheet workbooks.

GLOBAL SUPPLY CHAIN MANAGEMENT...introduces the student to supply chain financial transactions which include foreign exchange market, fluctuations of the market, role of the global capital market, major determinants in country risk, methods of foreign market entry, international contracts and commercial documents, export packaging, customs clearance, and global supply chain logistics infrastructure.

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQUISITE: Reading placement assessment equivalent or COREQUISITE: 10838105 Intro to Reading and Study Skills

ISO 9001 INTERNAL AUDITOR...is designed to introduce participants to the current ISO 9001 standard. The course is structured to provide a detailed review of the standards, how to document procedures, and how to perform audits. Students will practice preparation for and conducting audits in a local business. Successful completion of this course qualifies the student to receive the ISO 9001 Internal Auditor certificate (19-623-8).

LEAN MANUFACTURING OVERVIEW...expands the learner's ability to develop skills to prioritize and sequence work, execute work plans, implement controls, and create and analyze performance evaluations. It allows the student to explore the execution of quality initiatives and continuous improvement plans in addition to the control and handling of inventories.

LEAN SIX SIGMA - MEASURE AND ANALYZE...provides the student with skills and tools to collect and analyze data to solve problems and improve processes within an organization. Various techniques for process mapping are explored including SIPOC, FMEA, VSM, standard work sheets, and spaghetti diagrams. Statistical tools are explored including probability, confidence intervals, measurement systems analysis, hypothesis testing, and TAKT time analysis to create and implement a data collection plan.

LOGISTICS...introduces the student to business logistics, including the efficient and effective flow of goods, services, and related information from the point of origin to the point of consumption and provides a summary of the role and importance of transportation and an overview of carriers, carrier management, and technology and strategies in logistics.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PERSONAL BRANDING...focuses on the importance of developing a strong brand identity for yourself as a professional. As a prospective employee, you are constantly selling yourself from how you talk, walk, dress, your facial expressions, and your body language; people are always forming impressions of you. In this course, you will develop a professional resume, cover letter, practice interview skills, and learn the role of social media in career development.

PORTFOLIO ASSESSMENT-SUPPLY CHAIN...prepares the student to identify what they have learned through the supply chain program, write career goals, re-examine their resume, research and collect project samples of their achievements, and analyze their achievements within the college core abilities. PREREQUISITES: 10105128 Personal Branding

PRINCIPLES OF SUSTAINABILITY...prepares students to develop sustainable literacy, analyze interconnections among physical and biological sciences and environmental systems, summarize effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal/recycling in the U.S., and analyze approaches used by your community. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PROJECT MANAGEMENT...introduces the learner to explore the relationship of existing and emerging processes and technologies to manufacturing strategy and supply chain-related functions. This course addresses three main topics: aligning resources with the strategic plan, configuring and integrating operating processes to support the strategic plan, and implementing change.

PURCHASING...introduces the participant to basic purchasing, quality specifications, inventory control, supplier selection, price aspects, research and measurement, negotiation, and global purchasing. This course is exciting for anyone interested in working in a challenging and rewarding purchasing and supply chain management career.

SERVICE OPERATIONS MANAGEMENT...introduces the student to the basic coverage of the concepts and current issues in service operation management. Topics include the value equation in operations management; understanding services; building the service system; operating the service system; enterprise resource management (ERP) and supply chain management concepts in the service sector.

SUPPLY CHAIN MANAGEMENT...has been developed to provide a basic understanding of the planning and control of materials into, through, and out of organizations. In addition, those who want to become certified by APICS need a fundamentals course to learn about the material planning and control system. This course will provide a basis for further study leading to certification.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-182-1
Associate Degree in Applied Science
ABOUT THE PROGRAM

Supply chains are everywhere in every business, service, or hospital. Other terms you may know describe specific parts of a supply chain. Words such as logistics, purchasing, or material management all encompass only a part of a supply chain. Supply chains are led and managed by people who enjoy working with others and analyzing data. Without supply chain management, you could not get the products or services you need every day. If you want to be a part of an ever-changing and growing field, supply chain management is for you.

PROGRAM OUTCOMES

- Implement Supply Management practices in a global environment.
- Demonstrate operations management techniques across product and service industries.
- Analyze logistic interfaces and activities in a supply chain.
- Evaluate demand management techniques and customer service policies.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10182108	Purchasing	3
10804123	Math with Business Applications	3
10103191	Word - Level 1	1
10623118	Lean Manufacturing Overview	3
10182131	Supply Chain Management	3
10103121	Excel - Level 1	1
		14
Term 2 (Spring 2022)		
10623193	ISO 9001 Internal Auditor OR 10623195 ISO 9001 Concepts	3
10182122	Logistics	3
10809198	Introduction to Psychology	3
10196188	Project Management	3
		12
Term 3 (Summer 2022)		
10801195	Written Communication	3
		3
Term 4 (Fall 2022)		
10809166	Introduction to Ethics OR 10809112 Principles of Sustainability	3
10101155	Accounting for Professionals	3
10809195	Economics	3
10105128	Personal Branding	2
		11
Term 5 (Spring 2023)		
10182115	Computer Simulation for Operational Management	3
10182102	Service Operations Management	3
10623110	Lean Six Sigma - Measure and Analyze	4
		10
Term 6 (Summer 2023)		
10801196	Oral/Interpersonal Communication	3
		3
Term 7 (Fall 2023)		
10182160	Global Supply Chain Management	3
10182114	Enterprise Resource Planning and Control	3
10182107	Portfolio Assessment - Supply Chain	1
		7
		TOTAL 60

ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQUISITE: 10804123 Math w Business Applications or CONDITION: 101101 Paralegal program requirements met

COMPUTER SIMULATION FOR OPERATIONAL MANAGEMENT...introduces the student to simulation software. The course is structured to introduce basic simulation terminology, develop models, and analyze the information derived from modeling. Students will utilize a 3D simulation software to model, simulate, predict, and analyze systems in manufacturing and logistics organizations.

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ENTERPRISE RESOURCE PLANNING AND CONTROL...prepares the participant to interpret material requirements planning reports, build a master production schedule, construct capacity plans, and understand sales and operations planning. The curriculum is developed from the American Production and Inventory Controls exam certification's domain of knowledge. PREREQUISITE: 10182131 Supply Chain Mng

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LOGISTICS...introduces the student to business logistics, including the efficient and effective flow of goods, services, and related information from the point of origin to the point of consumption and provides a summary of the role and importance of transportation and an overview of carriers, carrier management, and technology and strategies in logistics.

MATH WITH BUSINESS APPLICATIONS...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PERSONAL BRANDING...focuses on the importance of developing a strong brand identity for yourself as a professional. As a prospective employee, you are constantly selling yourself from how you talk, walk, dress, your facial expressions, and your body language; people are always forming impressions of you. In this course, you will develop a professional resume, cover letter, practice interview skills, and learn the role of social media in career development.

PORTFOLIO ASSESSMENT-SUPPLY CHAIN...prepares the student to identify what they have learned through the supply chain program, write career goals, re-examine their resume, research and collect project samples of their achievements, and analyze their achievements within the college core abilities. PREREQUISITES: 10105128 Personal Branding

PRINCIPLES OF SUSTAINABILITY...prepares students to develop sustainable literacy, analyze interconnections among physical and biological sciences and environmental systems, summarize effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal/recycling in the U.S., and analyze approaches used by your community. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PROJECT MANAGEMENT...introduces the learner to explore the relationship of existing and emerging processes and technologies to manufacturing strategy and supply chain-related functions. This course addresses three main topics: aligning resources with the strategic plan, configuring and integrating operating processes to support the strategic plan, and implementing change.

PURCHASING...introduces the participant to basic purchasing, quality specifications, inventory control, supplier selection, price aspects, research and measurement, negotiation, and global purchasing. This course is exciting for anyone interested in working in a challenging and rewarding purchasing and supply chain management career.

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SUPPLY CHAIN MANAGEMENT...has been developed to provide a basic understanding of the planning and control of materials into, through, and out of organizations. In addition, those who want to become certified by APICS need a fundamentals course to learn about the material planning and control system. This course will provide a basis for further study leading to certification.

WORD - LEVEL 1...introduces the student to word processing features such as creating, saving, editing, navigating, and formatting the content of multi-page documents.

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equivalent

**Program Number 10-499-5
 Associate Degree in Applied Science • Varies**
ABOUT THE DEGREE

In response to requests for academic recognition of registered apprenticeship training in the state of Wisconsin, the Wisconsin Technical College System provides a Technical Studies—Journeyworker Associate Degree in Applied Science. The Technical Studies—Journeyworker degree is designed to support lifelong learning and accelerate the achievement of individual career goals. Transferability of the Technical Studies portion of this 60-credit associate degree to four-year institutions will be based on the accepting institution's policies.

ABOUT APPRENTICESHIP

Apprenticeships are employer-sponsored training programs. You must have a contract before being invited to school. A special application process is used for these programs. Please contact the Apprenticeship Office for the proper forms. Apprenticeship means you earn while you learn. If you want a career in a skilled trade, apprenticeship is the best way to get there. You'll combine on-the-job training with on-campus learning—you'll have the best of both worlds when it comes to learning the skills you need to get ahead. And even better, you'll earn a paycheck while you learn those skills.

ADVANCEMENT AS A JOURNEYWORKER

As people embark on the path to Journeyworker status in a skilled trade, they often consider the attainment of that card the culmination of their career training. In many cases, this may very well be true. However, in other cases, the holder of a journeyworker card may ask, "What's next?" They may be interested in becoming a business owner or expanding their studies to the bachelor's degree level. There are any number of possible options as one builds a career in the skilled trades. If your career path takes you on a route where a degree beyond the journeyworker card is necessary, then this degree is designed for you.

DEGREE COMPLETION REQUIREMENTS

- Possess a Wisconsin Apprenticeship Completion Certificate issued by the Department of Workforce Development—Bureau of Apprenticeship Standards.
- Complete all WTCS apprentice-related technical instruction with a minimum course grade of C. Possession of the DWD—BAS Wisconsin Apprentice Completion Certificate with at least 400 hours of paid related instruction AND successful completion of all coursework fulfills the 39-credit minimum technical studies requirement of the Technical Studies—Journeyworker Associate Degree in Applied Science.
- Meet the WTCS Associate Degree in Applied Science requirement for a minimum of 15 credits of General Education.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

General Education courses may require completion of the Accuplacer test in order to enroll. Check course pre-requisites for details or speak with the program advisor.

CONTACT

Alison Driscoll, Program Counselor
 920.693.1610 • alison.driscoll@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Occupational Specific		
10499100	BAS/BAT Apprenticeship Completion	39
General Education (21 Credits)		
	Communication: 6 Credits Required	6
	Social Science: 3 Credits Required	3
	Behavioral Science: 3 Credits Required	3
	Math OR Science: 3 Credits Required	3
	General Education Electives or Associate Degree Level Technical Studies: 6 Credits Required	6
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.



BAS/BAT APPRENTICESHIP COMPLETION...requires the completion of a BAS approved apprenticeship which includes a minimum of 400 hours of paid related instruction.

Program Number 50-439-3
5-Year Contract
Work Hours (including related instruction): 10,000
Related Instruction Hours: 576 • Night School Hours: 8
ABOUT APPRENTICESHIP

Apprenticeships are employer-sponsored training programs. You must have a contract before being invited to school. A special application process is used for these programs. Please contact the Apprenticeship Office for the proper forms. Apprenticeship means you earn while you learn. If you want a career in a skilled trade, apprenticeship is the best way to get there. You'll combine on-the-job training with on-campus learning—you'll have the best of both worlds when it comes to learning the skills you need to get ahead. And even better, you'll earn a paycheck while you learn those skills.

ABOUT THE CAREER

Tool and die makers are vital to the metal-working industry because they produce the tools, dies, and special grinding and holding devices used in mass production. The Tool and Die Apprenticeship program is an employer-sponsored, hands-on training program. If you like working with mechanical technology/ manufacturing processes and you value and can work with exacting precision, your talents fit perfectly with a career as a journey-level tool and die maker.

CAREERS

Graduates of LTC's Tool and Die Apprenticeship program work as journey-level tool and die makers in a variety of manufacturing/industrial settings.

INDUSTRIAL APPRENTICE ACCEPTANCE REQUIREMENTS

- Determined by employer
- Wisconsin Apprentice Contract

PROGRAM OUTCOMES

- Apply basic safety practices in the machine shop.
- Interpret industrial/engineering drawings.
- Apply precision measuring methods to part inspection.
- Perform basic machine tool equipment setup and operation.
- Perform programming, setup, and operation of CNC machine tools.
- Design jigs and fixtures.
- Summarize practices to produce dies for a variety of operations.

APPROXIMATE COSTS

Contact the LTC Apprenticeship office or visit www.gotoltc.edu/apprenticeship for detailed information.

SPECIAL NOTE

You must have a sponsoring employer and a contract before attending school.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

Catalog No.	Class Title	Credit(s)
Term 1		
50420714	Engineering Drawings for Machine Trades Apprentice 1	1
50420713	Precision Measurement for Machine Tool Trades	1
2		
Term 2		
50420734	Mathematics for Machinist Apprentice 1	1
50420715	Mechanical Hardware and Hand Tools for Machine Trades Apprentice	0.5
50420720	Materials and Cut-Off Machines for Machine Trades	0.5
2		
Term 3		
50420721	Math for Machine Trades 2	0.5
50420722	Engineering Drawings for Machine Trades 2	0.5
50420718	Drilling Machines for Machine Trades Apprentice	0.5
50420717	Milling Machines for Machine Trades Apprentice	0.5
2		
Term 4		
50420724	CNC Programming and Planning for Machine Trades	1
50420716	Turning Machines for Machine Trades Apprentice	0.5
50420723	Intro to CAM for Machine Trades Apprentice	0.5
2		
Term 5		
50420725	Basic CAD/CAM for Machine Trades Apprentice	1
50420726	Jig and Fixture Design for Machine Trades Apprentice	0.5
50420719	Grinding Machines for Machine Trades Apprentice	0.5
2		
Term 6		
50420733	CNC Operations for Machine Tool Trades Apprentice	1
50420727	Geometric Design and Tolerancing for Machine Trades	0.5
50420731	Metallurgy for Machine Trades Apprentice	0.5
2		
Term 7		
50420732	Electrical Discharge Machining for Machine Trades	1
50420728	Basic Stamping Diemaking for Machine Trades	1
2		
Term 8		
50420730	Stamping Die Design Applications for Machine Trades Apprentice	1
50420729	Mold Making for Machine Trades Apprentices	1
2		
		TOTAL 16

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with the Apprenticeship Office for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

BASIC CAD/CAM FOR MACHINE TRADES APPRENTICE...is designed to provide concepts and techniques used in computer-aided design (CAD) and computer-aided manufacturing (CAM) as part of their related instruction. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

BASIC STAMPING DIEMAKING FOR MACHINE TRADES...introduces the basics of stamping diemaking. Topics include basic terminology, blanking, piercing, bending and related basic operations. In addition, learners will discover the basics of the theory and background knowledge related to stamping diemaking. CONDITION: 504393 Tool and Die Apprentice program requirements met

CNC OPERATIONS FOR MACHINE TOOL TRADES APPRENTICE...will examine CNC related operations and safety. Course competencies include classifying types of equipment, comparing CNC tooling, setup, and work holding operations. Additional CNC programming skill development is included in the course. CNC controls and communications are explored as well. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

CNC PROGRAMMING AND PLANNING FOR MACHINE TRADES...is a classroom introduction to CNC programming for apprentices, with a focus on CNC turning and milling centers. Apprentices will create set up sheets, develop tool lists, calculate speeds and feeds, assign tool offsets and write CNC program. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program reqs met

DRILLING MACHINES FOR MACHINE TRADES APPRENTICE...focuses on safety, terminology, construction and operations of drilling machines in the metal-working industry. CONDITION: 504393 Tool & Die Appr or 504202 Machinist Appr Prog Reqs Met

ELECTRICAL DISCHARGE MACHINING FOR MACHINE...is designed to give a basic understanding of the theory and process of sinker and wire EDM in toolmaking. This course uses the EDM Technical Manual distributed by POCO Graphite, Inc., which contains the most current information available in industry. CONDITION: 504393 Tool and Die Apprentice program requirements met

ENGINEERING DRAWINGS FOR MACHINE TRADES APPRENTICE 1... will acquaint the apprentice with the interpretation of engineering prints and other technical and manufacturing documentation. The primary focus of the course will be on that part of manufacturing most closely related to machining and tooling. Background information is provided relative to the process used to create and finish the product or piece part on the prints being studied. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

ENGINEERING DRAWINGS FOR MACHINE TRADES 2...prepares the learner to interpret manufacturing prints to extract detailed information about threads, sections, auxiliary views, fasteners, surface finishes, welding symbols, assembly, geometric location, and tolerances. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

GEOMETRIC DESIGN AND TOLERANCING FOR MACHINE TRADES... will acquaint the apprentice with the skills to interpret the geometric dimensions and tolerances found on engineering drawings and in other industrial documents. Instruction concentrates on interpreting the symbols, identifying tolerance zones and determining ways to check parts for conformity to the specified geometric controls. Reference is made to ASME Y14.5M - 1994. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

GRINDING MACHINES FOR MACHINE TRADES APPRENTICE...focuses on the safety, terminology, construction, and operation of grinding machines in the metal working industry. It instructs apprentices in the use of traditional grinding machines and the attachments and accessories frequently encountered in manufacturing operations that use the common grinding processes. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

INTRO TO CAM FOR MACHINE TOOLS TRADES APPRENTICE...is widely used in industry for creating G&M code programs for CNC machines. In this course the learner will explore the Mastercam interface. You will be determining the proper post processors for the work being done. Create and edit basic geometry. Create and edit tool paths for basic operations. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

JIG AND FIXTURE DESIGN FOR MACHINE TRADE APPRENTICE... introduces the apprentice to the concepts of jig and fixture design as part of their apprentice related instruction. Topics include the basic elements of tool design, jig and fixture application, and the actual design of tooling. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

MATERIALS AND CUTOFF MACHINES FOR MACHINE TRADES...prepares the learner to identify metal composition and classification, follow cutoff machine tool safety rules, operate horizontal cutoff machine tools, and operate vertical machine tools. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

MATH FOR MACHINE TRADES 2...prepares the learner to interpret symbols used in algebraic expressions, solve equations by the rearrangement of formulas, use formulas, solve unknown angles using angular principles, and solve for the angles and length of sides in right triangles. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

MATHEMATICS FOR MACHINIST APPRENTICE 1...provides applied mathematics instruction from a review of basic arithmetic; basic algebra; applications based on geometry; right triangle trigonometry and oblique angle trigonometry; and compound angles. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

MECHANICAL HARDWARE & HAND TOOLS FOR MACHINE TRADES APPRENTICE... provides instruction for the apprentice in the recognition, selection, and operation of mechanical hardware and hand tools. Apprentices are taught to use outside sources to select correct component or tool sizes, characteristics, and operating parameters. Apprentices will sharpen drills and single point cutting tools. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program reqs met

METALLURGY FOR MACHINE TRADES APPRENTICES...prepares the learner to interpret the properties of ferrous and non-ferrous materials as well as how to heat treat and test the hardness of ferrous materials. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice Program Requirements Met

MILLING MACHINES FOR MACHINE TRADES APPRENTICE...will instruct apprentices on the basic principles of vertical and horizontal milling machines for the machine tool trade. Instruction includes safety, basic parts and functions of the machines, work holding devices, tooling requirements, and feeds and speeds. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

MOLD MAKING FOR MACHINE TRADES APPRENTICES...introduces the apprentice to the basic mold die making process consisting of mold construction, components, and materials. CONDITION: 504393 Tool and Die Apprentice program requirements met

PRECISION MEASUREMENT FOR MACHINE TOOL TRADES...is designed to acquaint the apprentice with the measurement systems and tools most frequently used in layout and machining processes. Learning outcomes relate to semi-precision through super-precision measuring tools and equipment combined with opportunities to investigate new technologies. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

STAMPING DIE DESIGN APPLICATIONS FOR MACHINE TRADES APPRENTICE... provides the stamping die maker apprentice with the opportunity to design from part specifications two elementary stamping dies. This course provides instruction for the tool and die, stamping die and mold makers apprenticeship. CONDITION: 504393 Tool and Die Apprentice program requirements met

TURNING MACHINES FOR MACHINE TRADES APPRENTICE...will acquaint the apprentice with the terminology, methods, and operations for turning machines used in the metal-working industry. Apprentices will learn to perform calculations needed to operate turning machines including speed and feed calculations. Apprentices will make calculations necessary to setup a turning machine for screw threads and taper operations. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice program requirements met

ABOUT THE PROGRAM

Develop the skills you need to pursue a great career in metal fabrication and welding. In this program, the learner will discover the wonderful world of welding and fabrication through the use of the three major electrical welding processes; Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Gas Tungsten Arc Welding (GTAW). Learners will weld in all positions preparing you for a career in many fields of work, including manufacturing, shipbuilding, custom fabrication and pipe welding. Learners will perfect their welding technique on mild steel, stainless steel and aluminum with a thickness range of 16 gauge up to one inch thick. Learners will perfect their weld quality techniques by using visual inspection and destructive testing. Throughout this program, the learner will apply math and print reading to today's industry standards. In this technical diploma, learners will set up, program, and use metal cutting and forming equipment to produce steel fabrication to industry specifications. Students will be introduced to Lean manufacturing by applying their welding and fabrication skills in an automated fabrication cell to include robotic welding.

PROGRAM OUTCOMES

- Demonstrate industry recognized safety practices.
- Form materials to detailed drawings.
- Cut materials to detailed drawings.
- Join materials to detailed drawings.
- Layout components/assemblies.
- Inspect product.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Welding program course content prepares students for numerous state and national certifications. None are required to complete the program; there are additional costs for testing/certification. The College does not guarantee its curriculum matches the requirements for preparation, examinations, or licensure for other states.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
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Term 1

31442300	Welding Introduction	1
31442308	Welding Metallurgy	1
31442350	Welding Hand/Power Tools	1
31442351	Welding Measurement 1	1
31442310	Welding Shielded Metal Arc 1 (Stick)	1
31442312	Welding Shielded Metal Arc 2 (Stick)	1
31442314	Welding Shielded Metal Arc 3 (Stick)	1
31442316	Welding Shielded Metal Arc 4 (Stick)	1
31442320	Welding Gas Metal Arc 1 (Wire/Mig)	1
31442322	Welding Gas Metal Arc 2 (Wire/Mig)	1
31442324	Welding Gas Metal Arc 3 (Wire/Mig)	1
31442326	Welding Gas Metal Arc 4 (Wire/Mig)	1
31442304	Welding Submerged Arc (SAW)	1
31442330	Welding Gas Tungsten Arc 1 (Heli-Arc/TIG)	1
31442332	Welding Gas Tungsten Arc 2 (Heli-Arc/TIG)	1
31442334	Welding Gas Tungsten Arc 3 (Heli-Arc/TIG)	1
31442336	Welding Gas Tungsten Arc 4 (Heli-Arc/TIG)	1
31442318	Pipe Welding Fundamentals	1
31442382	Welding Math 1	1
31442385	Welding Print Reading	1
31442340	Welding Advance Process 1	1
31442342	Welding Advance Process 2	1
31442357	Welding Fabrication Introduction	2
10106116	Computer Essentials	1
31801359	Communication Skills for the Workplace	2

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Term 2

31442301	Advanced Pipe Welding 1	1
31442303	Advanced Pipe Welding 2	1
31442305	Advanced Pipe Welding 3	1
31442325	Advanced Pipe Welding Processes	1
31442307	Welding Measurement 2	1
31420336	Drills	1
31420350	Mill-Squaring	1
31420340	Lathes Facing and Turning	1
31442309	Welding Print Reading 2	1
31442337	Weld Inspection and Processes	1
31442339	Stainless Steel Polishing and Finishing	1
10620167	Robotics-Teach Pendant/Controls	1
10620179	Robotics-Editing Programs	1
31442327	Robotic Welding 1	1
31442329	Robotic Welding 2	1
31457331	Fabrication 1	2
31457333	Fabrication 2	2
31457343	Fabrication 3	2
31457335	Fabrication Design and Application	2
31449301	Industrial Safety	1
31442384	Weld Math 2	1
10606101	Basic Mechanical Drafting	2

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TOTAL 54

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

Please see *Industrial Welding for Term 1* course descriptions.

ADVANCED PIPE WELDING 1...will have learners producing quality pipe welds in the flat and horizontal positions. Pipe to Pipe and Socket welds will be made by using Gas Metal Arc Welding, Shielded Metal Arc Welding and the Gas Tungsten Arc Welding processes. Learners will use WPS's (welding procedure specifications sheet) of pipe welding for mild steel in accordance with various welding codes. COREQUISITES: 31442326 Wldg Gas Metal Arc 4, 31442316 Wldg Shielded Metal Arc 4, and 31442336 Wldg Gas Tungsten Arc 4

ADVANCED PIPE WELDING 2...will have learners weld pipe to pipe and socket welds in the 4F, 5F, and 5G positions. Pipe to Pipe and Socket welds will be made by using the Flux Core Arc Welding, Shield Metal Arc Welding and the Gas Tungsten Arc Welding processes. Learners will use WPS's (welding procedure specifications sheet) of pipe welding for mild steel in accordance with various welding codes. COREQUISITE: 31442301 Advanced Pipe Welding 1

ADVANCED PIPE WELDING 3...will teach learners to weld pipe to pipe and socket welds in the 6F and 6G positions. Pipe to Pipe and Socket welds will be made by using the Flux Core Arc Welding, Shield Metal Arc Welding and the Gas Tungsten Arc Welding processes. Learners will use WPS's (welding procedure specifications sheet) of pipe welding for mild steel in accordance with various welding codes. COREQUISITE: 31442303 Advanced Pipe Welding 2

ADVANCED PIPE WELDING PROCESSES...instructs the learner to weld a piping spool project. They will layout, cut, grind, bevel, fit and pressure test. The spool project will be welded using the GTAW, SMAW, GMAW and the FCAW processes. The learner will have the opportunity to test for the state certification in the 6G pipe position. The learner will choose either the SMAW or the GMAW/FCAW welding processes. All welding will be completed using welding practices and will be in accordance with the AWS and ANSI steel code. COREQUISITE: 31442305 Adv Pipe Welding 3

BASIC MECHANICAL DRAFTING USING AUTOCAD...provides the learner with the skills to utilize AutoCAD's drawing editor, viewing commands; apply coordinate entry methods, AutoCAD file commands; utilize draw commands, modify commands; create and edit text, prints & plots; apply geometric construction to solve a drawing problem; utilize selection sets, duplicating modify commands, layers & objects properties, blocks; apply principles of orthographic and multi view projection.

DRILLS...prepares the learner to interpret the attributes of hole-producing tools, follow drilling machine tool safety rules, identify drilling machine tool components, and operate sensitive drilling machine tools. COREQUISITE: 31420310 Machine Tool Hand Tools or 31420394 Ind Mtn Machine Tool Intro or 10420194 Machine Tool Introduction

FABRICATION 1...teaches the basics of metal fabrication safety, production, measuring, hand tools, and layout. Learn how to use shears, forming, press brakes, box and pan brakes, and slip rollers. Learners will demonstrate proficiency in metal fabrication through related projects. COREQUISITES: 31442307 Welding Measurement 2 and 31442309 Welding Print Reading 2

FABRICATION 2...teaches the advanced process of forming product using automated and manual equipment. Demonstrate proficiency of forming by choice of tooling, calculations and sequence of forming. COREQUISITES: 10606101 Basic Mechanical Drafting and 31457331 Fabrication 1 or PREREQUISITE: 31442333 Fabrication 1

FABRICATION 3...teaches the advanced processes of material processing using automated and manual equipment. Demonstrate proficiency of CNC programming for automated Laser cutting processes. Demonstrate proficiency in laser cutting by proper set-up and shutdown, cutting conditions, program processing and gas selection based on material. COREQUISITE: 31457333 Fabrication 2

FABRICATION DESIGN AND APPLICATION...will have learners set-up, program, operate, weld, assemble, inspect, and finish/coat to complete metal fabrication projects and provide shop routings to demonstrate comprehension of process control in a manufacturing facility. Maintain safety in the shop for all operations with hand tools and machinery. COREQUISITE: 31457343 Fabrication 3

INDUSTRIAL SAFETY...utilizes advanced, lab-based, hands-on, and table-top interaction. Competencies focus on recognizing and promoting safe work programs. It is 'deep dive' training on; OSHA, forklift, personal protective equipment, hazards communication, hazardous materials, lockout/tagout, fall protection/confined space, emergency planning, fire prevention and suppression, CPR/AED/First-Aid, and electronic technology. You receive an OSHA 10-Hour and American Heart Association certification.

LATHE FACING AND TURNING...prepares the learner to perform lathe facing and turning operations safely.

MILL-SQUARING...prepares the learner to square a part using a vertical mill machine safely.

ROBOTIC WELDING 1...prepares the learner to perform basic robotic welding skills on the five major joints used in industry, how to load weld programs for their welding joints, and demonstrate safety practices associated with robotic welding. COREQUISITE: 31620335 Introduction to Robotics 2

ROBOTIC WELDING 2...builds upon learner's knowledge and skill of the world of robotic welding. In this course, students will learn how to weld around pipe that is 2" in diameter and larger, V-grooves and creating fixtures for different welding joints that will be used during this credit. COREQUISITE: 31442327 Robotic Welding 1

ROBOTICS-EDITING PROGRAMS...teaches troubleshooting and repairing issues in a robot program. COREQUISITE: 10620167 Robotics-Teach Pendant/Control

ROBOTICS-TEACH PENDANT/CONTROL...instructs students on using a teach pendant to control a robot. COREQUISITE: 10620169 Robotics-Editing Programs

STAINLESS STEEL POLISHING AND FINISHING...provides learning so that the student will develop and demonstrate skills needed to properly finish food grade weldments. Surface finish is an important element in any specification of stainless steel or steel regardless of the intended use. Students will demonstrate proficiency in welding projects using purging and backing techniques. Students will demonstrate proficiency in grinding within given tolerances for surface finish and flatness.

WELD INSPECTION AND PROCESSES...will teach welding metallurgy, metal properties and destructive testing. The learner will demonstrate proper evaluation of weld and base metal discontinuities. The learner will be introduced to VT and other NDE methods. COREQUISITES: 31442307 Welding Measurement 2

WELDING MATH 2...prepares the learner with the necessary skills to use scientific calculators for the application of solving problems of ratio and proportion, precision, and accuracy in measurements, unit conversions, direct-length measurements, pre-algebra, and simple and complex equations using algebra concepts. The class is designed for individualized student needs. This is credit two of the two-credits needed for the Welding program. COREQUISITE: 31442382 Weld Math 1 or CONDITION: Welding Math 1 Testout or equivalent

WELDING MEASUREMENT 2...provides the learner with the skills to: use precision hand held measuring tools and the use of semi-precision measuring tools, and use of layout and measurement tools to fabricate steel projects.

WELDING PRINT READING 2...prepares the learner to recognize and use pipe welding symbols, dual dimensioning, analyze metric units and how they can impact print reading, Inspection and Testing by the use of destructive testing symbols, and non-destructive testing symbols, understanding the International Standards symbols for welding, interpret Geometric Dimensioning and Tolerancing characteristic and symbols.

Program Number 31-442-1
Technical Diploma • One Term
ABOUT THE PROGRAM

Evidence of welders' work is all around us—everything from battleships, cars, and piping to the amazing dome on the U.S. Capitol Building. If you like hands-on work, have solid math and reading skills, are dedicated to accuracy, and have an eye for detail, welding is the perfect career for you.

PROGRAM OUTCOMES

- Demonstrate industry-recognized safety practices.
- Interpret welding drawings.
- Produce shielded metal arc welds (SMAW).
- Produce gas metal arc welds (GMAW).
- Produce flux core welds.
- Produce gas tungsten arc welds (GTAW).
- Perform thermal cutting.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This program is available in a part-time evening and full-time day offering. All classes meet the American Welding Society requirements.

Welding program course content prepares students for numerous state and national certifications. None are required to complete the program; there are additional costs for testing/certification. The College does not guarantee its curriculum matches the requirements for preparation, examinations, or licensure for other states.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
31442300	Welding Introduction	1
31442308	Welding Metallurgy	1
31442350	Welding Hand/Power Tools	1
31442351	Welding Measurement 1	1
31442310	Welding Shielded Metal Arc 1 (Stick)	1
31442312	Welding Shielded Metal Arc 2 (Stick)	1
31442314	Welding Shielded Metal Arc 3 (Stick)	1
31442316	Welding Shielded Metal Arc 4 (Stick)	1
31442320	Welding Gas Metal Arc 1 (Wire/Mig)	1
31442322	Welding Gas Metal Arc 2 (Wire/Mig)	1
31442324	Welding Gas Metal Arc 3 (Wire/Mig)	1
31442326	Welding Gas Metal Arc 4 (Wire/Mig)	1
31442304	Welding Submerged Arc (SAW)	1
31442330	Welding Gas Tungsten Arc 1 (Heli-Arc/TIG)	1
31442332	Welding Gas Tungsten Arc 2 (Heli-Arc/TIG)	1
31442334	Welding Gas Tungsten Arc 3 (Heli-Arc/TIG)	1
31442336	Welding Gas Tungsten Arc 4 (Heli-Arc/TIG)	1
31442318	Pipe Welding Fundamentals	1
31442382	Welding Math 1	1
31442385	Welding Print Reading	1
31442340	Welding Advance Process 1	1
31442342	Welding Advance Process 2	1
31442357	Welding Fabrication Introduction	2
10106116	Computer Essentials	1
31801359	Communication Skills for the Workplace	2

TOTAL 27

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2021-2022 rates and are subject to change prior to the start of the academic year.

COMMUNICATION SKILLS FOR THE WORKPLACE...prepares the student to develop paper job-search tools and job-related writing skills to increase job stability; introduces the students to team-building skills to resolve organizational problems; introduces the student to the skills of effective listening; prepares the student to respond to workplace criticism and praise; and introduces the student to interpersonal relationship skills, including effective interviewing skills, customer relations, and management/employee relations.

COMPUTER ESSENTIALS...covers computer technology and basic computer skills for the student who is just starting classes at LTC. This course will include topics related to uses of computer hardware and software, internet searching, e-mail, MyLTC, online courses, and an introduction to documents and presentations.

PIPE WELDING FUNDAMENTALS...demonstrates safe shop working practices. The learner will weld pipe to plate in the 2F, 5F and 6F positions while using the SMAW, GMAW, FCAW and GTAW welding processes. Students will weld pipe groove welds in the 1G, 2G, 5G and 6G positions while using the SMAW, GMAW, FCAW and GTAW welding processes. COREQUISITES: 31442326 Wldg Gas Metal Arc 4, 31442316 Wldg Shielded Metal Arc 4, and 31442336 Wldg Gas Tungsten Arc 4

WELDING ADVANCE PROCESS 1...is a student selected welding process. In it the student will begin to use that process to weld in all positions including pipe. The learner will prepare to become a certified welder. COREQUISITE: 31442326 Welding Gas Metal Arc 4 or 31442316 Welding Shielded Metal Arc 4 or 31442336 Welding Gas Tungsten Arc 4

WELDING ADVANCE PROCESS 2...is a student selected welding process. In it the student will learn to use that process to weld in all positions including pipe. The learner will have the opportunity to become a certified welder in the chosen welding process. COREQUISITE: 31442340 Welding Advance Process 1

WELDING FABRICATION INTRODUCTION...introduces the learner to various methods of steel fabrication. The learner will produce steel fabrications from drawings which includes the learner's ability to read and interpret drawings, sketches using appropriate welding symbols, follow written procedures, and cut parts to proper size. The learner will fit simple assemblies, and will pass workmanship tests using GMAW, FCAW and GTAW welding processes. COREQUISITE: 31442385 Welding Print Reading and 31442342 Welding Advance Process 2 or 31442342S3 Welding Advance Process 1B (Stick) or 31442342M3 Welding Advance Process 1B (Mig) or 31442342T3 Welding Advance Process 1B (Heli-Arc/Tig)

WELDING GAS METAL ARC 1...prepares the learner to demonstrate safe shop work practices; learners will perform set up and shut down of GMAW and FCAW equipment; weld mild steel using the GMAW and FCAW welding processes, and weld in all positions using the GMAW process. COREQUISITE: 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

WELDING GAS METAL ARC 2...will use safe shop work practices while producing 3/4" fillet welds using the FCAW and MCAW welding processes and 1/4" fillet welds while welding tube to plate in the horizontal position. Learners will produce V-groove weldments in all four positions, using .035 hard wire, .052 Flux Core and Metal electrode wires. COREQUISITE: 31442320 Welding Gas Metal Arc 1

WELDING GAS METAL ARC 3...will have learners demonstrate safe shop working practices while welding fillet welds in all positions using the FCAW and MCAW welding process. Learners will perform single bevel groove welds and V-groove welds in all positions using the multiple GMAW welding process, and will perform groove welds with and without backing material. COREQUISITE: 31442322 Welding Gas Metal Arc 2

WELDING GAS METAL ARC 4...demonstrates safe shop working practices, while welding fillet welds in all positions using the FCAW and MCAW welding process. Students perform single bevel groove welds and V-groove welds in all positions using the multiple GMAW welding process. Students weld pipe to plate in the 5 and 6F position using the FCAW welding process. COREQUISITE: 31442324 Weld Gas Metal Arc 3

WELDING GAS TUNGSTEN ARC 1...prepares the learner to demonstrate safe shop work practices, weld mild steel, stainless steel and aluminum in the flat position or horizontal positions using the GTAW process. COREQUISITE: 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

WELDING GAS TUNGSTEN ARC 2...prepares the learner to demonstrate safe shop work practices while welding mild steel, stainless steel and aluminum in the horizontal and vertical up positions using the GTAW process. The learner will be introduced to the GTAW Pulse welding process while welding mild steel in the 2F position. COREQUISITE: 31442330 Welding Gas Tungsten Arc 1

WELDING GAS TUNGSTEN ARC 3...demonstrates safe shop work practices while welding square butt joints on mild steel in the 2F, 3F and 4F positions; weld lap joints on mild steel in the 2F, 3F, and 4F positions using the; weld tee joints on mild steel in the 2F, 3F, and 4F positions using the GTAWP/GTAW process. The learner will also learn how to minimize oxidation in stainless steel during the welding process, welding thin SST in the 1G & 2G positions and proper food grade post weld cleanup to these joints. COREQUISITE: 31442332 Welding Gas Tungsten Arc 2

WELDING GAS TUNGSTEN ARC 4...prepares the learner to demonstrate safe shop work practices while welding V-grooves in all positions on 1/4" mild steel plate using either the GTAW or GTAWP welding processes. Learners will make 2-piece and 3-piece corner joints in the 1F, 2F and the 3F positions on 11 ga. HRS and 14 ga. SST. Learners will be introduced to a welding technique called "walking the cup" and will make fillet welds in the 1F position on 1/4" mild steel. COREQUISITE: 31442334 Welding Gas Tungsten Arc 3

WELDING HAND/POWER TOOLS...prepares the learner to communicate proper measurement terminology used in industry; will develop safety practices for the work place; proper use of measuring equipment and obtain measurement readings from measuring equipment; layout steel fabrication using hand measuring devices and layout equipment. The learner will inspect a variety of steel fabrications and how to classify industrial fasteners. Learners will have the opportunity to receive up to three NC3/Starrett measuring certifications. COREQUISITE: 31442351 Welding Measurement 1 and 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

WELDING INTRO...introduces the learner to the world of welding, weld shop safety practices, welding terminology, and welding machine setup to industry standards. Learners will be introduced to the three major welding processes: SMAW, GMAW, and GTAW and will build skills welding with each process in the flat, and horizontal positions while using the common welding joints found in industry. The learner will process material by using the two major hand held cutting processes - the Oxyfuel and PAC cutting processes.

WELDING MATH 1...provides the learner with the necessary skills to solve problems involving whole numbers, fractions, and decimal numbers using pad and pencil and calculator. The course is designed for individualized student needs. This is credit one of the twomath credits need for the Welding program.

WELDING MEASUREMENT 1...prepares the learner to communicate proper measurement terminology used in industry; will develop safety practices for the work place; proper use of measuring equipment and obtain measurement readings from measuring equipment; layout steel fabrication using hand measuring devices and layout equipment. The learner will inspect a variety of steel fabrications and how to classify industrial fasteners. Learners will have the opportunity to receive up to three NC3/Starrett measuring certifications.

WELDING METALLURGY...prepares learner to interpret properties of ferrous materials, heat treat ferrous metals; and test the hardness of ferrous materials. Learner will interpret weld discontinuities and how heat of the weld affects base metal properties.

WELDING PRINT READING...prepares the learner to apply orthographic projection principles and AWS welding symbols as they relate to welding fabrications. Students will learn the basics of print reading including alphabet lines, tolerances, bill of materials, title blocks, and revision blocks.

WELDING SHIELDED METAL ARC 1...prepares the learner to demonstrate safe shop work practices; make bead on plate welds on mild steel; make padding plate welds on mild steel; make fillet welds in 3/8" mild steel plate in the flat and horizontal positions; and make groove welds in mild steel plate. COREQUISITE: 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

WELDING SHIELDED METAL ARC 2...will have the learner demonstrate safe shop work practices; make horizontal padding plate welds on 1/2" mild steel with E7018 electrode; 1/4", 3/8" and 3/4" fillet welds in the horizontal position, 1/4" fillet welds on round and square tubing; open root groove welds with a 3/32" root opening in mild steel in the 1G position; groove welds with 1/4" root opening and 1/4" backup bar on mild steel in the 2G position using E7018 electrode; padding plates and fillet welds in the vertical position. COREQUISITE: 31442310 Welding Shielded Metal Arc 1

WELDING SHIELDED METAL ARC 3...teaches the learner to use safe shop work practices; Students will experience the art of welding in the vertical and overhead position. To better understand the vertical and overhead positions, students will perform padding plate welds on mild steel with E7018 electrode; Perform fillet welds in the vertical and overhead positions; Groove welds will also be performed in the vertical and overhead position. Groove welds will be with and without backing.. COREQUISITE: 31442312 Welding Shielded Metal Arc 2

WELDING SHIELDED METAL ARC 4...prepares the learner to demonstrate safe shop work practices while making multi pass groove welds in the 1G, 3G, and 4G positions using E7018 electrodes. Students will make multi pass fillet welds to pipe to plate in the 2F, 5F and 6F positions, and will be introduced to pipe welding in the 1G position. COREQUISITE: 31442314 Welding Shielded Metal Arc 3

WELDING SUBMERGED ARC (SAW)...is a common arc welding process. It requires a continuously fed consumable electrode. The molten weld and the arc zone are protected from atmospheric contamination by being "submerged" under a blanket of granular fusible flux. The learner will interpret SAW terminology, setup and shut down of SAW equipment, SAW weld safety; and perform SAW welds in the flat position. COREQUISITES: 31442326 Welding Gas Metal Arc 2B and 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

ABOUT THE PROGRAM

The wind energy industry is the fastest growing segment of new energy production. Employers seek skilled technicians for operation and maintenance activities in wind farms. There is also a demand for advanced technicians with U.S. and international wind turbine manufacturers; these include: installation technicians, quality control technicians, and warranty and commissioning technicians. Operation and maintenance positions generally remain with a given wind farm location; other technicians travel extensively with the construction of new wind farms and repair/retrofitting of wind turbines around the world.

PROGRAM OUTCOMES

- Install, inspect, test, service, and repair wind turbine components.
- Wear proper Personal Protection Equipment, identify hazards, mitigate said hazards, and safely climb towers.
- Cognitively think and use deductive reasoning as well as manufacturer information while troubleshooting or maintaining a wind turbine.
- Clearly and responsibly communicate appropriate information with stakeholders under minimal supervision.
- Practice the basics of self-evacuation and rescue.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This program is an official shared program with students from FVTC, MPTC, and NWT. Students attend electro-mechanical and general education classes at their local technical colleges. These students attend Wind Energy Technology specific courses at LTC in Cleveland and may graduate with both a degree from their respective colleges as well as a degree in Wind Energy Technology from LTC. LTC welcomes transfer students who are graduates of electro-mechanical and other energy-related programs or other universities. Interested transfer/dual-degree students are encouraged to contact the LTC program counselor at 920-693-1378.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10482101	Wind Systems Introduction	3
10482104	Wind Technician 1 - Rescue & Tools**	2
10482110	Energy and Solar Power	1
10620122	Industrial Wiring	2
10620103	Fluid Power 1	2
10620105	DC Fundamentals	2
10804113	College Technical Mathematics 1A OR 10804198 Calculus 1* (4 cr)	3
		15
Term 2		
10482106	Wind Technician 2 - Safety and Maintenance**	3
10482124	Wind Technician 3 Lab**	1
10482132	10482132 Turbine Maintenance** OR 10482103 Wind Farm Practical Experience (2 cr)**	2
10620104	Fluid Power 2	3
10620138	Programmable Controllers - Allen Bradley	3
10620110	AC Fundamentals	2
10620141	Industrial Controls & Motors	3
		17
Summer Term		
10482126	Wind Technician 4**	3
		3
Term 3		
10482140	Solar Technician 1 Lab	1
10482128	Wind Technician 5 Lab**	2
10482133	Wind Systems Networking	2
10482135	Energy Power and Force OR 10806154 General Physics 1 (4 cr)	3
10482136	Energy Power and Force Lab OR 10806154 General Physics 1 (4 cr)	1
10620195	Industrial Troubleshooting	1
10620130	Mechanical Drive Systems	3
10620164	Electromechanical Systems	2
		15
Term 4		
10801195	Written Communication	3
10809195	Economics OR 10809196 Introduction to Sociology (3 cr)	3
10801196	Oral/Interpersonal Communication	3
10809198	Introduction to Psychology	3
		12
		TOTAL 62

*Students who plan to also achieve a Bachelor's degree are encouraged to take this transferable course.

**These class dates and times may be rescheduled due to inclement weather. Students must be within safe-climbing, unequipped body weight of 115 to 295 pounds.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AC FUNDAMENTALS...prepares the student to analyze electrical circuits using AC math, analyze AC waveforms, measure and analyze AC power, analyze capacitors and inductors in DC and AC circuits, analyze AC circuits containing reactance and calculate resonance, apply the elements and properties of basic measuring circuits, and describe transformer characteristics. PREREQUISITE: 10620105 DC Fundamentals or 10660105 DC Fundamentals

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtn Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

DC FUNDAMENTALS...prepares the student to convert values to scientific and engineering notations; calculate math quantities; describe basic atomic theory; identify basic electrical terms; use established symbols standards; describe DC voltage characteristics and current sources and electrical resistance; measure and analyze electrical quantities in series and parallel circuits; and desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assessment equiv or CONDITION: 610062 Agribusiness/Financial Basic prog adm met

ELECTROMECHANICAL SYSTEMS...prepares the student to communicate with, tune, run, and troubleshoot Allen-Bradley servos; utilize electrical control of hydraulic systems, explore PID control of motor speed; and investigate open and closed loop control systems. PREREQUISITES: 10620104 Fluid Power 2 and 10620110 AC Fund or 10660110 AC Fund

ENERGY AND SOLAR POWER...provides the learner with an overview of electrical energy generation and distribution and its relationship to the renewable energy industry. Various types of electric energy systems are compared and contrasted. Solar Energy and its differing applications, including solar hot water and passive solar, are explored. Students will measure the output of a photovoltaic array and learn how a PV system can be integrated into the existing infrastructure.

ENERGY POWER AND FORCE...studies the laws and theories of electric power generation that govern motion and how to apply them to a range of concepts including rotational inertia, acceleration, velocity, lift, force, torque, etc. Studies the law of Conservation of Energy and basic atomic theory and how these concepts apply to electric power generation. The use and function of simple machines, and how they relate to electric power generator function, is also explored.

ENERGY POWER AND FORCE LAB...applies the laws and theories that govern motion to energy power and force concepts including rotational inertia, acceleration, velocity, lift, force and torque. Exploration of basic atomic theory and how it applies to electric power generation is conducted. In addition, the law of conservation of energy is applied in the lab activities. The use and function of simple machines, and how they relate to generator function is also examined. COREQUISITE: 10482135 Energy Power & Force

FLUID POWER 1...prepares the learner to identify hydraulic and pneumatic component symbols; adjust a pressure relief valve; analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits; analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. COREQUISITES: 10804115 College Technical Math 1 or 10804114 College Tech Math 1A

FLUID POWER 2...enhances the learner's ability to read schematics containing fluid power component symbols; assemble systems using schematics; analyze system's operation using a schematic; evaluate the general characteristics and terms of fluids under pressure, fluid conditioning, conductors, reservoirs, accumulators, pressure control; and troubleshoot malfunctioning pressurized systems. PREREQUISITE: 10620103 Fluid Power 1 or 10620155 Industrial Maintenance Hydraulics and Pneumatics

INDUSTRIAL CONTROLS AND MOTORS...prepares the learner to select control devices by function and operation; illustrate electrical circuits using symbols, diagrams, and abbreviations; explain the operation of magnetic solenoids and apply motor control techniques and introduces the student to three-phase power motor circuits for industrial applications. PREREQUISITE: 10620122 Industrial Wiring and COREQUISITE: 10620110 AC Fundamentals or PREREQUISITE: 10660110 AC Fundamentals

INDUSTRIAL TROUBLESHOOTING...prepares the learner to conduct effective machine control troubleshooting techniques with an understanding of preventive maintenance methods designed to minimize motor and controls issues between preventive maintenance measures. PREREQUISITE: 10620141 Industrial Controls and Motors

INDUSTRIAL WIRING...prepares the learner to follow safety procedures; maintain a safe and healthy work environment; construct electrical circuits; measure electrical quantities using a VOM and/or DVM; analyze measured values using electrical circuit laws; construct typical industrial control circuits; and analyze typical industrial control circuits.

INTRODUCTION TO PSYCHOLOGY...introduces the students to a survey of the multiple aspects of human behavior. Involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. Directs student to an insightful understanding of the complexities of human relationships in personal, social, & vocational settings. PREREQ: Reading plcmnt assmnt equiv or COREQ: 10838105 Intro to Rdg & Study Skills

MECHANICAL DRIVE SYSTEMS...prepares the learner to use tools and fasteners safely; identify belt and chain drive components; install and adjust belt and chain drives; apply bearing and lubrication information; perform coupling alignment using straight edge, feeler gauge, and dial indicator and laser methods; identify various gear drives; calculate gear ratios; and analyze first-, second-, and third-class levers.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY...prepares the student to understand basic PLC structure and terminology; learn to create and troubleshoot basic PLC programs using the RSLOGIX 500 software and the RSLINX communication software; become familiar with communicating with programming SLC-500 PLCs. This course is highly computer based.

SOLAR TECHNICIAN 1 LAB...provides a hands-on lab-based environment where students learn the basic parts of photovoltaic systems, complete a solar site assessment, and learn how to size a solar system for desired power output, as well as to work safely around solar electric equipment.

TURBINE MAINTENANCE...prepares learners to climb, inspect and service wind turbines; use torque fasteners; check gearbox lubrication; add grease to moving and exposed parts; verify good electrical connections; perform an overall "system check" and routine maintenance on a wind energy system; in addition to fault determination and troubleshooting. Students will incorporate wind industry best safety practices, must be prepared to climb multiple times in a day, and work full days outside in varying weather conditions. COREQUISITE: 10482124 Wind Technician 3 Lab

WIND SYSTEMS INTRODUCTION...prepares the learner to assess the global energy picture, analyze the causes of wind flow and wind flow properties, write a site assessment, explore small, medium, and large wind turbine designs, assess the environmental effects of wind turbines, perform business assessments for wind energy projects, plan a wind energy project, evaluate the operation and maintenance requirements of wind turbines and their components, and analyze the future of wind energy.

WIND SYSTEMS NETWORKING...introduces the wind technician to the applications of SCADA, SCADA control processes, remote connections of generation assets, remote monitoring and remote control, IP addressing, installing and removing programs on PC's, downloading programs on PLC's, proper removal and replacement of communication and control components, as well as connecting to various components for troubleshooting, testing, and component addressing. COREQUISITES: 10482124 Wind Technician 3 Lab and 10620138 Programmable Controllers - Allen Bradley

WIND TECHNICIAN 1 - RESCUE AND TOOLS...prepares students for work at height and to perform equipment inspections on climbing and fall arrest gear; wear required PPE, PFPE, and apparel while working on wind turbine systems. Students will be SAFER certified in safe tower access, climbing, rescue, and confined space rescue, and will demonstrate proper knot tying and display professionalism and safe working habits during all tasks. Students are trained in use of hand tools and torque tools. COREQUISITE: 10482101 Wind Systems Intro

WIND TECHNICIAN 2 - SAFETY AND MAINTENANCE...familiarizes learners with OSHA regulations related to the wind industry and proper methods to eliminate and control hazards. Students receive training in First Aid, CPR, rigging, and confined space and receive the 10-hour OSHA for General Industry and the Tools at Height certifications. Participants develop skills in repair and maintenance of commercial wind turbines. Industry standards, training manuals, and field experience are course standards. COREQUISITE: 10482104 Wind Technician 1 - Rescue & Tools

WIND TECHNICIAN 3 LAB...certifies learner in torque tool techniques with Snap-on tools. Students will apply safe and proper techniques while using various styles of torque wrenches and adapters including hand torque and hydraulic torque wrenches. Students will demonstrate proficiency in performing a variety of maintenance functions on the GE 1.5 nacelle including oil filter changes, generator brush maintenance, and brake pad replacement while following proper safety and LOTO procedures. COREQ: 10482106 Wind Tech 2-Stfy & Mtn

WIND TECHNICIAN 4...reviews arc flash requirements, power quality, power factor correction, transformer calculations, electrical distribution, and transmission systems. Student will learn the components and functions of a gearbox; how to inspect bearings and gears, troubleshoot the cooling system, and replace various gearbox components. Student will perform proper maintenance of the yaw system on the GE 1.5 nacelle, and will be responsible for completing troubleshooting/maintenance on the campus's wind turbines. PREREQUISITES: 10482124 Wind Tech 3, 10620141 Industrial Controls & Motors, 10620130 Mech Mech Intro, 10620138 Prog Cont-Allen Bradley and COREQUISITES: 10482132 Turbine Mtn or 10482103 Wind Farm Intern & 10482128 Wind Tech 5 and 10620140 PLC Adv

WIND TECHNICIAN 5 LAB...familiarizes the students with schematic reading and prepares the student to use schematics for troubleshooting and LOTO. The student will demonstrate proficiency in the use of a multi-meter for troubleshooting and LOTO. The student will demonstrate proficiency in troubleshooting motors and safely changing out motors. In this capstone course, students will responsibly perform troubleshooting and maintenance of the wind turbines on LTC's campus. COREQUISITE: 10482126 Wind Technician 4

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Wrtg placement assmt equiv and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Rdg placement assmt equiv

Program Number 10-482-1
Associate Degree in Applied Science
ABOUT THE PROGRAM

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PROGRAM OUTCOMES

- Install, inspect, test, service, and repair wind turbine components.
- Wear proper Personal Protection Equipment, identify hazards, mitigate said hazards, and safely climb towers.
- Cognitively think and use deductive reasoning as well as manufacturer information while troubleshooting or maintaining a wind turbine.
- Clearly and responsibly communicate appropriate information with stakeholders under minimal supervision.
- Practice the basics of self-evacuation and rescue.

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**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

This program is an official shared program with students from FVTC, MPTC, and NWTC. Students attend electro-mechanical and general education classes at their local technical colleges. These students attend Wind Energy Technology specific courses at LTC in Cleveland and may graduate with both a degree from their respective colleges as well as a degree in Wind Energy Technology from LTC. LTC welcomes transfer students who are graduates of electro-mechanical and other energy-related programs or other universities. Interested transfer/dual-degree students are encouraged to contact the LTC program counselor at 920-693-1378.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2021)		
10482110	Energy and Solar Power	1
10620103	Fluid Power 1	2
10620105	DC Fundamentals	2
10804113	College Technical Math 1A OR 10804198 Calculus 1* (4 cr)	3
		8
Term 2 (Spring 2022)		
10620104	Fluid Power 2	3
10620138	Programmable Controllers - Allen Bradley	3
10620110	AC Fundamentals	2
		8
Term 3 (Fall 2022)		
10482101	Wind Systems Intro	3
10482104	Wind Technician 1 - Rescue and Tools**	2
10620122	Industrial Wiring	2
		7
Term 4 (Spring 2023)		
10482106	Wind Technician 2 - Safety & Maintenance**	3
10482124	Wind Technician 3 Lab**	1
10620141	Industrial Controls & Motors	3
10482132	Turbine Maintenance** OR Wind Farm Practical Experience	2
		9
Term 6 (Fall 2023)		
10620130	Mechanical Drive Systems	3
10482135	Energy Power and Force	3
10482136	Energy Power and Force Lab	1
10482140	Solar Technician 1 Lab	1
		8
Term 7 (Spring 2024)		
10809195	Economics OR 10809196 Introduction to Sociology	3
10801196	Oral/Interpersonal Communication	3
		6
Term 5 (Summer 2024)		
10482126	Wind Technician 4**	3
		3
Term 8 (Fall 2024)		
10620164	Electromechanical Systems	2
10620195	Industrial Troubleshooting	1
10482133	Wind Systems Networking	2
10482128	Wind Technician 5 Lab**	2
		7
Term 9 (Spring 2025)		
10801195	Written Communication	3
10809198	Introduction to Psychology	3
		6
		TOTAL 62

*Students who plan to also achieve a Bachelor's degree are encouraged to take this transferable course.

**These class dates and times may be rescheduled due to inclement weather. Students must be within safe-climbing, unequipped body weight of 115 to 295 pounds.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

2021-22

AC FUNDAMENTALS...prepares the student to analyze electrical circuits using AC math, analyze AC waveforms, measure and analyze AC power, analyze capacitors and inductors in DC and AC circuits, analyze AC circuits containing reactance and calculate resonance, apply the elements and properties of basic measuring circuits, and describe transformer characteristics. PREREQUISITE: 10620105 DC Fundamentals or 10660105 DC Fundamentals

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. PREREQUISITES: 10834110 Elementary Algebra w Apps or 10804107 College Mathematics or 31457318 Ind Mtrc Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

DC FUNDAMENTALS...prepares the student to convert values to scientific and engineering notations; calculate math quantities; describe basic atomic theory; identify basic electrical terms; use established symbols standards; describe DC voltage characteristics and current sources and electrical resistance; measure and analyze electrical quantities in series and parallel circuits; and desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading placement assmt equiv or CONDITION: 610062 Agribusiness/Financial Basic prog adm met

ELECTROMECHANICAL SYSTEMS...prepares the student to communicate with, tune, run, and troubleshoot Allen-Bradley servos; utilize electrical control of hydraulic systems, explore PID control of motor speed; and investigate open and closed loop control systems. PREREQUISITES: 10620104 Fluid Power 2 and 10620110 AC Fund or 10660110 AC Fund

ENERGY AND SOLAR POWER...provides the learner with an overview of electrical energy generation and distribution and its relationship to the renewable energy industry. Various types of electric energy systems are compared and contrasted. Solar Energy and its differing applications, including solar hot water and passive solar, are explored. Students will measure the output of a photovoltaic array and learn how a PV system can be integrated into the existing infrastructure.

ENERGY POWER AND FORCE...studies the laws and theories of electric power generation that govern motion and how to apply them to a range of concepts including rotational inertia, acceleration, velocity, lift, force, torque, etc. Studies the law of Conservation of Energy and basic atomic theory and how these concepts apply to electric power generation. The use and function of simple machines, and how they relate to electric power generator function, is also explored.

ENERGY POWER AND FORCE LAB...applies the laws and theories that govern motion to energy power and force concepts including rotational inertia, acceleration, velocity, lift, force and torque. Exploration of basic atomic theory and how it applies to electric power generation is conducted. In addition, the law of conservation of energy is applied in the lab activities. The use and function of simple machines, and how they relate to generator function is also examined. COREQUISITE: 10482135 Energy Power & Force

FLUID POWER 1...prepares the learner to identify hydraulic and pneumatic component symbols; adjust a pressure relief valve; analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits; analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. COREQUISITES: 10804115 College Technical Math 1 or 10804114 College Tech Math 1A

FLUID POWER 2...enhances the learner's ability to read schematics containing fluid power component symbols; assemble systems using schematics; analyze system's operation using a schematic; evaluate the general characteristics and terms of fluids under pressure, fluid conditioning, conductors, reservoirs, accumulators, pressure control; and troubleshoot malfunctioning pressurized systems. PREREQUISITE: 10620103 Fluid Power 1 or 10620155 Industrial Maintenance Hydraulics and Pneumatics

INDUSTRIAL CONTROLS AND MOTORS...prepares the learner to select control devices by function and operation; illustrate electrical circuits using symbols, diagrams, and abbreviations; explain the operation of magnetic solenoids and apply motor control techniques and introduces the student to three-phase power motor circuits for industrial applications. PREREQUISITE: 10620122 Industrial Wiring and COREQUISITE: 10620110 AC Fundamentals or PREREQUISITE: 10660110 AC Fundamentals

INDUSTRIAL TROUBLESHOOTING...prepares the learner to conduct effective machine control troubleshooting techniques with an understanding of preventive maintenance methods designed to minimize motor and controls issues between preventive maintenance measures. PREREQUISITE: 10620141 Industrial Controls and Motors

INDUSTRIAL WIRING...prepares the learner to follow safety procedures; maintain a safe and healthy work environment; construct electrical circuits; measure electrical quantities using a VOM and/or DVM; analyze measured values using electrical circuit laws; construct typical industrial control circuits; and analyze typical industrial control circuits.

INTRODUCTION TO PSYCHOLOGY...introduces the students to a survey of the multiple aspects of human behavior. Involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. Directs student to an insightful understanding of the complexities of human relationships in personal, social, & vocational settings. PREREQ: Reading plcmnt assmt equiv or COREQ: 10838105 Intro to Rdg & Study Skills

MECHANICAL DRIVE SYSTEMS...prepares the learner to use tools and fasteners safely; identify belt and chain drive components; install and adjust belt and chain drives; apply bearing and lubrication information; perform coupling alignment using straight edge, feeler gauge, and dial indicator and laser methods; identify various gear drives; calculate gear ratios; and analyze first-, second-, and third-class levers.

ORAL/INTERPERSONAL COMMUNICATION...provides students with the skills to develop speaking, verbal and nonverbal communication, and listening skills through individual speeches, group activities, and other projects. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY...prepares the student to understand basic PLC structure and terminology; learn to create and troubleshoot basic PLC programs using the RSLOGIX 500 software and the RSLINX communication software; become familiar with communicating with programming SLC-500 PLCs. This course is highly computer based.

SOLAR TECHNICIAN 1 LAB...provides a hands-on lab-based environment where students learn the basic parts of photovoltaic systems, complete a solar site assessment, and learn how to size a solar system for desired power output, as well as to work safely around solar electric equipment.

TURBINE MAINTENANCE...prepares learners to climb, inspect and service wind turbines; use torque fasteners; check gearbox lubrication; add grease to moving and exposed parts; verify good electrical connections; perform an overall "system check" and routine maintenance on a wind energy system; in addition to fault determination and troubleshooting. Students will incorporate wind industry best safety practices, must be prepared to climb multiple times in a day, and work full days outside in varying weather conditions. COREQUISITE: 10482124 Wind Technician 3 Lab

WIND SYSTEMS INTRODUCTION...prepares the learner to assess the global energy picture, analyze the causes of wind flow and wind flow properties, write a site assessment, explore small, medium, and large wind turbine designs, assess the environmental effects of wind turbines, perform business assessments for wind energy projects, plan a wind energy project, evaluate the operation and maintenance requirements of wind turbines and their components, and analyze the future of wind energy.

WIND SYSTEMS NETWORKING...introduces the wind technician to the applications of SCADA, SCADA control processes, remote connections of generation assets, remote monitoring and remote control, IP addressing, installing and removing programs on PC's, downloading programs on PLC's, proper removal and replacement of communication and control components, as well as connecting to various components for troubleshooting, testing, and component addressing. COREQUISITES: 10482124 Wind Technician 3 Lab and 10620138 Programmable Controllers - Allen Bradley

WIND TECHNICIAN 1 - RESCUE AND TOOLS...prepares students for work at height and to perform equipment inspections on climbing and fall arrest gear; wear required PPE, PFPPE, and apparel while working on wind turbine systems. Students will be SAFER certified in safe tower access, climbing, rescue, and confined space rescue, and will demonstrate proper knot tying and display professionalism and safe working habits during all tasks. Students are trained in use of hand tools and torque tools. COREQUISITE: 10482101 Wind Systems Intro

WIND TECHNICIAN 2 - SAFETY AND MAINTENANCE...familiarizes learners with OSHA regulations related to the wind industry and proper methods to eliminate and control hazards. Students receive training in First Aid, CPR, rigging, and confined space and receive the 10-hour OSHA for General Industry and the Tools at Height certifications. Participants develop skills in repair and maintenance of commercial wind turbines. Industry standards, training manuals, and field experience are course standards. COREQUISITE: 10482104 Wind Technician 1 - Rescue & Tools

WIND TECHNICIAN 3 LAB...certifies learner in torque tool techniques with Snap-on tools. Students will apply safe and proper techniques while using various styles of torque wrenches and adapters including hand torque and hydraulic torque wrenches. Students will demonstrate proficiency in performing a variety of maintenance functions on the GE 1.5 nacelle including oil filter changes, generator brush maintenance, and brake pad replacement while following proper safety and LOTO procedures. COREQ: 10482106 Wind Tech 2-Sfty & Mtrc

WIND TECHNICIAN 4...reviews arc flash requirements, power quality, power factor correction, transformer calculations, electrical distribution, and transmission systems. Student will learn the components and functions of a gearbox; how to inspect bearings and gears, troubleshoot the cooling system, and replace various gearbox components. Student will perform proper maintenance of the yaw system on the GE 1.5 nacelle, and will be responsible for completing troubleshooting/maintenance on the campus's wind turbines. PREREQUISITES: 10482124 Wind Tech 3, 10620141 Industrial Controls & Motors, 10620130 Mech Mech Intro, 10620138 Prog Cont-Allen Bradley and COREQUISITES: 10482132 Turbine Mtrc or 10482103 Wind Farm Intern & 10482128 Wind Tech 5 and 10620140 PLC Adv

WIND TECHNICIAN 5 LAB...familiarizes the students with schematic reading and prepares the student to use schematics for troubleshooting and LOTO. The student will demonstrate proficiency in the use of a multi-meter for troubleshooting and LOTO. The student will demonstrate proficiency in troubleshooting motors and safely changing out motors. In this capstone course, students will responsibly perform troubleshooting and maintenance of the wind turbines on LTC's campus. COREQUISITE: 10482126 Wind Technician 4

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Keyboarding skills are required for this course. It also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQUISITE: 10831103 Intro to College Wrtg or Wrtg placement assmt equiv and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Rdg placement assmt equiv

Program Number 31-482-1 Technical Diploma • Three Terms

ABOUT THE PROGRAM

The wind energy industry is one of the fastest growing segments of energy production. Demand for skilled technicians is growing. The BLS lists Wind Turbine Technician as one of the fastest growing careers. Upon completion you have the ability to become an operations and maintenance technician, installation technician, tower torque mechanic, or warranty technician. Operation and maintenance positions generally remain with a given wind farm location; other technicians travel extensively with the construction of new wind farms and repair/retrofitting of wind turbines around the world. This diploma gives you the skills you need to be successful as a Wind Turbine Technician.

PROGRAM OUTCOMES

- Install, inspect, test, service, and repair wind turbine components.
- Wear proper Personal Protection Equipment, identify hazards, mitigate said hazards, and safely climb towers.
- Cognitively think and use deductive reasoning as well as manufacturer information while troubleshooting or maintaining a wind turbine.
- Clearly and responsibly communicate appropriate information with stakeholders under minimal supervision.
- Practice the basics of self-evacuation and rescue.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Counseling Session with your assigned program counselor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

**Submit transcripts and test scores (optional, highly recommended): College transcripts, along with high school transcripts and test scores from within the last five years, used for course registration. Official transcripts needed for transferring college credit(s) and for financial aid purposes.*

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. \$10 per credit online, or hybrid fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program may be eligible for financial aid pending federal approval. Visit gotoltc.edu/Financial-Aid or talk with your Admissions Advisor about how to apply for aid.

SPECIAL NOTE

Upon completion of this technical diploma, students are encouraged to continue their coursework (an additional 12 credits) to achieve an associate degree in Wind Energy Technology.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10482101	Wind Systems Introduction	3
10482104	Wind Technician 1 - Rescue and Tools**	2
10482110	Energy and Solar Power	1
10620122	Industrial Wiring	2
10620103	Fluid Power 1	2
10620105	DC Fundamentals	2
10804113	College Technical Mathematics 1A OR 10804198 Calculus 1* (4 cr)	3
		15
Term 2		
10482106	Wind Technician 2 - Safety & Maintenance	3
10482124	Wind Technician 3 Lab	1
10620104	Fluid Power 2	3
10620138	Programmable Controllers-Allen Bradley	3
10620110	AC Fundamentals	2
10620141	Industrial Controls & Motors	3
10482132	Turbine Maintenance OR 10482103 Wind Farm Practical Experience	2
		17
Term 3		
10482133	Wind Systems Networking	2
10482126	Wind Technician 4	3
10482128	Wind Technician 5 Lab	2
10482140	Solar Technician 1 Lab	1
10620130	Mechanical Drive Systems	3
10620164	Electromechanical Systems	2
10482135	Energy Power and Force	3
10482136	Energy Power and Force Lab	1
10620195	Industrial Troubleshooting	1
		18
		TOTAL 50

*Students who plan to also achieve a Bachelor's degree are encouraged to take this transferable course.

**These class dates and times may be rescheduled due to inclement weather. Students must be within safe-climbing, unequipped body weight of 115 to 295 pounds.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

AC FUNDAMENTALS...prepares the student to analyze electrical circuits using AC math, analyze AC waveforms, measure and analyze AC power, analyze capacitors and inductors in DC and AC circuits, analyze AC circuits containing reactance and calculate resonance, apply the elements and properties of basic measuring circuits, and describe transformer characteristics. PREREQUISITE: 10620105 DC Fund or 10660105 DC Fund

COLLEGE TECHNICAL MATHEMATICS 1A...prepares the student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis on application of skills to technical problems. PREREQUISITES: 10834110 Elem Algebra wApps or 10804107 College Math or 31457318 Ind Mtrc Trades Math or 31420320 Mach Tool Math or math placement assessment equivalent

DC FUNDAMENTALS...prepares the student to convert values to scientific and engineering notations; calculate math quantities; describe basic atomic theory; identify basic electrical terms; use established symbols standards; describe DC voltage characteristics and current sources and electrical resistance; measure and analyze electrical quantities in series and parallel circuits; and desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1 or 10804198 Calculus 1 or 10804118 Interm Algebra with Apps

ELECTROMECHANICAL SYSTEMS...prepares student to communicate with, tune, run, and troubleshoot Allen-Bradley servos; utilize electrical control of hydraulic systems, explore PID control of motor speed; and investigate open and closed loop control systems. PREREQUISITES: 10620104 Fluid Power 2 and 10620110 AC Fund or 10660110 AC Fund

ENERGY AND SOLAR POWER...provides the learner with an overview of electrical energy generation and distribution and its relationship to the renewable energy industry. Various types of electric energy systems are compared and contrasted. Solar Energy and its differing applications, including solar hot water and passive solar, are explored. Students will measure the output of a photovoltaic array and learn how a PV system can be integrated into the existing infrastructure.

ENERGY POWER AND FORCE...studies the laws and theories of electric power generation that govern motion and how to apply them to a range of concepts including rotational inertia, acceleration, velocity, lift, force, torque, etc. Studies the law of Conservation of Energy and basic atomic theory and how these concepts apply to electric power generation. The use and function of simple machines, and how they relate to electric power generator function, is also explored.

ENERGY POWER AND FORCE LAB...applies the laws and theories that govern motion to energy power and force concepts including rotational inertia, acceleration, velocity, lift, force and torque. Exploration of basic atomic theory and how it applies to electric power generation is conducted. In addition, the law of conservation of energy is applied in the lab activities. The use and function of simple machines, and how they relate to generator function is also examined. COREQ: 10482135 Energy Power & Force

FLUID POWER 1...prepares learner to identify hydraulic and pneumatic component symbols; adjust a pressure relief valve; analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits; analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. COREQUISITES: 10804115 College Tech Math 1 or 10804113 College Tech Math 1A or 10804198 Calculus 1 or 10804118 Interm Algebra wApps

FLUID POWER 2...enhances the learner's ability to read schematics containing fluid power component symbols; assemble systems using schematics; analyze system's operation using a schematic; evaluate the general characteristics and terms of fluids under pressure, fluid conditioning, conductors, reservoirs, accumulators, pressure control; and troubleshoot malfunctioning pressurized systems. PREREQUISITE: 10620103 Fluid Power 1 or 10620155 Indust Maintenance Hydraulics and Pneumatics

INDUSTRIAL CONTROLS AND MOTORS...prepares the learner to select control devices by function and operation; illustrate electrical circuits using symbols, diagrams, and abbreviations; explain the operation of magnetic solenoids and apply motor control techniques and introduces the student to three-phase power motor circuits for industrial applications. PREREQUISITE: 10620122 Industrial Wiring and COREQUISITE: 10620110 AC Fundamentals or PREREQUISITE: 10660110 AC Fundamentals

INDUSTRIAL TROUBLESHOOTING...prepares the learner to conduct effective machine control troubleshooting techniques with an understanding of preventive maintenance methods designed to minimize motor and controls issues between preventive maintenance measures. PREREQUISITE: 10620141 Ind Controls & Motors

INDUSTRIAL WIRING...prepares learner to follow safety procedures; maintain a safe and healthy work environment; construct electrical circuits; measure electrical quantities using a VOM and/or DVM; analyze measured values using electrical circuit laws; construct typical industrial control circuits; and analyze typical industrial control circuits.

MECHANICAL DRIVE SYSTEMS...prepares the learner to use tools and fasteners safely; identify belt and chain drive components; install and adjust belt and chain drives; apply bearing and lubrication information; perform coupling alignment using straight edge, feeler gauge, and dial indicator and laser methods; identify various gear drives; calculate gear ratios; and analyze first-, second-, and third-class levers.

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY...prepares the student to understand basic PLC structure and terminology; learn to create and troubleshoot basic PLC programs using the RSLOGIX 500 software and the RSLINX communication software; become familiar with communicating with programming SLC-500 PLCs. This course is highly computer based.

SOLAR TECHNICIAN 1 LAB...provides a hands-on lab-based environment where students learn the basic parts of photovoltaic systems, complete a solar site assessment, and learn how to size a solar system for desired power output, as well as to work safely around solar electric equipment.

TURBINE MAINTENANCE...prepares learners to climb, inspect and service wind turbines; use torque fasteners; check gearbox lubrication; add grease to moving and exposed parts; verify good electrical connections; perform an overall "system check" and routine maintenance on a wind energy system; in addition to fault determination and troubleshooting. Students will incorporate wind industry best safety practices, must be prepared to climb multiple times in a day, and work full days outside in varying weather conditions. COREQUISITE: 10482124 Wind Technician 3 Lab

WIND SYSTEMS INTRODUCTION...prepares the learner to assess the global energy picture, analyze the causes of wind flow and wind flow properties, write a site assessment, explore small, medium, and large wind turbine designs, assess the environmental effects of wind turbines, perform business assessments for wind energy projects, plan a wind energy project, evaluate the operation and maintenance requirements of wind turbines and their components, and analyze the future of wind energy.

WIND SYSTEMS NETWORKING...introduces the wind technician to the applications of SCADA, SCADA control processes, remote connections of generation assets, remote monitoring and remote control, IP addressing, installing and removing programs on PC's, downloading programs on PLC's, proper removal and replacement of communication and control components, as well as connecting to various components for troubleshooting, testing, and component addressing. COREQUISITES: 10482124 Wind Technician 3 Lab and 10620138 Programmable Controllers - Allen Bradley

WIND TECHNICIAN 1 - RESCUE AND TOOLS...prepares students for work at height and to perform equipment inspections on climbing and fall arrest gear; wear required PPE, PFPE, and apparel while working on wind turbine systems. Students will be SAFER certified in safe tower access, climbing, rescue, and confined space rescue, and will demonstrate proper knot tying and display professionalism and safe working habits during all tasks. Students are trained in the use of hand tools and torque tools. COREQUISITE: 10482101 Wind Systems Introduction

WIND TECHNICIAN 2 - SAFETY AND MAINTENANCE...familiarizes learners with OSHA regulations related to the wind industry and proper methods to eliminate and control hazards. Students receive training in First Aid, CPR, rigging, and confined space and receive the 10-hour OSHA for General Industry and the Tools at Height certifications. Participants develop skills in repair and maintenance of commercial wind turbines. Industry standards, training manuals, and field experience are course standards. COREQUISITE: 10482104 Wind Technician 1 - Rescue & Tools

WIND TECHNICIAN 3 LAB...certifies learner in torque tool techniques with Snap-on tools. Students will apply safe and proper techniques while using various styles of torque wrenches and adapters including hand torque and hydraulic torque wrenches. Students will demonstrate proficiency in performing a variety of maintenance functions on the GE 1.5 nacelle including oil filter changes, generator brush maintenance, and brake pad replacement while following proper safety and LOTO procedures. COREQUISITE: 10482106 Wind Technician 2 - Safety & Maintenance

WIND TECHNICIAN 4...reviews arc flash requirements, power quality, power factor correction, transformer calculations, electrical distribution, and transmission systems. Student will learn the components and functions of a gearbox; how to inspect bearings and gears, troubleshoot the cooling system, and replace various gearbox components. Student will perform proper maintenance of the yaw system on the GE 1.5 nacelle, and will be responsible for completing troubleshooting/maintenance on the campus's wind turbines. PREREQUISITES: 10482124 Wind Tech 3, 10620141 Industrial Controls & Motors, 10620130 Mech Mech Intro, 10620138 Prog Cont-Allen Bradley and COREQUISITES: 10482132 Turbine Mtrc or 10482103 Wind Farm Practical Experience and 10482128 Wind Tech 5 and 10620140 PLC Advanced

WIND TECHNICIAN 5 LAB...familiarizes the students with schematic reading and prepares the student to use schematics for troubleshooting and LOTO. The student will demonstrate proficiency in the use of a multi-meter for troubleshooting and LOTO. The student will demonstrate proficiency in troubleshooting motors and safely changing out motors. In this capstone course, students will responsibly perform troubleshooting and maintenance of the wind turbines on LTC's campus. COREQUISITE: 10482126 Wind Technician 4

Program Number 61-482-1
Certificate • 12 credits

ABOUT THE PROGRAM

The Bureau of Labor Statistics predicts a 96 percent increase in wind energy careers through 2026. The Wind Tower Climber certificate is an entry-level credential for work at height professionals. Employers seek employees skilled at climbing and working at heights safely for the operation and maintenance activities. This includes the demand for installation technicians, torque mechanics, and repair technicians. Tower climbers travel extensively around the world with wind farm and telecommunications construction, maintenance, and decommissioning.

PROGRAM OUTCOMES

- Install and inspect wind turbine components.
- Wear Proper Personal Protection Equipment, identify hazards, mitigate said hazards and safely climb towers.
- Practice the basics of self-evacuation and rescue.

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

- \$141 per credit tuition (WI resident) plus \$8.46 per credit student activity fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

Tower Climber certificate students may choose to continue their education by completing 38 additional credits for the Wind Technician technical diploma.

CONTACT

LTC Admissions Advisor
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10482101	Wind Systems Introduction	3
10482104	Wind Technician 1 - Rescue and Tools	2
10482110	Energy and Solar Power	1
		6
Term 2		
10482106	Wind Technician 2 - Safety and Maintenance	3
10482124	Wind Technician 3 Lab	1
10482132	Turbine Maintenance	2
		6
		TOTAL 12

These class dates and times may be rescheduled due to inclement weather. Students must be within safe-climbing, unequipped body weight of 115 to 295 pounds.

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.

ENERGY AND SOLAR POWER...provides the learner with an overview of electrical energy generation and distribution and its relationship to the renewable energy industry. Various types of electric energy systems are compared and contrasted. Solar Energy and its differing applications, including solar hot water and passive solar, are explored. Students will measure the output of a photovoltaic array and learn how a PV system can be integrated into the existing infrastructure.

TURBINE MAINTENANCE...prepares learners to climb, inspect and service wind turbines; use torque fasteners; check gearbox lubrication; add grease to moving and exposed parts; verify good electrical connections; perform an overall "system check" and routine maintenance on a wind energy system; in addition to fault determination and troubleshooting. Students will incorporate wind industry best safety practices, must be prepared to climb multiple times in a day, and work full days outside in varying weather conditions. COREQUISITE: 10482124 Wind Technician 3 Lab

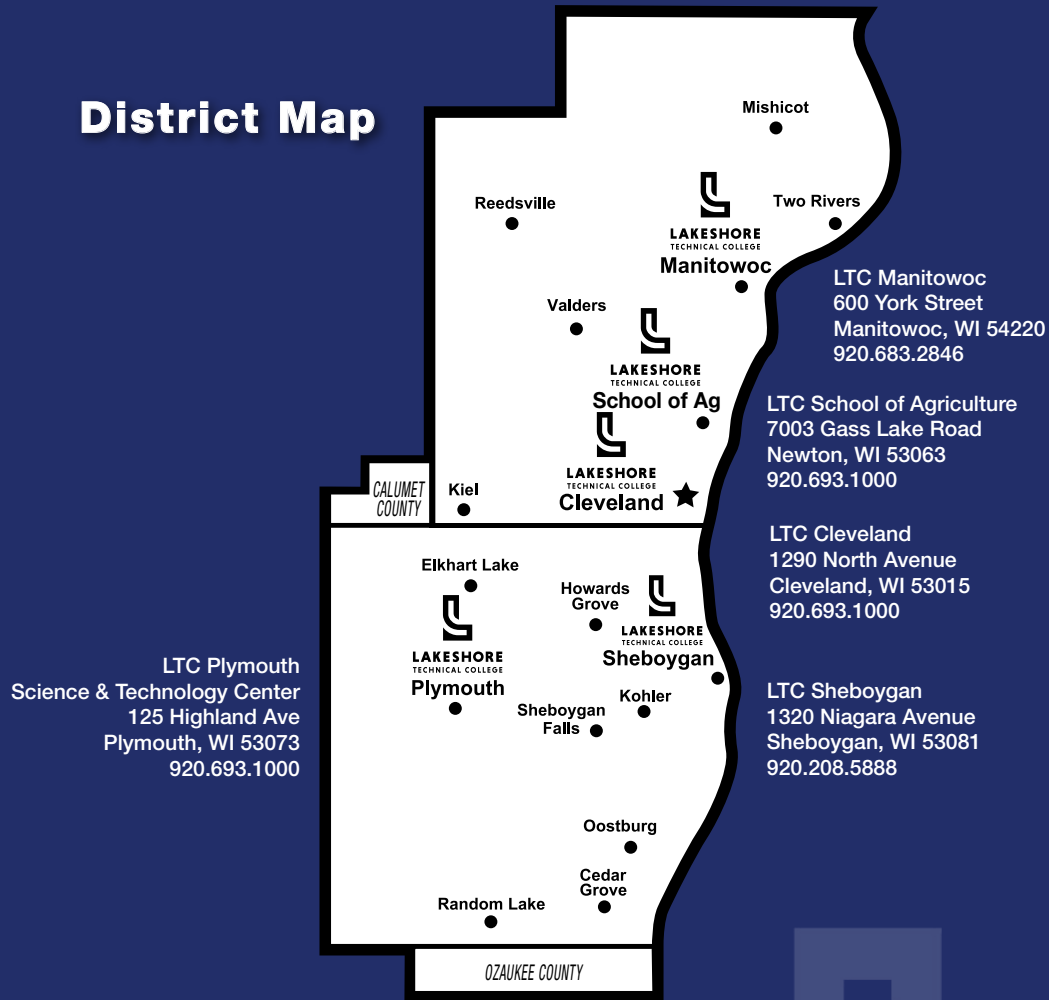
WIND SYSTEMS INTRODUCTION...prepares the learner to assess the global energy picture, analyze the causes of wind flow and wind flow properties, write a site assessment, explore small, medium, and large wind turbine designs, assess the environmental effects of wind turbines, perform business assessments for wind energy projects, plan a wind energy project, evaluate the operation and maintenance requirements of wind turbines and their components, and analyze the future of wind energy.

WIND TECHNICIAN 1 - RESCUE AND TOOLS...prepares students for work at height and to perform equipment inspections on climbing and fall arrest gear; wear required PPE, PFPE, and apparel while working on wind turbine systems. Students will be SAFER certified in safe tower access, climbing, rescue, and confined space rescue, and will demonstrate proper knot tying and display professionalism and safe working habits during all tasks. Students are trained in the use of hand tools and torque tools. COREQUISITE: 10482101 Wind Systems Introduction

WIND TECHNICIAN 2 - SAFETY AND MAINTENANCE...familiarizes learners with OSHA regulations related to the wind industry and proper methods to eliminate and control hazards. Students receive training in First Aid, CPR, rigging, and confined space and receive the 10-hour OSHA for General Industry and the Tools at Height certifications. Participants develop skills in repair and maintenance of commercial wind turbines. Industry standards, training manuals, and field experience are course standards. COREQUISITE: 10482104 Wind Technician 1 - Rescue & Tools

WIND TECHNICIAN 3 LAB...certifies learner in torque tool techniques with Snap-on tools. Students will apply safe and proper techniques while using various styles of torque wrenches and adapters including hand torque and hydraulic torque wrenches. Students will demonstrate proficiency in performing a variety of maintenance functions on the GE 1.5 nacelle including oil filter changes, generator brush maintenance, and brake pad replacement while following proper safety and LOTO procedures. COREQUISITE: 10482106 Wind Technician 2 - Safety & Maintenance

District Map



LAKESHORE TECHNICAL COLLEGE
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1290 North Avenue • Cleveland WI
HLC Accredited • hlcommission.org

07/2021

LAKESHORE
TECHNICAL COLLEGE