

LAKESHORE TECHNICAL COLLEGE

2022 – 2023 CATALOG



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(AD)	Associate Degree in Applied Science
(AS)	Associate of Science
(C)	Certificate
(TD)	Technical Diploma

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(AA)	Associate of Arts
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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 6/22

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.

MISSION

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

VISION

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

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.

HISTORY OF LAKESHORE

Lakeshore Technical College (Lakeshore) is a public, nonprofit organization that was established in 1967 as the Lakeshore Vocational, Technical, and Adult Education School. The history of Lakeshore dates back to 1911 when legislation was first enacted to create a state system of vocational schools. In 1912 the district's first vocational school was opened.

The main campus in Cleveland opened in July, 1974. Lakeshore is one of sixteen comprehensive post-secondary technical colleges in Wisconsin operating under the administration of the Wisconsin Technical College System (WTCS) and a local district board.

EQUAL OPPORTUNITY ACCESS EMPLOYER/EDUCATOR

Lakeshore Technical College (Lakeshore) 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. Lakeshore offers degrees, diplomas, apprenticeships and certificates in agribusiness, business, marketing, graphics, human ecology, industrial, health, services, and technical and media instructional areas. Admissions criteria varies by program and is available by calling our Admissions Office at 920.693.1109. The following individuals have been designated to coordinate Title IX of the Education Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973 and to handle inquiries regarding Lakeshore's nondiscrimination policies:

Lakeshore Technical College
1290 North Avenue
Cleveland, WI 53015

For students:

Manager of Access, Equity, and Inclusion
Nicole Yang
920.693.1120 | TTY 711
nicole.yang@gotoltc.edu

For staff/others:

Executive Director of Human Resources
Marissa Holst
920.693.1139 | TTY 711
marissa.holst@gotoltc.edu

STUDENT RESOURCES

ACADEMIC SUPPORT & TUTORING

Lakeshore's Academic Support & Tutoring Services provides free assistance for a variety of classes and programs. Students may access support through walk-in hours, structured labs, study groups, and individualized tutoring. Support is provided in the areas of General Education, such as Reading, Math, English, Social Science, Science, and Study Skills. Most supports are available virtually, in person, or over the phone.

Student technology support provides one-on-one computer help for a variety of campus technologies and software, including Blackboard, MyLTC, email, Microsoft Office (formatting documents, Word, Excel, and PowerPoint), file management, and more.

Academic Coaching is a resource for all students at Lakeshore who want to improve their academic skills. Every student can benefit from building their skills to help them achieve greater academic success. If you are interested in learning more about academic coaching or would like to get started with a coach, please connect with a member of the Academic Support and Tutoring team today! Peer Tutoring is available for individualized help in technical program classes.

For students who seek support via online tutoring, Lakeshore has partnered with Tutor.com. Tutoring support is available 24/7 and features a team of on-demand expert tutors. Success is not achieved alone; it takes a team - and Tutor.com is here to help you. Access Tutor.com directly from your course or Academic Support tab in Blackboard.

Unsure about technology or what to expect in your college classes? No worries, Lakeshore has you covered! Get tech-ready for classes with the Crush IT Learning Series! Let Lakeshore staff experts guide you through commonly used Lakeshore technology, applications, resources, tips, and skills essential to student success while taking online and face-to-face classes. All sessions are open to prospective and current students, staff, and community members. In addition, feel free to access our QuickBytes webpage for self-help videos to survive and thrive here at Lakeshore. We have self-paced tutorials that can assist you with a variety of subjects in Blackboard, Navigate, MyLAKESHORE, Career and Employment Services, Handshake, InterviewStream, Mental Health, our Lakeshore Library, StudentSHARE, and Academic Support & Tutoring resources.

If you are looking for academic support of any type, ask how we can help. Academic Support is in the Student Resource Center. Stop in, call 920.693.1322, or email academic.support@gotoltc.edu.

ACCESS, EQUITY, AND INCLUSION

We are committed to fostering an accessible and inclusive environment where all members of our college community are empowered to pursue their academic and professional goals. We promote an appreciative awareness of diversity, nurture personal growth, and provide proactive student support.

Services Include:

- Academic and cultural support
- ADA and Title IX Accommodation Services
- One-on-one assistance and referrals
- Safe Space Ally Program
- Special events and workshops

For more information, contact the Manager of Access, Equity, and Inclusion at 920.693.1120 (TTY 711).

ACCOMMODATION SERVICES

We partner with students and instructors to develop accommodation plans so that all students have equal opportunity to participate in Lakeshore Technical College programs, services, and activities.

Accommodations are voluntary, confidential, and outcome neutral. They do not modify curriculum, provide any advantage, or guarantee success in a course or program.

Types of Accommodation Plans Include:

- ADA Accommodation Services are available to students with documented disabilities in accordance with the Americans with Disabilities Act and Section 504e of the Rehabilitation Act.
- Title IX Accommodation Services are available to students who are pregnant, adopting, or parenting as defined by Title IX.

For more information, contact the Manager of Access, Equity, and Inclusion at 920.693.1120 (TTY 711).

Service Animal Policy

Lakeshore allows the use of service animals on our campuses by persons with documented needs. The intent of Lakeshore is to meet the needs of the entire campus community in an atmosphere of open communication and inclusion.

Emotional support animals are not allowed on campus per Lakeshore's Animals on Campus Policy.

If you have questions about receiving accommodations or would like to schedule an appointment, please contact Accommodation Services, at 920.693.1120 or 920.693.1274.

STUDENT RESOURCES

ORIENTATION & STUDENT SUCCESS TUTORIAL

All new program students are required to complete the college's orientation, which is the online Student Success Tutorial. It 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 Lakeshore technologies.
- Understand campus-wide policies.
- Discover tips and tricks to being a successful student at Lakeshore.
- Identify the different options to pay for college.
- Explore various student support resources available to students at Lakeshore.

Individual programs may require an additional orientation session. Each respective division will coordinate and communicate dates, times, and details.

TESTING SERVICES

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

Testing Procedures:

- Appointments are required and must be scheduled 24 hours in advance. Proctored instructional testing for Lakeshore classes must be scheduled through Navigate.
- Testers **MUST** have a photo ID with full name and picture.
- Testing must be completed by closing time. Please plan your time accordingly.
- Cell phones and electronic devices (including smart watches) are not allowed. Lockers are available.
- Scratch paper and pencils are provided. Calculators will be provided if approved. Personal calculators are not allowed. All items must be returned to the proctor when finished.
- Beverages and snacks are not allowed.
- Testers may not leave for breaks after a test has started.
- Only testers are allowed in 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.

For more information, contact Testing Services at 920.693.1184 or testing@gotoltc.edu.

GENERAL COLLEGE INFORMATION

LTC MANITOWOC & LTC SHEBOYGAN

Lakeshore offers programs to prepare adults to earn a high school credential, enter a college program, and/or improve to enter employment. Instruction is provided in the areas of reading, writing, math, social studies, science, civics, career and employability education, and English Language Learning (ELL). The course of study is determined through goal setting and working closely with instructors to create an individualized plan of education.

Specific Programming Includes:

- Adult Education is designed for individuals who want to review, learn, or improve academic skills in reading, writing, math, and digital literacy. The curriculum offers students the opportunity to meet personal needs for additional education, training and/or employment.
- GED/HSED programming prepares adult students to earn a high school credential, such as the General Equivalency Development (GED) certificate or the High School Equivalency Diploma (HSED). To earn a GED, students must successfully complete a Career Awareness course and four academic exams:
 - o Reasoning through Language Arts
 - o Mathematical Reasoning
 - o Science
 - o Social Studies
- The HSED credential requires successful completion of the four GED exams PLUS the following:
 - o Health (exam or coursework)
 - o Employability Skills course
- Alternative HSED programming is also available. A competency-based, structured class option allows students to earn the HSED without taking the GED exams. This is for individuals who can, in a classroom setting, demonstrate mastery of skills expected of Wisconsin high school graduates, but who would be unable to demonstrate those competencies in a formal, timed, testing environment. This credentialing opportunity also requires a state-mandated civics test.
- All high school credentialing opportunities also require a state mandated civics test in addition to the above criteria.
- The English Language Learning (ELL) program is designed to provide non-English and limited-English speaking student's coursework in Reading, Writing, Listening, and Speaking the English language. Other subjects offered are digital literacy, citizenship exam preparation, and employability classes.
- Career and employability courses are offered to explore interests, skills, and goals for employment. Resume writing, interviewing skills, digital literacy, and other skills to obtain and retain employment are stressed.
- Lakeshore support services are offered; these include:
 - o General Counselors who are available to assist with career planning, program enrollment support, and selection.
 - o Admissions Advisors to work with students on college admission steps.
 - o Student support, such as accommodation services, diversity services, and academic support.

GENERAL COLLEGE INFORMATION

To participate in any of these classes or activities, contact your preferred location:

LTC Manitowoc
600 York Street
Manitowoc, WI 54220
920.683.2846
(TTY: 920.683.1776)

LTC Sheboygan
1320 Niagara Avenue
Sheboygan, WI 53081
920.208.5888
(TTY: 920.208.5877)

PREFERRED & LEGAL NAME

A student's legal name is the name that is listed on official college documents including, but not limited to, transcripts, certificates, and diplomas. Students who wish to use a preferred name on campus may request that Student Services staff add their preferred name to their student record at Lakeshore.

Students with preferred names:

- will be listed by their preferred name in the student directory.
- will use their preferred name when setting up a username and password for the Lakeshore network and email.
- will be known by their preferred name by the Lakeshore Help Desk.
- MUST contact Student Billing to ensure that all refunds are processed according to their preference.

Please note that preferred names are not related to legal or official name changes. Students who wish to change their legal name should submit the Official Name Change Form which is available at Student Services or online at gotoltc.edu/sites/default/files/pdf/current-students/Official-Name-Change.pdf.

REGISTRATION

Students register online by accessing MyLTC from gotoltc.edu > Current Students. User ID and password are required for access. Other registration options include in person or by email.

Students will need to complete the following steps in order to register for classes:

1. Identify the Classes You Need

If you are a program student, your program information sheet includes the recommended sequence of courses you should take. Review course prerequisites and corequisites. To find out if a class you would like to take has a co/prerequisite, visit one of the following on the Lakeshore website:

- Searchable class listing
- Course descriptions on your program information sheet
- MyLTC Shopping Cart

For assistance in choosing classes, we recommend that you speak with your Program Counselor. To meet with a Program Counselor, please call 920.693.1366 or schedule an appointment via Navigate.

2. Get Your Class Information

You will need some key information about each course for which you would like to register, including:

- Class Title
- Class Number or Catalog Number

You can easily obtain this information through our online Find a Class search feature, or on the Lakeshore website. Be sure to note this information on a piece of paper or download and print our Registration Form before going to the next step in the Registration process. The Registration form can be found at gotoltc.edu/business-industry/seminars-and-continuing-education/seminars/seminar-registration.

3. Register

Confirm your registration dates in MyLTC. Military service members will receive priority registration in accordance with federal law. There are 3 easy options to register for your Lakeshore class (es):

a. Online Registration (Preferred)

- You will need to log in to MyLTC with your student ID number and password. Online registration access is available 24/7.
- If you have forgotten your password, you can reset it at MyLTC.
- The Chrome browser is recommended for online registration.
- Click on MyLTC drop down for the informational brochure at gotoltc.edu/current-students/technology/ for additional information about MyLTC.

b. In-Person

- Hours: 7:30 am to 5:30 pm Monday-Thursday; 7:30 am to 3:30 pm Friday.
- The Student Services Welcome Center is located in the lower level of the Lakeshore Building.
- For directions to Lakeshore, visit gotoltc.edu/about-us.

c. Email

- Complete the registration form including signature.
- Email to group-registration@gotoltc.edu.

4. Pay Your Tuition

See PAYING FOR COLLEGE section in this catalog.

5. Print Your Schedule

Find instructions on how to print your schedule from MyLTC at gotoltc.edu/how-to-apply/already-a-student-class/print.

6. Purchase Your Books

Purchase your books at the Lakeshore Bookstore or buy them online at www.bkstr.com/lakeshoretechnicalstore/home.

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 be 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 repeating a course, or forgiveness is the best option for them.

Students may qualify for Academic Forgiveness under the following conditions:

- Student is moving from one Lakeshore program to another Lakeshore program.
- Student is returning to Lakeshore 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 Lakeshore. 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 Lakeshore 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 entered into Lakeshore'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 Student Services desk, or in writing to lrc.records@gotolrc.edu via their official Lakeshore email account. Students are unable to drop classes by telephone.

Students are required to participate in the first class session (or class activity for online classes). 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. Fall (December) and spring (May) graduation celebration events 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:

Students may drop a course at any time in the term either via MyLTC, in person, or in writing via their official LTC email account. Students who drop a class, 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: Students are advised to 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 a class or withdrawing from the term. Stopping attendance in class does not constitute officially dropping a class. LTC will only withdraw students from a class if the student initiates a drop as described in the Student Drop Procedure or as the result of a policy violation. Students are unable to drop a class after the class ends.

Students are charged for the class(es) they enrolled in. If students drop a class, they are still responsible for the course fees plus any related material and program fees. Any refund (if applicable) is based on when the drop occurred and how much class meeting time has elapsed. Class fee refunds are issued in accordance with guidelines established by the Wisconsin Technical College System.

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.

ACADEMICS

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 time away from work.
- **Same courses:** the course outcomes do not change, only the delivery.

Traditional, Video Conference, Online, Blended, Hybrid, Competency-Based Education (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:
 - o Access to a computer with internet service.
 - o Strong motivation to achieve your goal.
 - o About 3 hours per credit each week for class work (may vary depending on class, content, skill level, etc.).
 - o Good time management skills.
 - o 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.
- **Competency-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 delivery that lets students have the flexibility of attending in person or online, as their schedule allows. Students have equitable components, such as learning activities, assessments, and recorded lecture content, whether sitting in the classroom or

learning online. Structured due dates are present throughout the course. Class time may vary, depending on individual course. Check course schedule for meeting times and locations.

CREDIT FOR PRIOR LEARNING

Lakeshore recognizes its responsibility to provide advanced placement status to those students with valid and credible learning experiences that have occurred outside 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 Wisconsin Technical College System (WTCS) colleges.
- 2) Postsecondary credits earned at non-WTCS colleges.
- 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 a 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 920.693.1366 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 Lakeshore 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 Lakeshore.
- Lakeshore 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 and Portfolio and Skill Demonstrations are \$90.
- Credit for prior learning for previous work experience will include a \$90 fee.

ACADEMICS

GRADING

Grading communicates the student's level of competence and/or proficiency at the end of each class. The Lakeshore grades are A, B, C, D, F, P, N, LF, WF, W, TR, WE, IC, R, TA, 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 Lakeshore 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.
<p>Grade R</p> <ul style="list-style-type: none"> • A previously failed course will be changed to a final grade of R after a student successfully retakes and passes • Not included in GPA 	<p>Grade TA</p> <ul style="list-style-type: none"> • Transcribed audit (for high school students ONLY) • Not included in GPA

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.

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

STUDENT GRADE AND OTHER ACADEMIC CONCERN APPEAL PROCESS

Students 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.

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

The College's final decision may be appealed to the Wisconsin Technical College System (WTCS).

GRADUATION REQUIREMENTS

Students are required to Student Records an Application for Graduation prior to the last term's program registration. The Lakeshore 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% of the technical/occupational studies courses at Lakeshore.

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 graded points divided by 12 credits = 3.000 grade points per credit / GPA = 3.000.

HONORS RECOGNITION

Lakeshore 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 GPA of 3.500 to 3.999.
- Complete at least 25 % of earned graded credits at Lakeshore.

Honors designations will appear on the student's transcript after graduating from a selected program.

Presidential Honors Graduate

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

- Earn a GPA of 4.000.
- Complete at least 25% of earned graded credits at Lakeshore.

Honors designations will appear on the student's transcript after graduating 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

The college recognizes and celebrates students for academic success, student organization leadership, and service excellence. Program Excellence Award recipients are selected by program faculty, Student Organization Leadership Award recipients are selected by student organization advisor(s), and recipient(s) of the Trevor J. Casper Service Excellence award are recognized by any staff member. Award recipients are notified of their selection in late April. For information email studentlife.slb@gotoltc.edu.

Dean's List

Students that have 6 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 (PTK) 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 coursework or six credits of technical diploma coursework and 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.

ACADEMICS

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

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 Lakeshore 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 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 Lakeshore and other Wisconsin Technical System Colleges. Students are subject to the same grade and grade point average requirements for class progression. All grades earned in program courses offered by Lakeshore or shared program districts 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. 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 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.

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TRANSFER OF CREDITS TO OTHER POSTSECONDARY INSTITUTIONS

Lakeshore credits 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 the Lakeshore 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 a student's account.

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

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 covers 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.
- **Test outs Fee:** a student may attempt to test-out of certain classes by taking an examination. The cost is \$50 per test out. The College Level Examination Program (CLEP) total cost is \$114.
- **Accuplacer Fee:** Apprentice students required to take the Accuplacer will be charged \$25.
- **Background Information Disclosure Fees:** this is required for students involved in identified programs. The in-state fee is \$20; the out-of-state fee varies by state.
- **Lakeshore College Transcript Requests Fees:** Official transcripts are \$10 per transcript and must be requested through MyLTC. Unofficial transcripts have no fee and may be printed via MyLTC.

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- 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); contact the department at 800.768.8886 or dpi.wi.gov/ged/transcripts.

- Accuplacer Test Result Transcript Requests Fee: (for use at other colleges): A \$10 fee is charged for transcripts requests made in writing, in person, by mail, email or fax. Contact Testing Services at 920.693.1184 or testing@gotoltc.edu. Transcripts are mailed within 48 hours. Accuplacer test results cannot 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. Lakeshore 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 and complete additional Lakeshore 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 Lakeshore Bookstore. Students are not required to purchase books and supplies at the Lakeshore 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 Lakeshore Financial Aid Office. Book charges are available 3 weeks prior to the start of the term through the 10th week of the term.

Disbursement

Funds are paid 3 weeks into the academic semester for fall and spring, 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 Lakeshore; be a citizen, permanent resident of the United States, or other eligible non-citizen as detailed at 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 fulltime; 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

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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 gotoltc.edu/financial-aid/eligibility/satisfactory-academic-progress.

PAY YOUR TUITION

Lakeshore payment methods include cash, check, money order, credit card (Visa or MasterCard), a completed Financial Aid Award, a third-party authorization, and the Lakeshore 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 Lakeshore'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:

- Lakeshore accepts a variety of payment methods:
 - o Cash, check, credit cards, money order, and electronic funds transfer
 - o Scholarships
 - o Financial aid
 - o Employer/Agency Funding. Authorization must be on file at the time of registration, or an Agency Payment Agreement form must be completed. Forms are available at Student Services.
 - o Payment plan
 - o Employee Reimbursement Payment Agreement (requires a payment of \$50 per class, Lakeshore Employee Reimbursement form, and student's employer's 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 Lakeshore results in a hold placed on your record, prohibiting further services. The hold remains in effect until the financial obligation has been satisfied.
 - o Students with outstanding balances will not be allowed to register.
 - o Lakeshore reserves the right to require upfront payment from a student for future registrations.
 - o Transcripts, diplomas, and certificates will not be released.
 - o 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.
 - o 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 a student to register if payment is made in full at the 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:
 - o 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 Wisconsin Technical College System refund schedule. That schedule is 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% of the fees.
- If students withdraw before or at the time 10% of the course's potential hours of instruction have been completed, they are entitled to a fee refund equal to 80% of the fees.
- If students withdraw after 10% but before more than 20% of the course's potential hours of instruction have been completed, they are entitled to a fee refund equal to 60% of the fees.

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- If students withdraw after 20% 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 Lakeshore 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 Lakeshore'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. Lakeshore's obligation to follow-up on such disputes does not extend beyond the term the disputed charges took place.

SCHOLARSHIPS

The Lakeshore 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. Lakeshore Foundation scholarships are funded by charitable donations from local foundations, Lakeshore staff, businesses, friends, and alumni who elect to invest in their community by supporting technical education, the college, and its students.

Lakeshore 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 Lakeshore website at gotoltc.edu/scholarships.

VETERANS SERVICES

Lakeshore 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 Lakeshore Veterans Education Benefits Request form, to initially receive state and/or federal benefits and avoid late fees. Veterans continuing to receive federal benefits must complete the Lakeshore Veterans Education Benefits Request form each semester. For more information, contact your County Veteran's Service Officer or Lakeshore's 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 Lakeshore 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 Lakeshore 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 Lakeshore 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.

If you feel there are extenuating circumstances, you should notify the Veterans Administration of the circumstances. The Veterans Administration will then make a decision regarding whether the extenuating circumstances are beyond your control.

If you do write to the Veterans Administration, explain the circumstances in detail in order that a fair and just decision can be made. Be sure to include your Veterans Administration file number. Any correspondence should be addressed to:

Veterans Administration Regional Office
PO Box 4616
Buffalo, NY 14240-4616

Veterans Standards of Progress Policy for Wisconsin GI Bill Benefits

As of January 1, 2014, a student must have at least a 2.0 cumulative GPA to qualify for benefits. You will be responsible for any costs associated with attending classes if your cumulative GPA is below 2.0. This will be a requirement for every semester.

If you lose your WI GI Bill eligibility because of your GPA but later improve your cumulative GPA to at least 2.0, you will be able to use the WI GI Bill during the next semester in which you enroll for classes.

RIGHTS & RESPONSIBILITIES

ACCESS TO STUDENT RECORDS - FERPA

Student Records Confidentiality Notice

The Family Educational Rights and Privacy Act (also known as FERPA or the Buckley Amendment) affords students certain rights with respect to their education records. They are:

- The right to inspect and review the student's educational records within 45 days from the day the college receives a request for access. You should submit written requests that identify the record(s) you wish to inspect to Student Records or the Registrar.
- The right to request the amendment of the student's education records that the student believes is inaccurate or misleading. You should write to the Registrar and clearly identify the part of the record you want changed and specify why it is inaccurate or misleading.
- The right to consent to disclosures of personally identifiable information contained in the student's educational records, except to the extent that FERPA authorizes disclosure without consent.
- The right to refuse to permit the college to designate disclosure of personally identifiable information about the student as directory information which is not subject to restrictions on disclosure.

The following information is designated directory information: name, city of residence, student email address, field(s) of study, current enrollment status, dates of attendance, degrees received, most recent previous educational institution attended, honors and awards received (including selection to a dean's list or honorary organization), and photos and videos of students for use in college presentations/ displays, news releases, publications, and websites.

If you do not wish to have your information designated as directory information and disclosed to members of the college community and to requesters from outside of the college, you must inform Student Records in writing.

Students may consent to the release of non-directory information by submitting a form for Authorization to Release Non-Directory Information; the form is available from the Student Records office.

Under sections 99.31(a) and 99.34 of Title 34 of the Code of Federal Regulations, applying the Family Educational Rights and Privacy Act, should a Lakeshore student seek to enroll in another college or university to complete a course or degree, Lakeshore may share personally identifiable data with that college or university's education officials without the student's prior approval. Lakeshore may also share personally identifiable information with college officials who have a legitimate educational interest.

Officials of the college are defined as:

- Persons employed by the school in an administrative, supervisory, academic, research, or staff position.
- Persons serving on school governing bodies.
- Persons employed by or under contract to the college to perform a specific task, such as an attorney or auditor.
- An official has legitimate educational interest if they need to:
- Perform duties specified in their job description or under terms of contractual agreement.
- Provide campus services related to a student such as advising, financial aid, and counseling.

- Conduct tasks related to a student's education or campus discipline.

Lakeshore maintains a record of all releases of student records. Students may forward questions concerning FERPA or request to view a copy of what was shared with other colleges by contacting the Registrar at 920.693.1733. Student data information may be used by the college under allowed exceptions in accordance with the respective laws.

The student has the right to file a complaint with the U.S. Department of Education concerning alleged failures by the college to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

**Family Policy Compliance Office
U.S. Department of Education
600 Independence Avenue, S.W.
Washington, DC 20202-4605**

For more information on FERPA, please visit the website for the Department of Education at ed.gov.

ACCOMMODATIONS FOR RELIGIOUS BELIEFS

In compliance with Wisconsin state statute 38.04(16), as outlined in TCS Chapter 14 of the WI Administrative code, reasonable accommodation will be made of a student's sincerely held religious beliefs. Students may request a reasonable accommodation with regard to scheduling an examination and other academic requirements. The student will submit a request in writing to the instructor five school working days prior to the date or dates of the anticipated absence. The request will be kept confidential. Instructors will provide a means by which makeup work is completed in a timely manner without any prejudicial effect.

CONCERNS

Students are encouraged to use the following procedure to report concerns. A concern is any written expression of dissatisfaction about the College that is not a complaint (see above). Concerns may involve an Lakeshore faculty or staff member, administrator, another student, facilities, services, etc. To submit a concern about the campus please complete a Questions, Concerns and Suggestions form located at: cm.maxient.com/reportingform.php?LakeshoreTC&layout_id=6

Student concerns will be addressed via the following procedure:

Step 1

Student completes and submits the Questions, Concerns and Suggestions form. The form is available [online at cm.maxient.com/reportingform.php?LakeshoreTC&layout_id=6](http://cm.maxient.com/reportingform.php?LakeshoreTC&layout_id=6).

Step 2

The Registrar/Student Conduct Officer will contact the student to gather any information regarding the concern that has been raised. The Registrar/Student Conduct Officer will also make every attempt to meet with the other party/parties related to the shared concern to gather additional information.

Step 3

The Registrar/Student Conduct Officer will attempt to resolve the concern by scheduling a meeting with the parties involved, if necessary. The Registrar/Student Conduct Officer will serve as a neutral third party

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during this meeting which is designed to follow a process to resolve the concern informally. The goal of the mediation process is to provide a resolution to the concern that is acceptable to both parties. If a meeting is deemed to not be necessary, the Registrar/Student Conduct Officer will relay the concern and all related information to the individual or campus office that is best positioned to address and resolve the concern.

Step 4

If the mediation meeting fails to resolve the matter, it will be referred to one of two Vice Presidents for a final decision. If instructional in nature, the Vice President of Instruction would be the final step in the process. If the matter involves anything other than instruction concerns, the Vice President of Student Success would be the final step in the process.

CRIME AWARENESS & CAMPUS SECURITY (CLERY ACT)

Lakeshore is committed to maintaining a safe and secure environment on campus. As part of the Crime Awareness and Campus Security Act of 1990, the college provides complete information about security awareness, crime prevention, crime reporting, crime statistics, and other related policies. This information is communicated annually to students and staff, through the Annual Security Report.

FREEDOM OF EXPRESSION

Freedom of thought, inquiry, speech, and lawful assembly are fundamental rights of all persons. These rights include the freedom to express opinions; to hear, express and debate various views, no matter how unpopular; and to voice criticism. Free speech is uniquely important to Lakeshore as it brings about a free interchange of ideas integral to the College's fundamental mission of teaching, research, and public service.

The College encourages students to present ideas, express their individuality and culture, and be open to thoughts or lifestyles that differ from their own. The College expects all students will present themselves in a respectful manner that does not endanger, threaten, or infringe on the rights of others. The College also expects students will not conduct themselves in a manner that will infringe on another individual's education or the mission of the College. Students that fail to meet these expectations can be referred to the Student Conduct Process.

GUARANTEED RETRAINING GRADUATE-EMPLOYER

A graduate of an associate degree or technical diploma program who is a resident of this state is exempt from the fees for up to six credits within the same occupational program for which the degree or diploma was awarded if the graduate applies for the exemption within six months of graduation and either of the following applies:

- Within 90 days after initial employment, the employer certifies that the graduate lacks entry level job skills and specifies the deficient areas.

-OR

- The graduate certifies all of the following apply:
 - o Has not secured employment in the occupational field of the degree or diploma
 - o Has actively pursued employment in that occupational field
 - o Has not refused employment in that field or a related field

o Has actively sought the assistance of Lakeshore Career & Employment Services

A student development team may be utilized to provide support for the returning graduate and employer if applicable, to assist in determining the graduate's instruction and support service requirements. For additional information, contact Lakeshore Career & Employment Services.

MILITARY SERVICE MEMBER SPECIAL CIRCUMSTANCES READMISSION & REFUND POLICY

Students who serve in the National Guard, Reserves, or Active Duty stationed locally who are ordered into active military service in the Armed Forces of the United States or who are requested to work for the federal or state government during a national emergency, limited national emergency, or state emergency are provided priority readmission upon their return. Individuals in these circumstances will be eligible for 100% refund of tuition and fees for the current term.

Students who are forced to withdraw from classes due to the activation of a close family member (Father, Mother, Stepfather, Stepmother, Spouse or Life-partner) are provided priority readmission upon their return. Individuals in these circumstances will be eligible to submit a refund appeal request citing military activation as the extenuating circumstance. This appeal, if granted, may result in a 100% refund of tuition and fees.

Individuals seeking a refund of tuition and fees are required to provide a copy of the activation orders to the campus Registrar.

Students who choose to stay enrolled and/or complete their coursework may do so in consultation and permission from their instructor(s).

NON-REGISTERED INDIVIDUALS IN THE CLASSROOM

To preserve the integrity of the educational environment, non-registered individuals are not allowed in Lakeshore classrooms, labs, shops, or designated testing areas, except when the non-registered individuals are part of the instructional activities. Exceptions may be made in cases of emergencies and with prior approval from the Dean or their delegate.

POLITICAL ACTIVITIES ON COLLEGE PREMISES

The care, control, and management of the campus of the Lakeshore Technical College, at all locations, is vested within the College District Board and Office of the College President. College buildings and premises of all types are intended for educational purposes authorized by the District Board and President. College buildings and all premises are not a forum open to the general public for public discourse or political activity, as defined herein. The District Board and College President have not designated, and no official of the College is authorized without prior Board approval, to designate any area of College premises, either in whole or in part, to be an open public forum or limited public forum for the purpose of public discourse or political activity as defined, herein.

The mission of the College is andragogic. The District Board, College President, and other College officials act in the public interest through precluding a public impression that the College endorses particular political candidates, groups, messages, or positions.

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With the exception of forums, student "straw polls," and similar student programs, specifically sanctioned by the College President, political activity is not permitted in any College building or at any location on College premises, wherever located, at any time. Political activity includes but is not limited to; distribution or posting of political campaign literature, leafleting, posting of signs, circulating petitions, and nomination papers, political fundraising, picketing, rallies, protests, meetings, speeches, demonstrations, and hand billing, and any other activities which disrupt academic work or any function of the College.

Subject to applicable local ordinances, political activity is authorized on public walkways along roads contiguous to College premises. Public walkways may be recognized as traditional public forums. Political activity on public walkways, however, may not disrupt or interfere with the College curriculum, the orderly ingress or egress of persons from College buildings, the safe and efficient movement of persons on or off of College premises, or the orderly operation of classes, or functioning of the College. The College President is authorized to take necessary and reasonable action to restrict or limit the effect of political activity occurring off of College premises, which directly and adversely impacts College premises, so long as such restrictions are non-discriminatory and viewpoint neutral.

Campus security resources and law enforcement agencies will be summoned in response to conduct in violation of the terms of this policy which is disruptive, threatening, or a violation of law.

STANDARD OF EVIDENCE

Lakeshore uses the preponderance of evidence standard in all matters involving students. This includes student code of conduct (academic and non-academic), Title IX, and equity cases. The preponderance of evidence standard is defined as such that a party has shown that its version of facts, causes, damages, and fault is more likely than not to be the correct version.

STUDENT CODE OF CONDUCT

Nonacademic Misconduct

Nonacademic Conduct Subject to Disciplinary Action. Lakeshore Technical College may discipline a student for engaging in, attempting to engage in, or assisting others to engage in any of the following types of nonacademic misconduct:

(1) Aiding or Abetting. Aiding, abetting, or procuring another person to violate any provision of the Student Code of Conduct.

(2) Alcohol. Use, possession, presence, manufacture, distribution, or being under the influence of alcoholic beverages except as expressly permitted by law and College policy.

(3) Arson. Individuals are prohibited from intentionally setting fires unless such action is part of a bona fide academic lesson or experience.

(4) Dangerous Conduct. Conduct that endangers or threatens the health or safety of oneself or another person.

(5) Disorderly Conduct. No person may engage in violent, abusive, indecent, profane, boisterous, unreasonably loud, or otherwise disorderly conduct under circumstances in which the conduct tends to cause or provoke a disturbance, in college buildings or on college lands.

(6) Drugs. Manufacturing, distribution, possession, use or being under the influence of any drug or controlled substance or being in possession of drug paraphernalia or equipment used to manufacture, grow, or distribute drugs or controlled substances.

- (7) Failure to Comply.** Failure to comply with the directions of College officials or law enforcement officers acting in performance of their duties and/or failure to identify oneself to these persons when requested to do so; refusal or failure to leave premises because of conduct prescribed by this code.
- (8) False Information.** Acts of dishonesty, including but not limited to the following: Furnishing false information to the College, any College official, faculty member or office.
- (9) Fire Alarms and Safety Equipment.** Tampering with fire alarms or safety equipment is prohibited. This is including, but is not limited to, fire hydrants, fire hoses, extinguishers, AED's, and fire alarm pull stations.
- (10) Forgery or Falsification.** Unauthorized possession of or fraudulent creation, alteration, or misuse of any college or other governmental document, record, key, electronic device, or identification.
- (11) Harassment.** Conduct defined in s. 947.013, Stats.
- (12) Hazing.** Conduct defined in s. 948.51, Stats.
- (13) Misuse of Computing Resources.** Conduct that involves any of the following:
- (a)** Failure to comply with laws, license agreements, and contracts governing college computer network, software, and hardware use.
 - (b)** Use of college computing resources for unauthorized commercial purposes or personal gain.
 - (c)** Failure to protect a personal password or college-authorized account.
 - (d)** Breach of computer security, invasion of privacy, or unauthorized access to college computing resources.
 - (e)** Other violations of Lakeshore's Computer Use Policy for College Students.
- (14) Noncompliance with Disciplinary Sanctions.** Conduct that violates a sanction, requirement, or restriction imposed in connection with previous disciplinary action.
- (15) Serious and Repeated Violations of Municipal Law.** Serious and repeated off-campus violations of municipal law.
- (16) Sexual Assault.** Conduct defined in s. 940.225, Stats.
- (17) Stalking.** Conduct defined in s. 940.32, Stats.
- (18) Theft.** Attempted or actual theft of College property or the property of others.
- (19) Unauthorized Entry or Use.** Unauthorized entry into or use of College buildings and grounds, including roofs, ledges, balconies; unauthorized erection or use on College property of any structures including but not limited to tents, huts, gazebos, shelters, platforms, and public address systems.
- (20) Unauthorized Recording.** Any unauthorized use of electronic or other devices to make an audio or video record of any person while on College premises without his/her prior knowledge, or without his/her effective consent when such a recording is likely to cause injury or distress. This includes, but is not limited to, surreptitiously taking pictures of another person.
- (21) Unauthorized Use of or Damage to Property.** Unauthorized possession of, use of, tampering with, damage to, or destruction of College property or the property of others.
- (22) Violation of Criminal Law.** Conduct that constitutes a criminal offense as defined by state or federal law.
- (23) Violation of College Rules.** Conduct that violates any published college rules, regulations, or policies, including provisions contained in college contracts with students including program handbooks.
- (24) Weapons or Dangerous Items.** Possession or use of firearms, explosives, dangerous chemicals, or other dangerous weapons or instruments on College premises or use of any such

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item unless part of an approved academic activity (This includes but is not limited to BB guns, Airsoft guns, Mace, switchblades and knives, or swords with blades over four inches).

Disciplinary Procedure:

(1) Process. The Registrar/Student Conduct Officer may proceed in accordance with this section to impose, subject to hearing and appeal rights, one or more of the disciplinary sanctions listed under “disciplinary sanctions.”

(2) Conference with Student. When the Registrar/Student Conduct Officer concludes that proceedings under this section are warranted, the Registrar/Student Conduct Officer shall promptly contact the student in person, by telephone, or by electronic mail to offer to discuss the matter with the student. The purpose of this discussion is to permit the Registrar/Student Conduct Officer to review with the student the basis for his or her belief that the student engaged in nonacademic misconduct, and to afford the student an opportunity to respond. If the student does not respond to the Registrar/Student Conduct Officer’s offer to discuss the matter, the Registrar/Student Conduct Officer may proceed to make a determination on the basis of the available information.

(3) Determination by the Investigating Officer that No Disciplinary Sanction is Warranted. If, as a result of a discussion or review of available information, the Registrar/Student Conduct Officer determines that nonacademic misconduct did not in fact occur, or that no disciplinary sanction is warranted under the circumstances, the matter will be considered resolved without the necessity for further action.

(4) Process Following Determination by the Registrar/Student Conduct Officer that Nonacademic Misconduct Occurred.

(a) If, as a result of a discussion or review of available information, the Registrar/Student Conduct Officer determines that nonacademic misconduct did occur and that one or more of the disciplinary sanctions listed under should be recommended, the Registrar/Student Conduct Officer shall prepare a written report which shall contain all of the following:

1. A description of the alleged misconduct.
2. A description of all information available to the college regarding the alleged misconduct. Such information shall be available to the student upon request, except as may be precluded by applicable state or federal law.
3. Specification of the sanction to be imposed.
4. Notice of the student's right to an appeal.
5. A copy of this code of conduct and of the institutional procedures adopted to implement this section.

(b) The written report shall be delivered to the student.

(c) A student who receives a written report under this section has the right to appeal, as described in the following section, to contest the determination that nonacademic misconduct occurred, the choice of disciplinary sanctions, or both.

1. Where the disciplinary sanction sought is one of those listed (a) to (h), and if the student desires a hearing, the student shall file a written request with the Registrar/Student Conduct Officer within 10 days of the date the written report is delivered to the student. If the student does not request a hearing within this period, the determination of nonacademic misconduct shall be regarded as final, and

the disciplinary sanction sought shall be imposed.

2. Where the disciplinary sanction sought is one of those listed (i) to (j), the Registrar/ Student Conduct Officer shall forward a copy of the written report under to the Vice President of Student Success. The Vice President for Student Success shall, upon receipt of the written report, proceed to schedule a hearing on the matter. A hearing shall be conducted unless the student waives, in writing, the right to such a hearing.

Hearing:

(1) A student who requests an appeal hearing, or for whom a hearing is required, shall have the right to decide whether the matter will be heard by the Vice President of Student Success or a hearing committee. If the student does not request a hearing, the matter will be heard by the Vice President of Student Success.

(2) If a student requests a hearing, or a hearing is required to be scheduled due to the sanction being sought, the Vice President of Student Success shall take the necessary steps to convene the hearing and shall schedule it within 15 days of receipt of the request or written report. The hearing shall be conducted within 45 days of receipt of the request or written report, unless a different time period has been mutually agreed upon by the student and Registrar/Student Conduct Officer.

(3) No less than 5 days in advance of the hearing, the Vice President of Student Success or hearing committee shall obtain from the Registrar/Student Conduct Officer, in writing, a full explanation of the facts upon which the determination of misconduct was based, and shall provide the student with access to or copies of the Registrar/Student Conduct Officer's explanation, together with any other materials provided to the Vice President of Student Success or hearing committee by the Registrar/Student Conduct Officer.

(4) The hearing shall be conducted in accordance with the following guidance and requirements:

(a) The hearing process shall further the educational purposes and be reflective of the college's commitment to student dignity, equity, and non-discrimination. The process need not conform to state or federal rules of criminal or civil procedure.

(b) The student shall have the right to question adverse witnesses, the right to present information and witnesses, the right to be heard on his or her own behalf, and the right to be accompanied by an advisor of the student's choice. The advisor may be a lawyer. The advisor may counsel the student, but may not directly question adverse witnesses, present information, or witnesses, or speak on behalf of the student except at the discretion of the hearing examiner or committee. In accordance with the educational purposes of the hearing, the student is expected to respond on his or her own behalf to questions asked of him or her during the hearing.

(c) The Vice President of Student Success or hearing committee:

1. Shall admit information that has reasonable value in proving the facts, but may exclude immaterial, irrelevant, or unduly repetitious testimony.

2. Shall observe recognized legal privileges (confidentiality).

3. May take reasonable steps to maintain order, and to adopt procedures for the questioning of a witness appropriate to the circumstances of that witness's testimony, provided, however, whatever procedure is adopted, the student is allowed to effectively question the witness.

(d) The Vice President of Student Success or hearing committee shall make a record of the hearing. The record shall include a verbatim record of the testimony, which may

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be a sound recording, and a file of the exhibits offered at the hearing. The student charged with misconduct may access the record, upon the student's request.

(e) The hearing examiner or committee shall prepare written findings of fact and a written statement of its decision based upon the record of the hearing.

(f) A Vice President of Student Success's or hearing committee's finding of nonacademic misconduct shall be based on one of the following standards of evidence:

1. Clear and convincing evidence, when the sanction to be imposed is listed in Disciplinary Sanctions (1) (i) to (j).

2. A preponderance of the evidence, when the sanction to be imposed is listed in Disciplinary Sanctions (1) (a) to (h).

3. A preponderance of the evidence, regardless of the sanction to be imposed, in all cases of sexual harassment and sexual assault.

(g) The Vice President of Student Success or hearing committee may impose one or more of the disciplinary sanctions listed (a) to (h) that differs from the recommendation of the Registrar/Student Conduct Officer. Disciplinary sanctions listed (i) to (j) may not be imposed unless previously recommended by the Registrar/Student Conduct Officer.

(h) The hearing shall be conducted by the Vice President of Student Success or hearing committee, and the college's case against the student shall be presented by the Registrar/Student Conduct Officer or his or her designee.

(i) The decision of the Vice President of Student Success or hearing committee shall be prepared within 14 days of the hearing and delivered to the student. The decision shall become final within 14 days of the date on the written decision unless an appeal to the College President is taken.

(j) If a party fails to appear at a scheduled hearing and to proceed, the Vice President of Student Success or hearing committee may either dismiss the case or, based upon the information provided, find that the student committed the misconduct alleged and assign sanction.

(k) Disciplinary hearings are subject to the Wisconsin open meetings law and may be closed if the student whose case is being heard requests a closed hearing or if the hearing examiner or committee determines that it is necessary to hold a closed hearing, as permitted under the Wisconsin open meetings law. Deliberations of the committee shall be held in closed session, in accordance with s. 19.85, Stats. As such, proper notice and other applicable rules shall be followed.

Appeal to the College President:

(1) Where the sanction prescribed by the hearing examiner or committee is one of those listed in Disciplinary Sanctions (i) to (j), the student may appeal to the College President within 14 days of the date of the written decision to review the decision of the hearing examiner or committee, based upon the record. In such a case, the College President has 30 days from receipt of the student's appeal to respond and shall sustain the decision of the nonacademic misconduct hearing examiner or committee unless the College President finds any of the following:

a. The information in the record does not support the findings or decision of the hearing examiner or committee.

b. Appropriate procedures were not followed by the nonacademic misconduct hearing examiner or committee and material prejudice to the student resulted.

c. The decision was based on factors proscribed by state or federal law.

(2) If the President makes a finding, the President may return the matter for consideration by a different hearing examiner or hearing committee or may invoke an appropriate remedy of his or her own.

Discretionary Appeal to the Wisconsin Technical College System Board: The decision of the college shall be final, except that the WTCS board may, at its discretion, grant a review upon the record.

Settlement: The procedures set forth in this chapter allow the college and a student to enter into a settlement agreement regarding the alleged misconduct, after proper notice has been given. Any such agreement and its terms shall be in writing and signed by the student and the Registrar/Student Conduct Officer or Vice President of Student Success. The case is concluded when a copy of the signed agreement is delivered to the student.

Effect of Discipline Within the Institution: A student who, at the time of commencement, is subject to a continuing disciplinary sanction or unresolved disciplinary charges as a result of a report, shall not be awarded a degree during the pendency of the sanction or disciplinary proceeding.

Petition for Restoration of Rights After Suspension or Expulsion: A student who has been suspended may petition to have his or her student status, rights, and privileges restored before the suspension has expired by its own terms. A student who has been expelled may petition for the right to apply for readmission. The petition shall be in writing and directed to the College President. The College President shall make the readmission decision.

Emergency Suspension:

(1) The College President may impose an emergency suspension on a student, pending final institutional action on a report of nonacademic misconduct, in accordance with the procedures of this section.

(2) The College President may impose an emergency suspension on a student when all of the following conditions are met:

a. The Registrar/Student Conduct Officer has made a reasonable attempt to offer the student the opportunity for discussion, either in person or by telephone.

b. The Registrar/Student Conduct Officer recommends a sanction of suspension or expulsion.

c. The College President concludes, based on the available information, that the misconduct likely occurred and that the student's continued presence on campus meets one or more of the following conditions:

1. Would constitute a potential for serious harm to the student.

2. Would constitute a potential for serious harm to others.

3. Would pose a threat of serious disruption of college-run or college-authorized activities.

4. Would constitute a potential for serious damage to college facilities or property.

(3) If the College President determines that an emergency suspension is warranted under sub. (2), he or she shall promptly have written notification of the emergency suspension delivered to the student. The College President's decision to impose an emergency suspension shall be

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effective immediately when delivered to the student and is final.

(4) Where an emergency suspension is imposed, the hearing on the underlying allegations of misconduct shall be held, either on or outside of college lands, within 21 days of the imposition of the emergency suspension, unless the student agrees to a later date.

(5) An emergency suspension imposed in accordance with this section shall be in effect until the decision in the hearing on the underlying charges pursuant to is rendered or the College President rescinds the emergency suspension. In no case shall an emergency suspension remain in effect for longer than 30 days unless the student agrees to a longer period.

(6) If the College President determines that none of the conditions specified above are present, but that misconduct may have occurred, the case shall proceed in accordance with published disciplinary procedure.

Potential Responses to Student Misconduct:

Disciplinary Sanctions:

(1) The disciplinary sanctions that may be imposed for nonacademic misconduct, upon conclusion of the disciplinary process, are any of the following:

- a. A written reprimand.
- b. Denial of specified college privileges.
- c. Payment of restitution.
- d. Educational or service sanctions, including community service.
- e. Disciplinary probation.
- f. Imposition of reasonable terms and conditions on continued student status.
- g. Removal from a course in progress.
- h. Enrollment restrictions on a course or program.
- i. Suspension from the college.
- j. Expulsion from the college.

(2) One or more of the aforementioned disciplinary sanctions may be imposed for an incident of nonacademic misconduct.

(3) Disciplinary sanctions shall not include the termination or revocation of student financial aid; however, this shall not be interpreted as precluding the individual operation of rules or standards governing eligibility for student financial aid under which the imposition of a disciplinary sanction could result in disqualification of a student for financial aid.

Academic Misconduct

Academic misconduct subject to disciplinary action:

(1) The definition of academic misconduct is an act in which a student:

- a. Seeks to claim credit for the work or efforts of another without authorization or citation;
- b. Uses unauthorized materials or fabricated data in any academic exercise;
- c. Forges or falsifies academic documents or records;
- d. Intentionally impedes or damages the academic work of others;
- e. Engages in conduct aimed at making false representation of a student's academic performance; or
- f. Assists other students in any of these acts.

(2) Examples of academic misconduct include, but are not limited to: cheating on an examination;

collaborating with others in work to be presented, contrary to the stated rules of the course; submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another; submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas; stealing examinations or course materials; submitting, if contrary to the rules of a course, work previously presented in another course; tampering with the laboratory experiment or computer program of another student; knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

Disciplinary Sanctions:

(1) The following are the disciplinary sanctions that may be imposed for academic misconduct.

- a. An oral reprimand;
- b. A written reprimand presented only to the student;
- c. An assignment to repeat the work, to be graded on its merits;
- d. A lower or failing grade on the particular assignment or test;
- e. A lower grade in the course;
- f. A failing grade in the course;
- g. Removal of the student from the course in progress;
- h. A written reprimand to be included in the student's disciplinary file;
- i. Removal from their academic program of study;
- j. Disciplinary probation; or
- k. Suspension or expulsion from the college.

(2) One or more of the disciplinary sanctions listed in sub. (1) may be imposed for an incident of academic misconduct.

Disciplinary Sanction Imposed at the Discretion of the Instructor:

(1) Where an instructor concludes that a student enrolled in one of his or her courses has engaged in academic misconduct in the course, the instructor will follow the following procedure to impose a sanction listed in (1) (a) through (f).

(a) CONFERENCE WITH STUDENT. When an instructor concludes that proceedings under this section are warranted, the instructor shall promptly offer to discuss the matter with the student. The purpose of this discussion is to permit the instructor to review with the student the basis for his or her belief that the student engaged in academic misconduct, and to afford the student an opportunity to respond.

(b) DETERMINATION BY THE INSTRUCTOR THAT NO ACADEMIC MISCONDUCT OCCURRED. If, as a result of the discussion, the instructor determines that academic misconduct did not in fact occur or that no disciplinary sanction is warranted under the circumstances, the matter will be considered resolved without the necessity for further action or a written report.

(c) PROCESS FOLLOWING DETERMINATION BY THE INSTRUCTOR THAT ACADEMIC MISCONDUCT OCCURRED

i. If, as a result of the discussion, the instructor determines that academic misconduct did occur, the instructor shall prepare a written report so informing the student, which shall contain the following:

1. A description of the misconduct;

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2. Specification of the sanction recommended;
 3. Notice of the student's right to appeal the decision to the Division Dean; and
 4. A copy of the institutional procedures adopted to implement this section.
- ii. The written report shall be delivered personally to the student, emailed to the student via their campus email account or be mailed to the student by regular first-class United States mail at his or her current address, as maintained by the college.
 - iii. A student who receives a disciplinary sanction under this section has the right to appeal the decision of the instructor to the Division Dean to contest the determination that academic misconduct occurred, or the disciplinary sanction imposed, or both. If the student desires to appeal, the student must file a written request with the Division Dean within 10 days of personal delivery or mailing of the written report. If the student does not request a hearing within this period, the determination of academic misconduct shall be regarded as final, and the disciplinary sanction recommended shall be imposed.
- (2)** Where an instructor concludes that a student enrolled in one of his or her courses has engaged in academic misconduct in the course, the instructor will follow the following procedure to impose a sanction listed in (1) (g) through (h):
- (a)** The instructor will proceed as above but will also send a copy of the report to the Division Dean.
 - (b)** The instructor will inform the student that, because of the recommended sanction, the case will be heard, and a decision rendered by the Dean.
 - (c)** The Dean will review the information provided by the instructor and will meet with the student to discuss the case.
 - (d)** If, as a result of the discussion, the Dean determines that academic misconduct did not in fact occur or that no disciplinary sanction is warranted under the circumstances, the matter will be considered resolved without the necessity for further action.
 - (e)** If the Dean determines that misconduct has occurred, the Dean will:
 - i. Determine the appropriate sanction(s) for the offense. The sanction can be any listed in (1) (a) through (h). If the Dean determines that the appropriate sanction, is one listed in (1) (i) through (j), they will refer the matter to the Vice President for Instruction as outlined below.
 - ii. Inform the student of their decision via a written report that shall be delivered personally to the student, emailed to the student via their campus email account or be mailed to the student by regular first-class United States mail at his or her current address, as maintained at the college.
 - (f)** A student who receives a disciplinary sanction under this section has the right to appeal the decision of the Dean to the Vice President of Instruction to contest the determination that academic misconduct occurred, or the disciplinary sanction imposed, or both. If the student desires to appeal, the student must file a written request with the Vice President of Instruction within 10 days of personal or email delivery or mailing of the written report. If the student does not request a hearing within this period, the determination of academic misconduct shall be regarded as final, and the disciplinary sanction recommended shall be imposed.
- (3)** Where an instructor concludes that a student enrolled in one of his or her courses has engaged in academic misconduct in the course, and the instructor or the Division Dean has determined that

a sanction listed in (1) (i) through (j) is warranted, the following procedure will be followed:

- (a)** The instructor/Dean will proceed as above but will also send a copy of the report to the Vice President of Instruction.
- (b)** The instructor/Dean will inform the student that, because of the recommended sanction, the case will be heard, and a decision rendered by the Vice President of Instruction.
- (c)** The Vice President of Instruction will review the information provided by the instructor/Dean and will meet with the student to discuss the case.
- (d)** If, as a result of the discussion, the Vice President of Instruction determines that academic misconduct did not in fact occur or that no disciplinary sanction is warranted under the circumstances, the matter will be considered resolved without the necessity for further action.
- (e)** If the Vice President of Instruction determines that misconduct has occurred, the Vice President will:
 - i.** Determine the appropriate sanction(s) for the offense. The sanction can be any listed in (1) (a) through (j). If the Vice President determines that the appropriate sanction is (1) (k), suspension or expulsion from the college, the Vice-President will present the case to the College President who will review the case and either confirm the recommended sanction or remand the case back to the Vice President for further review.
 - ii.** Inform the student of their decision via a written report that shall be delivered personally to the student, emailed to the student via their campus email account or be mailed to the student by regular first-class United States mail at his or her current address, as maintained at the institution.
- (f)** A student who receives a disciplinary sanction listed in (1) (i) through(k) under this section has the right to appeal the decision of the Vice President of Instruction to contest the determination that academic misconduct occurred, or the disciplinary sanction imposed, or both, to the academic misconduct hearing committee. The request for a hearing must be submitted to the Vice President of Student Success within 10 days of personal delivery or mailing of the written report. The Vice President of Student Success shall take the necessary steps to convene the hearing and shall schedule it within 15 days of receipt of the request. The hearing shall be conducted within 45 days of receipt of the request unless a different time period has been mutually agreed upon by the student and the College. If the student does not request an appeal hearing within this period, the determination of academic misconduct shall be regarded as final, and the disciplinary sanction recommended shall be imposed.

Hearing:

- (1)** If a student requests a hearing, the Vice President for Student Success will take the necessary steps to convene the academic misconduct hearing committee and shall schedule the hearing within 10 days of receipt of the request or written report, unless a different time period is mutually agreed upon between the college and the student.
- (2)** Reasonably in advance of the hearing, the committee shall obtain from the instructor or investigating officer, in writing, a full explanation of the facts upon which the determination of misconduct was based and shall provide a copy of the Academic Misconduct section of the Student Code of Conduct to the student.
- (3)** The hearing before the academic misconduct hearing committee shall be conducted in

RIGHTS & RESPONSIBILITIES

accordance with the following requirements:

- a. The student shall have the right to question adverse witnesses, the right to present evidence and witnesses, and to be heard in his or her own behalf, and the right to be accompanied by a representative of his or her choice.
- b. The hearing committee shall not be bound by common law or statutory rules of evidence and may admit evidence having reasonable probative value, but shall exclude immaterial, irrelevant, or unduly repetitious testimony, and shall give effect to recognized legal privileges.
- c. The hearing committee shall make a record of the hearing. The record shall include a verbatim record of the testimony, which may be a sound recording, and a file of the exhibits offered at the hearing. Any party to the hearing may obtain copies of the record at his or her own expense. Upon a showing of indigency and legal need, a party may be provided a copy of the verbatim record of the testimony without charge.
- d. The hearing committee shall prepare written findings of fact and a written statement of its decision based upon the record of the hearing.
- e. The hearing committee may find academic misconduct and impose a sanction of suspension or expulsion only if the proof of such misconduct is clear and convincing. In other cases, a finding of misconduct must be based on a preponderance of the credible evidence.
- f. The hearing committee may impose a disciplinary sanction that differs from the recommendation of the instructor or investigating officer.
- g. The instructor or the investigating officer or both may be witnesses at the hearing conducted by the committee, but do not have responsibility for conducting the hearing.
- h. The decision of the hearing committee shall be served upon the student either by personal delivery or by first class United States mail and shall become final within 10 days of service.

Discretionary Appeal to the Wisconsin Technical College System Board: The decision of the college shall be final, except that the WTCS board may, at its discretion, grant a review upon the record.

Settlement: The procedures set forth in this chapter do not preclude a student from agreeing that academic misconduct occurred and to the imposition of a sanction, after proper notice has been given.

Right to Petition for Readmission: A student who has been expelled may petition for readmission, and a student who has been suspended may petition for readmission prior to the expiration of the suspension period. The petition for readmission must be in writing and directed to the president of the institution from which the student was suspended or expelled. The petition may not be filed before the expiration of one year from the date of the final determination in expulsion cases, or before the expiration of one-half of the suspension period in suspension cases.

TOBACCO/SMOKE-FREE CAMPUS POLICY

The Tobacco-Smoke Free Campus policy is part of the college's commitment to creating a healthy campus for all members of our campus community and is designed to be positive and supportive of overall health and well-being.

The Tobacco-Smoke Free Campus policy defines tobacco, smoking, or vapor products as including but not limited to all tobacco products including cigarettes, cigars, pipes, any devices used to smoke tobacco products, electronic cigarettes, vaporizers that are alternatives to smoking products, water pipes, smokeless tobacco products such as, chewing, or dipping products, etc.

The use of tobacco, smoking, and vapor products is prohibited in all buildings and grounds owned or leased by Lakeshore. Individuals may use these products in their personal vehicles; however, improper disposal of cigarette butts or littering, smoking, or tobacco materials on campus grounds is prohibited.

Enforcement of the policy will be achieved primarily through respectful communication of the policy, education, and awareness.

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

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.
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FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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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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

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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 long-term investments, bonds, leases, stockholders' equity, and time value of money. 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 COREQUISITE: 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.

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

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10101180	Spreadsheet Data Management	2
6		
Term 3 (Summer 2023)		
10101135	Payroll Accounting (online)	3
10101182	Accounting Software Applications	2
10801195	Written Communication	3
8		
Term 4 (Fall 2023)		
10101115	Accounting 3	4
10809195	Economics	3
7		
Term 5 (Spring 2024)		
10101118	Accounting 4	2
10101124	Auditing	2
10809196	Introduction to Sociology	3
7		
Term 6 (Summer 2024)		
10801196	Oral/Interpersonal Communication	3
10809198	Introduction to Psychology	3
6		
Term 7 (Fall 2024)		
10101125	Accounting Cost 1	4
10101122	Income Tax	3
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9		
Term 8 (Spring 2025)		
10101126	Accounting Cost 2	2
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10101199	Accounting Capstone	3
10102160	Business Law 1 (online)	3
9		
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10801195	Written Communication	3
		6
Term 4 (Fall 2023)		
10101115	Accounting 3	4
10809195	Economics	3
		7
Term 5 (Spring 2024)		
10101118	Accounting 4	2
10101124	Auditing	2
10809196	Introduction to Sociology	3
		7
Term 6 (Summer 2024)		
10801196	Oral/Interpersonal Communication	3
10809198	Introduction to Psychology	3
		6
Term 7 (Fall 2024)		
10101125	Accounting Cost 1	4
10101122	Income Tax	3
10101128	Income Tax 2	2
		9
Term 8 (Spring 2025)		
10101126	Accounting Cost 2	2
10101129	Applied Tax	1
10101199	Accounting Capstone	3
10102160	Business Law 1	3
		9
		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 2022-2023 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 long-term investments, bonds, leases, stockholders' equity, and time value of money. PREREQUISITE: 10101115 Accting 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

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

All assessments must be proctored at an LTC Testing site.

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 2022-2023 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

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 10-106-6
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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

Keyboard Speedbuilding assessments must be proctored at an LTC testing site.

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
10116109	Career Planning & Networking	1
10801196	Oral/Interpersonal Communication OR	3
	10809198 Speech	
		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 2022-2023 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

CAREER PLANNING & NETWORKING...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.

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. COREQ: 10103191 Word-Level 1 or equiv

COMMUNICATIONS...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 areal-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 equiv and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Rdg plcmnt assessment equiv

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 the 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 requirements 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.

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. PREREQ: 10103191 Word-Level 1 or equiv

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 61-006-1
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.
- 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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's class schedule is provided in the iFlex format which allows students to take courses online, face-to-face, or flex between the two.

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 • Admissions@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 2022-2023 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 Return On Investment

ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

- Submit online application.
- Complete the online Student Success Questionnaire.
- Schedule your 1st 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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's class schedule is provided in the iFlex format which allows students to take courses online, face-to-face or flex between the two.

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
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall)		
10006112	Farm Business Management	3
10804123	Math with Business Applications*	3
10006116	Intro to Soil Science	3
		9
Term 2 (Spring)		
10006110	Ag Finance & Accounting	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 program counselor for details. The tuition and fees are approximate based on 2022-2023 rates and are subject to change prior to the start of the academic year.

AGRICULTURAL FINANCE AND ACCOUNTING...introduces the learner to the basics of agricultural financial management including securing credit, working with financial statements (balance sheet, income statement, cash flows, owner equity) and investment analysis. Additionally, students will perform basic financial analysis, calculate depreciation, and prepare amortization schedules. Students will learn the basics of agricultural accounting and will practice using basic accounting software programs. PREREQUISITE: 10006112 Farm Business Management or CONDITION: 310011 Horticulture Technician and COREQUISITE: 10804123 Math with Business 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

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

ABOUT THE PROGRAM

Introduces the learner to animal health, diseases, and immune systems, with an emphasis on 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 Artificial Insemination 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.
- 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.

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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's class schedule is provided in the iFlex format which allows students to take courses online, face-toface or flex between the two.

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 • Admissions@gotoltc.edu

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	Ag Finance & Accounting	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 2022-2023 rates and are subject to change prior to the start of the academic year.

AG FINANCE AND ACCOUNTING...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

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.
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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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

• \$143.45 per credit tuition (WI resident) plus \$8.61 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 is provided in the iFlex format, which allows you to take courses online, face-to-face, or flex between the two. 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.

CONTACT

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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
10801196	Oral/Interpersonal Communication	3
10804123	Math with Business Applications	3
		15
Term 2		
10006110	Ag Finance & Accounting	3
10006122	Principles of Crop Production	3
10006124	Principles of Animal Breeding	3
10006134	Animal Records	1
10809195	Economics	3
10006128	Agribusiness Internship*	2
		15
Term 3		
10006144	Nutrition Principles	3
10006146	Precision Ag Technologies	3
10006133	Ag Product Promotion	3
10006115	Agricultural Sales & Communications	3
10809198	Introduction to Psychology	3
		15
Term 4		
10006130	Agricultural Commodity Marketing	3
10006140	Legal Aspects of Agribusiness	3
10006141	Livestock Production Systems & Management	3
10006143	Ag Employability & Professionalism	3
10801195	Written Communications	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 2022-2023 rates and are subject to change prior to the start of the academic year.

AG EMPLOYABILITY & PROFESSIONALISM...expects the student to prepare for a career in agriculture, which includes personality assessments, advocacy, professional networking, job shadowing, stress management, career exploration, problem solving and business etiquette. Students will further develop leadership, management and conflict resolution skills through the UWEX Employer of Choice certification. The student will gather and organize the components of a portfolio to showcase the skills and experiences that have prepared them for a career in the agriculture industry.

AG PRODUCT PROMOTION...prepares students to market and sell agricultural products. Topics include creating a marketing plan, promotion, branding, product pricing, marketing research and tools, budgeting and product positioning using the marketing mix. Furthermore, students will investigate alternative ag product markets and value added agriculture.

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, 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 10809195 Economics or 10006135 Agriculture Business Accounting

AGRICULTURAL FINANCE AND ACCOUNTING...introduces the learner to the basics of agricultural financial management including securing credit, working with financial statements (balance sheet, income statement, cash flows, owner equity) and investment analysis. Additionally, students will perform basic financial analysis, calculate depreciation, and prepare amortization schedules. Students will learn the basics of agricultural accounting and will practice using basic accounting software programs. PREREQUISITE: 10006112 Farm Business Management or CONDITION: 310011 Horticulture Technician and COREQUISITE: 10804123 Math with Business Apps

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

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

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.

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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

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

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 10-006-2
Associate Degree
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/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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 is provided in the iFlex format, which allows you to take courses online, face-to-face, or flex between the two. 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.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

REAL EXPERIENCE FOR THE REAL WORLD

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2022)		
10006112	Farm Business Management	3
10006116	Intro to Soil Science	3
10804123	Math with Business Applications	3
		9
Term 2 (Spring 2023)		
10006110	Ag Finance & Accounting	3
10006122	Principles of Crop Production	3
10809195	Economics	3
		9
Term 3 (Fall 2023)		
10006114	Intro to Animal Science	3
10801196	Oral/Interpersonal Communication	3
10006133	Ag Product Promotion	3
		9
Term 4 (Spring 2024)		
10006134	Animal Records	1
10006124	Principles of Animal Breeding	3
10006128	Agribusiness Internship*	2
10006130	Agricultural Commodity Marketing	3
		9
Term 5 (Fall 2024)		
10006146	Precision Ag Technologies	3
10006144	Nutrition Principles	3
		6
Term 6 (Spring 2025)		
10006143	Ag Employability & Professionalism	3
10006141	Livestock Production Systems & Management	3
		6
Term 7 (Fall 2025)		
10006115	Agricultural Sales & Communications	3
10809198	Introduction to Psychology	3
		6
Term 8 (Spring 2026)		
10006140	Legal Aspects of Agribusiness	3
10801195	Written Communications	3
		6
		TOTAL 60

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

**Online Students: Please register for Accounting for Professionals

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 2022-2023 rates and are subject to change prior to the start of the academic year.

2022-23

AG EMPLOYABILITY & PROFESSIONALISM... expects the student to prepare for a career in agriculture, which includes personality assessments, advocacy, professional networking, job shadowing, stress management, career exploration, problem solving and business etiquette. Students will further develop leadership, management and conflict resolution skills through the UWEX Employer of Choice certification. The student will gather and organize the components of a portfolio to showcase the skills and experiences that have prepared them for a career in the agriculture industry.

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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

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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

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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 is provided in the iFlex format, which allows you to take courses online, face-to-face, or flex between the two. 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.

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
10801196	Oral/Interpersonal Communications	3
10804123	Math with Business Applications	3
		15
Term 2		
10006110	Ag Finance & Accounting	3
10006122	Principles of Crop Production	3
10006124	Principles of Animal Breeding	3
10006134	Animal Records	1
10809195	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 2022-2023 rates and are subject to change prior to the start of the academic year.

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, 10006124 Principles of Animal Breeding or 10091103 Dairy Reproductive Management

AGRICULTURAL FINANCE AND ACCOUNTING...introduces the learner to the basics of agricultural financial management including securing credit, working with financial statements (balance sheet, income statement, cash flows, owner equity) and investment analysis. Additionally, students will perform basic financial analysis, calculate depreciation, and prepare amortization schedules. Students will learn the basics of agricultural accounting and will practice using basic accounting software programs. PREREQUISITE: 10006112 Farm Business Management or CONDITION: 310011 Horticulture Technician and COREQUISITE: 10804123 Math with Business Apps

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

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

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

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 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

Program Number 31-405-1 Technical Diploma • Two 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.

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/Success Coach 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 and 2 at an approximate total cost of \$2,700.

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 for and take two of the I-CAR (Inter-Industry Conference on Auto Collision Repair) Welding Certifications. They are the MIG (Metal Inert Gas) Steel and MIG (Metal Inert Gas) Aluminum I-CAR (Inter-Industry Conference on Auto Collision Repair) Welding Exams.
- This program accepts new students in both the fall and spring terms.
- 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.

This program offers flexible start dates throughout the year. Students can attend classes anytime Monday through Thursday from 9am-4:30pm.

CONTACT

LTC Admissions Advisor
920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
31405320	Introduction to Auto Collision	1
31405350	Auto Collision Panel Repair Fundamentals	1
31405351	Auto Collision Panel Repair Intermediate	1
31405352	Auto Collision Plastic Repair	1
31405356	Auto Collision Panel Alignment	1
31405357	Auto Collision Panel Replacement	1
31405358	Auto Collision Panel Repair Advanced	1
31405359	Auto Collision Suspension and Steering	1
31405360	Auto Collision Vehicle Air Conditioning	1
32405313	Hybrid and Electric Vehicles	1
31405361	Auto Collision Vertical Steel MIG Welding	1
31405362	Auto Collision Overhead Steel MIG Welding	1
31405341	Structural Analysis	1
31405363	Vehicle Anchoring	1
31405364	Vehicle Structural Repair	1
31405365	Structural Steel Sectioning	1
31405366	Structural Steel Replacement	1

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Term 2

31405340	Introduction to Auto Refinishing	1
31405367	Auto Refinishing Surface Preparation	1
31405368	Auto Refinishing Masking	1
31405369	Auto Refinishing Color Application	1
31405370	Auto Refinishing Color Matching	1
31405371	Auto Refinishing Color Blending	1
31405372	Auto Refinishing Multiple Panel	1
31405373	Auto Refinishing Buffing and Polishing	1
31405374	MIG Aluminum Vertical Welding	1
31405375	MIG Aluminum Overhead Welding	1
32405333	Collision Center Customer Service	1
31405376	Collision Estimating and Repair Planning	1
31405377	Vehicle Repairs and Finishing	3
31405378	Vehicle Repairs and Finishing 2 OR	1
32405317	Internship – Auto Collision	1

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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 2022-2023 rates and are subject to change prior to the start of the academic year.

AUTO COLLISION OVERHEAD STEEL MIG WELDING...prepares the learner to demonstrate the four welds performed in the overhead position for the I-CAR Steel Welding Certification. Learner will demonstrate proper set up and maintenance of steel MIG welding equipment. COREQUISITE: 31405361 Auto Collision Vertical Steel MIG Welding

AUTO COLLISION PANEL ALIGNMENT...prepares the learner to demonstrate removal, installation and alignment of bolted on automotive body panels and parts. Learners will demonstrate removal and installation of door handles, door glass and related components. COREQUISITE: 31405320 Introduction to Auto Collision

AUTO COLLISION PANEL REPAIR ADVANCED...prepares the learner to demonstrate panel repairs with multiple contours and compound curves. Learners will demonstrate glue-pulling dent repair (GPDR) and the proper use of paintless dent repair (PDR) tools. Learner will demonstrate efficiency and proper dent repair process. COREQUISITE: 31405351 Auto Collision Panel Repair Intermediate

AUTO COLLISION PANEL REPAIR FUNDAMENTALS...prepares the learner to demonstrate hammer and dolly techniques, proper application of body filler and finish sanding. Learner will demonstrate efficiency and proper dent repair processes. COREQUISITE: 31405320 Introduction to Auto Collision

AUTO COLLISION PANEL REPAIR INTERMEDIATE...prepares the learner to demonstrate heat shrinking techniques and the proper use of weld on pulling attachments and hydraulics to straighten a damaged panel. Learner will demonstrate efficiency and proper dent repair processes. COREQUISITE: 31405350 Auto Collision Panel Repair Fund

AUTO COLLISION PANEL REPLACEMENT...prepares the learner to demonstrate a proper door skin and rocker panel replacement and fit-up using specialized tools and squeeze type resistance spot welding. Learners will also demonstrate proper application of internal corrosion protection. COREQUISITE: 31405356 Auto Collision Panel Alignment

AUTO COLLISION PLASTIC REPAIR...prepares the learner to identify automotive plastics and to demonstrate proper nitrogen and airless welding repairs. Learner will demonstrate adhesive repairs to flexible and rigid plastics. Learner will demonstrate efficiency and proper plastic repair processes. COREQUISITE: 31405320 Introduction to Auto Collision

AUTO COLLISION SUSPENSION AND STEERING...prepares the learner to diagnose, inspect, adjust and repair suspension systems and demonstrate the proper removal and replacement of a MacPherson strut, lower control arm, steering knuckle and related components. COREQUISITE: 31405320 Introduction to Auto Collision

AUTO COLLISION VEHICLE AIR CONDITIONING...prepares the learner to identify automotive refrigerants and to demonstrate proper evacuation, repair and recharge of automotive air conditioning systems. Learners can earn A/C certification from the U.S. Environmental Protection Agency.

AUTO COLLISION VERTICAL STEEL MIG WELDING...prepares the learner to demonstrate the six welds performed in the vertical position for the I-CAR Steel Welding Certification. Learner will demonstrate proper set up and maintenance of steel MIG welding equipment. COREQUISITE: 31405320 Introduction to Auto Collision

AUTO REFINISHING BUFFING AND POLISHING...prepares the learner to properly demonstrate the removal of panel overspray, orange peel, sags, runs, sanding marks, contour mapping, low gloss condition, dirt and dust. Learner will demonstrate proper defect removal, sanding, buffing and polishing processes. COREQUISITE: 31405340 Introduction to Auto Refinishing

AUTO REFINISHING COLOR APPLICATION...prepares the learner to demonstrate the proper application of a solvent basecoat-clearcoat paint finish. Learner will demonstrate proper spray-gun set up, spray technique, basecoat defect removal and clearcoat application. COREQUISITE: 31405340 Introduction to Auto Refinishing

AUTO REFINISHING COLOR BLENDING...prepares the learner to identify poor hiding colors and determine necessary action. Learner will properly demonstrate color-blending methods, the application of multi-stage coats for panel blending and reverse blending techniques. COREQUISITE: 31405370 Auto Refinishing Color Matching

AUTO REFINISHING COLOR MATCHING...prepares the learner to use the color wheel and to identify alternate color formulas. Learner will create test panels with a proper color match and demonstrate the modification of color formulas to achieve a blendable color match. COREQUISITE: 31405369 Auto Refinishing Color Application

AUTO REFINISHING MASKING...prepares the learner to properly demonstrate back masking, the application of plastic bag to vehicle and masking parts suspended from racks or stands. Learner will demonstrate the proper use of fine-line, aperture and lifting tapes. COREQUISITE: 31405367 Auto Refinishing Surface Preparation

AUTO REFINISHING MULTIPLE PANEL...prepares the learner to demonstrate the proper application of a solvent basecoat-clearcoat paint finish to multiple adjacent automotive body panels. Learner will troubleshoot paint problems and demonstrate proper panel overlap producing an industry quality finish. COREQUISITE: 31405340 Introduction to Auto Refinishing

AUTO REFINISHING SURFACE PREPARATION...prepares the learner to properly demonstrate proper surface preparation for primer surfacer, sealer, basecoat and clearcoat operations. Learner will demonstrate wet and dry preparation methods on steel and plastic automotive body panels and parts. COREQUISITE: 31405340 Intro to Auto Refinishing

COLLISION CENTER CUSTOMER SERVICE...prepares the learner to create positive customer relationships for collision repair businesses. Learner will identify customer concerns, needs and expectations and project positive attitude, cooperation and professionalism during the repair process.

COLLISION ESTIMATING AND REPAIR PLANNING...prepares the learner to demonstrate vehicle tear-down and inspection. Learner will identify damage to energy absorbing components and determine reparability of vehicle components made from various materials. Learner will create and interpret damage estimates.

HYBRID AND ELECTRIC VEHICLES...prepares the learner to identify automotive high voltage systems and to demonstrate proper shut down and initiation procedures. Learners will demonstrate the proper removal and installation of vehicle (SRS) supplemental restraint system components and test electrical circuits.

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. COREQUISITE: 31405377 Vehicle Repairs and Finishing

INTRODUCTION TO AUTO COLLISION...prepares the learner to work in the lab environment with proper personal protective equipment. An overview of the collision repair industry will be provided and learner will demonstrate vehicle lift safety and the proper use of hand tools and shop equipment.

INTRODUCTION TO AUTO REFINISHING...prepares learner to work in the refinishing lab environment with proper personal protection equipment. Learner will demonstrate proper mixture of paint products and the proper use and care of spray guns and related tools.

MIG ALUMINUM OVERHEAD WELDING...prepares the learner to demonstrate the four welds performed in the overhead position for the I-CAR Aluminum Welding Certification. Learner will demonstrate proper set up and maintenance of Aluminum MIG welding equipment. COREQUISITE: 31405374 MIG Aluminum Vertical Welding

MIG ALUMINUM VERTICAL WELDING...prepares the learner to demonstrate the six welds performed in the vertical position for the I-CAR Aluminum Welding Certification. Learner will demonstrate proper set up and maintenance of Aluminum MIG welding equipment. COREQUISITE: 31405362 Auto Collision Overhead Steel MIG Welding

STRUCTURAL ANALYSIS...prepares the learner to demonstrate vehicle measuring using mechanical and electronic systems. Learner will interpret vehicle dimension data and demonstrate proper vehicle upper body, lower body and component measuring. COREQUISITE: 31405320 Introduction to Auto Collision

STRUCTURAL STEEL REPLACEMENT...prepares the learner to properly demonstrate the attachment and replacement of structural components using squeeze type resistance welding, riveting, structural adhesive and weld bonding. Learners will demonstrate efficiency and follow OEM processes and recommendations. COREQUISITE: 31405365 Structural Steel Sectioning

STRUCTURAL STEEL SECTIONING...prepares the learner to properly demonstrate welding, cutting and joining methods necessary to section a unibody frame rail. Learners will demonstrate efficiency and proper sectioning processes and prepare to earn the I-Car SPS05 Steel Sectioning Certification. COREQUISITE: 31405364 Vehicle Structural Repair

VEHICLE ANCHORING...prepares the learner to demonstrate proper anchoring for unibody and full frame vehicles. Learner will demonstrate the proper use of pinch-weld clamps, truck clamps and dedicated holding fixtures to secure vehicle to frame straightening equipment. COREQUISITE: 31405341 Structural Analysis

VEHICLE REPAIRS AND FINISHING...prepares the learner to demonstrate mastery of collision repair and refinishing skills on live customer repairs. Learner will demonstrate efficiency and proper repair processes. Repair work performed by learner will be meet or exceed instructor and customer expectations. PREREQUISITES: 31405358, 31405352, 31405357, 31405359, 31405360, 31405366, 32405313; COREQUISITES: 31405375, 31405368, 31405371, 31405372, 31405373

VEHICLE REPAIRS AND FINISHING 2...prepares the learner to continue to demonstrate mastery of collision repair and refinishing skills on live customer repairs. Learner will demonstrate efficiency and proper repair processes. Repair work performed by learner will be meet or exceed instructor and customer expectations. COREQUISITE: 31405377 Vehicle Repairs and Finishing

VEHICLE STRUCTURAL REPAIR...prepares the learner to analyze and straighten vehicle structural damage and properly demonstrate pulling using hydraulic powered equipment, unibody and full frame alignment and cold stress relief methods necessary to repair vehicle structural parts. COREQUISITE: 31405363 Vehicle Anchoring

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 \$2,500.

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		
31404301	Auto Orientation and Safety	1
31404303	Auto Mechanical Hand & Torque Tools	1
31442345	Auto Servicing Welding	1
31404306	Auto Body Applications for Mechanics	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		
31404328	Auto Air Conditioning	2
31404316	Differential and Manual Transmissions	3
31404327	Auto Electrical Systems 6	2
31404329	Auto Engine Performance 1	3
31801360	Workplace Fundamentals	1
31801361	Interpersonal Skills	1
		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 2022-2023 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 and COREQUISITE: 31404303 Auto Mech Hand & Torque Tools

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 BODY APPLICATIONS FOR MECHANICS...introduces the mechanic student to the common auto collision repair topics experienced in a maintenance shop. Concepts include adhesives, window regulators, panel scratch repair and polishing, plastic repair, and panel alignment.

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 and 31404303 Auto Mech Hand & Torque Tools

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

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 and COREQUISITE: 31404303 Auto Mech Hand & Torque Tools

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 and 31404303 Auto Mech Hand & Torque Tools

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 and COREQUISITE: 31404303 Auto Mech Hand & Torque Tools

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 and COREQUISITE: 31404303 Auto Mech Hand & Torque Tools

INTERPERSONAL SKILLS...prepares the learner to model interpersonal skills, ethics and diversity.

WORKPLACE FUNDAMENTALS...prepares the learner to incorporate problem solving, creativity and communication skills into daily workplace habits.

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 2022-2023 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: 10106108 or 10170108 Realtime Rptg Speed Dev, 10106128 or 10170128 Jury Chrg 1-Adv, 10106109 or 10170109 Lit 1-Adv, 10106156 or 10170156 Test 1-Adv & COREQ: 10106129 or 10170129 Jury Chrg 2-Adv, 10106111 or 10170111 Lit 2-Adv & 10106157 or 10170157 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: Minimum 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-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 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 10-102-3
Associate Degree in Applied Science • Four Terms
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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

- Entrepreneurship & Business (19-145-2)

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	3
10804123	Math with Business Applications	3
		14
Term 2		
10101111	Accounting 1	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 2022-2023 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.

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: 10101111 Accounting 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

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: 10101111 Accounting 1 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: 10101111 Accounting 1

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.

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.

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

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

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

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)

This certificate will give job seekers an expertise in tax preparation procedures and provide related accounting skills which will make them more employable.

10101111 Accounting 1 - 4cr

10101128 Income Tax 2 - 2cr

10101122 Income Tax - 3cr

10101129 Applied Tax - 1cr

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.

30091320 Ag Ed Plus-Livestock Management - 1cr 30006312 Ag Ed Plus-Business Management - 1cr

30006310 Ag Ed Plus-Financial Management - 1cr 30093322 Ag Ed Plus-Crop & Soil Management - 1cr

19-006-9 Ag Ed Plus - Management (3 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.

30006315 Ag Ed Plus-Agricultural Sales - 1cr 30006330 Ag Ed Plus-Commodity & Marketing - 1cr

30006340 Ag Ed Plus-Legal Considerations - 1cr

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.

30093316 Ag Ed Plus-Soil Science - 1cr 30091344 Ag Ed Plus-Livestock Nutrition - 1cr

30006334 Ag Ed Plus-Herd Record Keeping - 1cr 30091342 Ag Ed Plus-Adv Livestock Manager - 1cr

30006328 Ag Ed Plus Precision Ag Technologies - 1cr

30091324 Ag Ed Plus Animal Breeding Concepts - 1cr

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.

10091102 Dairy Cattle Management - 3cr

10091108 Quality Milk Production - 3cr

10091103 Dairy Reproductive Management - 3cr

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 (sheer, CNC Plasma and Fiber Laser) as well as Sheet Metal forming equipment. Projects will be completed using welding and finishing techniques.

31457331 Fabrication 1 - 2cr

31457333 Fabrication 2 - 2cr

31442309 Weld Print 3 for Fabricators - 1cr

31442307 Welding Measurement 2 - 1cr

19-116-4 Human Resources 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.

10196193 Human Resource Mngt - 3cr 10116127 HR Technology - 2cr
10116125 Human Resource Employment Law - 3cr

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.

10623193 ISO 9001 Internal Auditor - 3cr

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.

10182131 Supply Chain Management - 3cr 10182122 Logistics - 3cr
10182160 Global Supply Chain Management - 3cr

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.

10182131 Supply Chain Management - 3cr
10182102 Service Operations Management - 3cr
10182114 Enterprise Resource Planning - 3cr

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.

10196188 Project Management - 3cr 10182108 Purchasing - 3cr

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.

10182108 Purchasing - 3cr 10182131 Supply Chain Management - 3cr

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.

10623114 Lean Six Sigma-Black Belt - 4cr

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.

10623110 Lean Six Sigma-Measure and Analyze - 4cr
10623111 Lean Six Sigma-Improve & Control - 4cr
10623112 Lean Six Sigma-Implementation - 3cr

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.

10196189 Teambuilding and Problem Solving - 3cr
10196107 Principles of Mngt OR 10196190 Leadership Development - 3cr
10196134 Legal Issues for Supervisors OR 10196191 Supervision - 3cr

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.

10410113 OSHA 10-Construction OR 10410103 OSHA 30 for - 1cr
Construction (2 cr)
10601101 HVAC Foundations - 1cr
10601102 HVAC Duct Systems - 1cr
10601103 HVAC Piping-Applications - 1cr
10601104 HVAC Electrical-Theory - 1cr
10601105 HVAC Electrical-Applications - 1cr
10601106 HVAC Heating Systems-Theory - 1cr
10601107 HVAC Heating Systems-Applications - 1cr
10601108 HVAC Heating Systems-Startup/Troubleshoot - 1cr
10601111 HVAC Airflow-Principles - 1cr
10601112 HVAC Air Conditioning-Theory - 1cr
10601113 HVAC Air Conditioning-Applications - 1cr
10601114 HVAC Air Conditioning-Startup/Troubleshoot - 1cr
10601123 HVAC Installations-Introduction - 2cr
10601126 HVAC Installations-Troubleshoot/Service - 1cr
10601127 HVAC Hydronic Heating Systems-Theory - 1cr
10601128 HVAC Hydronic Heating Systems-Applications - 1cr

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.

10501101 Medical Terminology - 3cr 10536122 Pharmacology - 3cr
 10501102 Health Insurance and Reimbursement - 3cr
 10536126 Pharmacy Parenteral Admixtures - 3cr
 10536110 Pharmaceutical Calculations - 3cr
 10536115 Pharmacy Law - 2cr

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.

10150114 Networking 1 - 3cr 10150176 Networking 2 - 3cr
 10620138 Programmable Controllers-Allen Bradley - 3cr
 10620140 Programmable Controllers-Allen Bradley Advanced - 2cr
 10150176 Networking 2 - 2cr 10620198 Industrial Networks - 2cr

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.

10150114 Networking 1 - 3cr 10154104 Intro to IT - 3cr
 10150176 Networking 2 - 3cr 10150163 Neworking 3 - 3cr
 10150129 Virtualization - 2cr
 10150173 Server Administration 1 - 3cr
 10150174 Server Administration 2 - 3cr

MARKETING & GRAPHIC DESIGN

19-201-1 Adobe Creative Cloud (12 credits)

This certificate focuses on the Adobe Suite software. Courses include Photoshop, Illustration, InDesign and Multimedia Concepts.

10201109 Illustration - 3cr 10201108 Photoshop - 3cr
 10201110 InDesign - 3cr 10152122 Multimedia Concepts - 3cr

19-201-2 Digital Media (15 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.

10201101 Design Fundamentals - 3cr 10201108 Photoshop - 3cr
 10152196 Web Development 1 - 3cr 10152122 Multimedia Concepts - 3cr
 10201173 Website Development Advanced - 3cr

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.

10201101 Design Fundamentals - 3cr 10201108 Photoshop - 3cr
 10201109 Illustration - 3cr 10201110 InDesign - 3cr
 10201114 Typography - 2cr

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.

10103101 Access-Lev 1 - 1cr 10103161 PowerPoint-Lev 1 - 1cr
 10103121 Excel-Level 1 - 1cr 10103122 Excel-Lev 2 - 1cr
 10103191 Word-Level 1 - 1cr 10103192 Word-Lev 2 - 1cr
 10106167 Microsoft Office Integration - 3cr

19-109-3 Microsoft® Office Introduction (4 credits)

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.

10103191 Word -Level 1 - 1cr 10103121 Excel -Level 1 - 1cr
 10103161 PowerPoint -Level 1 - 1cr 10103101 Access -Level 1 - 1cr

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 2022-2023 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

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 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. 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.
- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 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
		18
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

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 2022-2023 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: 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 PREREQUISITE: 10307167 ECE: Health, Safety & Nutrition

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

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 • Admissions@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 2022-2023 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 32-444-1 Technical Diploma • Four Terms

ABOUT THE PROGRAM

Learn CNC (computer numerical control) 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 advanced machine tool equipment set-up and operation.
- Perform advanced programming, set-up and operation of CNC Machine Tools.
- Perform advanced CNC Machining 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 your First Time Program Counseling/Registration Session with your assigned Program Counselor/Success Coach 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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.

This program offers flexible start dates throughout the year. Students can attend classes anytime Monday through Thursday from 8am-8pm.

RELATED PROGRAMS

- Machinist Apprenticeship
- Tool and Die Apprenticeship
- Millwright 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 2D 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 2022-2023 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 and 32444306 CNC Skills Portfolio

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 Machine Tool 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 Pharmacy Technician Program Handbook form.
- Schedule a Program Counseling/Registration 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

- Complete health requirements.
- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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
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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 2022-2023 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

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 (American Society of Mechanical Engineers) standards.

PROGRAM OUTCOMES

- Prepare detail and assembly drawings for documentation of mechanical parts and machines using CAD (Computer-Aided Design) software using ASME Y14.5M Standard.
- Create CAD geometry, parts and assemblies.

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

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- 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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		
10606100	Mechanical Drafting Standards/Procedures	1
10606101	AutoCAD-2D Computer Aided Design	2
10606108	SolidWorks 1-Parametric Modeling	2
10606102	Product Design & Rapid Prototyping	1
10606104	Manufacturing Processes and Materials	2
10420107	Machining Applications	1
		9
Term 2		
10606106	Tolerancing and GD&T	3
10606109	SolidWorks 2-Modeling/Details for Designers	2
10606110	SolidWorks 3-Working Drawings for Designers	2
10606111	SolidWorks-Advanced Modeling	2
		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 2022-2023 rates and are subject to change prior to the start of the academic year.

AUTOCAD-2D COMPUTER AIDED DESIGN...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.

MACHINING APPLICATIONS...takes a hands-on approach to the subject of machining processes including milling, turning and drilling. Students will use the machines common to a machine shop to build a functional gearbox during their time in this course. The use of calipers, micrometers and coordinate measuring machines will also be used to verify the work. COREQUISITE: 10606104 Manufacturing Processes and Materials

MANUFACTURING PROCESSES AND MATERIALS...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. In addition, the student will also explore metallurgy, computer-age machining and methods in advanced manufacturing technology.

MECHANICAL DRAFTING STANDARDS & PROCEDURES...develops skills in creating engineering sketches through the application of drafting standards and procedures. Principles covered include view selection, orthographic projection, section and auxiliary views, and their utilization in working drawings. The need for engineering sketching is reinforced through a hands-on project requiring measurement, inspection and sketching of orthographic views.

PRODUCT DESIGN AND RAPID PROTOTYPING...introduces students to rapid prototyping methods and the operation of various types of rapid prototyping equipment available in the Mechanical Design and Engineering Technology program's Fab Lab. Research and the use 3D printers including FDM and related material usage, will be explored through hands-on lab activities to develop a working prototype. COREQUISITE: 10606108 SolidWorks 1 - Parametric Modeling

SOLIDWORKS 1-PARAMETRIC MODELING...introduces the students to the concepts and commands of parametric solid modeling. Students create sketches and add relationships to the sketch segments, extrude the sketches to create models, and add features such as fillets, cut extrude, chamfers, holes, draft, shell, lofts and sweeps. Emphasis is placed on the design intent of the parametric solid models.

SOLIDWORKS 2-MODELING/DETAILS FOR DESIGNERS...is the second course in the study of parametric solid modeling using SolidWorks as it applies to the mechanical design field. Students extract 2D documentation from the 3D models and add details to the drawings. Advanced software applications are explored including assembly modeling techniques, configurations, detail drawing generation, surfaces, multibody parts, additional work with sweeps and lofts, and preparation for the CSWA (Certified SolidWorks Associate) exam. PREREQUISITES: 10606100 Mechanical Drafting Standards/Procedures and 10606108 SolidWorks 1 - Parametric Modeling

SOLIDWORKS 3-WORKING DRAWINGS FOR DESIGNERS...focuses on the creation of complete sets of engineering detail and assembly drawings including the accompanying engineering documentation, bill of materials and the application of geometric dimensioning and tolerancing standards. Emphasis is placed on product design analysis, tolerance stack ups and the application of GD&T. COREQUISITE: 10606109 SolidWorks 2-Modeling/Details for Designers

SOLIDWORKS-ADVANCED MODELING...introduces students to advanced modeling and design techniques for part design in sheet metal, weldments, castings and mold design. COREQUISITES: 10606110 SolidWorks 3-Working Drawings for Designers and 10606106 Tolerancing and GD&T

TOLERANCING AND GD&T...provides the learner with the skills to apply and interpret tolerancing standards for both rectangular and geometric tolerancing (ASME 14.5M-2018) on part drawings, including form, profile, orientation, runout, and positional tolerances. Additionally the learning will design mating parts and tolerance stack ups with and without GD&T.

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, heating, ventilating, air conditioning and electrical systems

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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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
10804107	College Mathematics	3
10442100	Welding Introduction	1
10410103	OSHA 30 for Construction	2

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 2022-2023 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 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

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.

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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
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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 2022-2023 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, 10106128 or 10170128 Jury Chrg 1-Adv, 10106109 or 10170109 Lit 1-Adv, 10106156 or 10170156 Test 1-Adv & COREQ: 10106129 or 10170129 Jury Chrg 2-Adv, 10106111 or 10170111 Lit 2-Adv & 10106157 or 10170157 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: Minimum 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 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 31-504-7
 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 your First Time Program Counseling/Registration 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.

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 2022-2023 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 Violence, 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
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 your First Time Program Counseling/Registration 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

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 2022)		
10801195	Written Communication	3
10809198	Introduction to Psychology	3
10504118	Intro to Public Safety	2
		8
Term 2 (Spring 2023)		
10504108	Professional Communications in Public Safety	1
10801196	Oral/Interpersonal Communications	3
10809122	Introduction to American Government OR	3
10809166	Introduction to Ethics: Theory & Application	7
		7
Term 3 (Fall 2023)		
10804107	College Mathematics	3
10504170	Public Safety Fitness	1
10801198	Speech	3
10504910	Law Enforcement Career Development	2
		9
Term 4 (Spring 2024)		
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 2024)		
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 2024)		
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

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 2022-2023 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 • 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 your 1st Time Program Counseling/Registration 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

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 program counselor for details. The tuition and fees are approximate based on 2022-2023 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, Domestics, 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 (EVO) 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 2022-2023 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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
10316115	Introduction to Restaurant Operations	3
10316117	Advanced Patisserie and Desserts	3
10809172	Introduction to Diversity Studies OR 10809196 Introduction to Sociology	3
		16
Term 3		
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
		14
Term 4		
10316121	Advanced Garde Manger and Catering	3
10316134	Culinary Internship	2
10316131	Global Cuisine	3
10316120	Nutrition	2
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 2022-2023 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...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: 10316115 Intro to Restaurant Oper or 10316114 Culinary Pract 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

DINING ROOM AND BEVERAGE SERVICE...introduces learners to dining room and beverage service including wine, spirits, beer, mixology, and non-alcoholic drinks. Helps refine 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 & 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. Creativity is emphasized along with all ACF standards of professionalism. Safety, sanitation, and cost control concepts are applied. PREREQUISITE: 10316125 Culinary Pract 3 or 10316126 Adv Rest Oper

HOSPITALITY COST CONTROLS...applies concepts of controlling costs with emphasis on cost-to-sales relationship. 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. COREQUISITE: 10838105 Intro Rdg & Study Skills or Rdg plcmnt assmnt equiv

INTRODUCTION TO PSYCHOLOGY...introduces students to a survey of multiple aspects of human behavior. Involves a survey of the theoretical foundations of human functioning in 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. PREREQUISITE: Rdg plcmnt equiv or COREQUISITE: 10838105 Intro to Rdg & Study Skills

INTRODUCTION TO RESTAURANT OPERATIONS...introduces the learner to functioning in a professional environment. Students will maintain a commercial kitchen and will work together as a team to apply the fundamentals introduced in previous courses, executing preparation techniques and cooking methods with an "a la minute" and service mindset. Students will also explore and develop a range of menus, menu styles, and categories that are employed in the various business segments of the food service industry. PREREQUISITE: 10316102 Skills Development

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...introduces the learner to basic nutritional principles. This course will prepare students to apply nutritional concepts in a professional, culinary environment with a focus on the seven nutrients and their characteristics, various populations and meeting their nutritional needs, flavor development, menu planning, and recipe modification. Students will also explore current nutritional issues within the culinary field and within our communities.

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.

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

WRITTEN COMMUNICATION...teaches 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 Wrtg plcmnt assmnt equiv and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Rdg plcmnt assmnt equiv

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.

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 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

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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	3
		14
Term 2		
10316107	Introduction to Stocks, Soups and Sauces	2
10316110	Cooking Methods	3
10316111	Garde Manger	2
10316115	Introduction to Restaurant Operations	3
10316117	Advanced Patisserie and Desserts	3
		13
Term 3		
10109158	Hospitality Cost Controls	3
10316122	Classic and Contemporary French Cuisine	3
10316126	Advanced Restaurant Operations	2
10316138	Culinary Leadership	3
		11
Term 4		
10316121	Advanced Garde Manger and Catering	3
10316134	Culinary Internship	2
10316131	Global Cuisine	3
10316120	Nutrition	2
		10

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 2022-2023 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 Adv 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: 10316115 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 Dev

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 Adv Rest Oprtns

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 Pract 3 or 10316126 Adv 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...introduces the learner to functioning in a professional environment. Students will maintain a commercial kitchen and will work together as a team to apply the fundamentals introduced in previous courses, executing preparation techniques and cooking methods with an "a la minute" and service mindset. Students will also explore and develop a range of menus, menu styles, and categories that are employed in the various business segments of the food service industry. PREREQUISITE: 10316102 Skills Development

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...introduces the learner to basic nutritional principles. This course will prepare students to apply nutritional concepts in a professional, culinary environment with a focus on the seven nutrients and their characteristics, various populations and meeting their nutritional needs, flavor development, menu planning, and recipe modification. Students will also explore current nutritional issues within the culinary field and within our communities.

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.
- Ensure enrolled in or graduate of Dairy Herd Management program.
- 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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, students are required to have transportation and participate throughout the year. Students have the opportunity to join PAS (Professional Agriculture Students) and participate in competitions and activities. Terms 1 and 2 of this curriculum completes the Dairy Herd Management technical diploma. The Term 3 and 4 class schedule is provided in the iFlex format, which allows you to take courses online, face-to-face, or flex between the two. To participate synchronously in class using videoconferencing software, a minimum of 5Mb as well as audio and visual capabilities on your computer is required. Program students eligible to be issued a LTC laptop while learning and applying the software applications. Online classes have the same expectations completing labs, technology exploration and demonstrations.

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 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
Term 3		
10006112	Farm Business Management	3
10006146	Precision Ag Technologies	3
10809195	Economics	3
10809198	Introduction to Psychology	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
10006110	Ag Finance & Accounting	3
10006128	Agribusiness Internship	2
10801195	Written Communications	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 2022-2023 rates and are subject to change prior to the start of the academic year.

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

AG FINANCE AND ACCOUNTING...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

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.

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

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

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 your 1st 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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. Students will complete an on-farm placement survey. Students of LTC's Dairy Herd Management program are eligible to receive national Artificial Insemination 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 (Individualized Technical Studies) 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
31804123	Math with Business Applications OR 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 program counselor for details. The tuition and fees are approximate based on 2022-2023 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 program, and will earn the Dairy Care 365 Certificate.

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. Dairy Beef Quality Assurance and the F.A.R.M. programs 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.

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 or 31804123 Math w 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.

MATH W BUSINESS APPS...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

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.
- 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 your 1st 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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. Students will complete an on-farm placement survey. Students of LTC's Dairy Herd Management program are eligible to receive national Artificial Insemination 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 (Individualized Technical Studies) 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 2022)		
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
Term 2 (Spring 2023)		
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
Term 3 (Fall 2023)		
10091115	Nutrition Principles - Dairy	3
10091104	On-Farm Internship 1	1
31804123	Math with Business Applications OR 10804123 Math with Business Applications	3
Term 4 (Spring 2024)		
10091105	Dairy Feeding Management	3
10091107	Dairy Employability and Management	3
10091109	On-Farm Internship 2	1
		7
		TOTAL 28

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your program counselor for details. The tuition and fees are approximate based on 2022-2023 rates and are subject to change prior to the start of the academic year.

REAL EXPERIENCE FOR THE REAL WORLD
2022-23

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 program, and will earn the Dairy Care 365 Certificate.

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. Dairy Beef Quality Assurance and the F.A.R.M. programs 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.

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 or 31804123 Math w 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.

MATH W BUSINESS APPS...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

**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 your 1st 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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
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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
31508303	Dental Materials OR 10508113 Dental Materials	2
		TOTAL 16

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
31508303	Dental Materials OR 10508113 Dental Materials	2

TOTAL 16

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your program counselor for details. The tuition and fees are approximate based on 2022-2023 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 admission 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: 31508303/10508113 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 ongoing 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, 31508303/10508113 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 students to handle and prepare dental materials such as intermediary cements and resin restorative materials, gypsum products, and impression materials. They also learn to clean removable appliances. COREQUISITE: 10508101 Dental Health Safety and CONDITION: 305082 Dental Assistant admission requirements met

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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

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
		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 2022-2023 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, 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

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

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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		
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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 2022-2023 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. PREREQ 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

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.

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 Principles 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

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

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 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. 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.
- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 program counselor for details.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
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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 2022-2023 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 and PREREQUISITE: 10307167 ECE: Health, Safety & Nutrition

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 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. COREQ: 10838105 Intro to Rdg & Study Skills or Rdg plcmnt asmnt equiv

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 Wrtg 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 our Industry 4.0 Electro-Mechanical Technology program.

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

- Maintenance Mechanic
- Electro-Mechanical Maintenance Technician
- Manufacturing Engineering Technology
- Industrial Electrician Apprenticeship
- Maintenance Technician Apprenticeship

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10620122	Industrial Wiring	2
10620155	Hydraulics and Pneumatics	3
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	Microcontroller Programming	1
10801195	Written Communications	3
		16
Term 2		
10620138	Programmable Controllers - Allen Bradley	3
10620141	Industrial Controls and Motors	3
10620110	AC Fundamentals	2
10806154	General Physics 1	4
10809198	Introduction to Psychology	3
10801196	Oral/Interpersonal Communication	3
		18
Term 3		
10620130	Mechanical Drive Systems	3
10620140	Programmable Controllers - Allen Bradley Advanced	3
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
10620151	Electrical Robotic Maintenance	2
10620185	Robotic Integration	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
		17
		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 2022-2023 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. PREREQ: 10620110 AC Fund OR 10620110 AC Fund, 10620141 Ind Cntrl and Motors, 10620140 PCLs Adv, 10620194 Touch Screen Apps, 10620147 Elec Devices/Transducers

COLLEGE TECHNICAL MATHEMATICS 1A...prepares student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis on the application of skills to technical problems. PREREQS: 10834110 Elem Algebra w Apps or 10804107 College Math or 31457318 Ind Mntc Trades Math or 31420320 Mach Tool Math or math plcmnt assmnt equiv

DC FUNDAMENTALS...prepares 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. COREQ: 10804113 College Tech Math 1A or 10804115 College Tech Math 1 or 10804198 Calculus 1 or 10804118 Interm Algebra w Apps

ELECTRICAL ROBOTIC MAINTENANCE...introduces students to causes of error codes and their repair with Fanuc R30iB 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 or 10620155 Hydraulics and Pneumatics COREQUISITE: 10620110 AC Fundamentals or 10660110 AC Fundamentals

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 or 10620155 Hydraulics and Pneumatics COREQUISITE: 10620110 AC Fundamentals or 10660110 AC Fundamentals

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 OR 10620110 AC Fundamentals

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.

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: 10804113 College Tech Math 1A

INDUSTRIAL APPLICATIONS...prepares the learner to configure, install, troubleshoot and maintain automation equipment in a "real world" setting. This course will include wiring 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 or 10620155 Hydraulics/Pneumatics, 10620194 Touch Screen Appl, 10620168 Robotics Intro, 10620193 NEC Codes, 10620198 Indust Networks and COREQUISITE: 10620195 Indust Trblshng

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, and COREQUISITE: 10620198 Ind Networks

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

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.

MICROCONTROLLER PROGRAMMING...introduces the student to concepts in basic digital programming, programming logic, electronic components, and Digital and Analog I/O.

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 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, Studio5000 software. This course is highly computer based. PREREQ: 10620138 Prog Cntrl/AB. This class qualifies for 48 hrs 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 IRvision on both Fanuc Robotic arm and Delta Robots. Once a student completes both Robotic Introduction and Robotics Advanced they will be well prepared to take the Fanuc Certification test by NOCTI. PREREQ: 10620168 Robotics Introduction. This class qualifies for 48 hrs of Continuing Education Units (CEUs) for Electricians.

ROBOTIC INTEGRATION...students will examine integration of Fanuc robots into industrial automation systems, involving Rockwell touch screens, PLCs, and industrial communication networks. Students required to complete an integration project using a Fanuc robotic cell. The project will tie everything learned during their time together – safety, machine integration, vision systems, machine applications for robotics, troubleshooting, and work documentation. COREQS: 10620171 Robotics Adv and 10620151 Electrical Robotic Maint

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. COREQUISITES: 10620140 Programmable Controls AB Advanced

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 Wrtg placement assmnt equiv and COREQ: 10838105 Intro to Rdg & Study Skills or Rdg placement assmnt equiv

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 and robotic equipment and systems.
- Maintain industrial and robotic equipment and systems.
- Troubleshoot industrial and robotic equipment and systems.
- Repair industrial and robotic 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 may 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 Calculus 1* (4 cr)	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	Safety and Welding Fundamentals	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
10462127	Bearings and Lubrication	2
10462117	Power Transmission	3
10462121	Troubleshooting and Machine Repair	3
10801196	Oral/Interpersonal Communication	3
		18
Term 3		
10620169	Robotic Mechanical Maintenance	1
10620124	Microcontroller Programming	1
10620168	Robotics Introduction	2
10620105	DC Fundamentals	2
10809198	Introduction to Psychology	3
10801195	Written Communication	3
		12
Term 4		
10620151	Electrical Robotic Maintenance	2
10620110	AC Fundamentals	2
10620164	Electromechanical Systems	2
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 2022-2023 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

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 Intro or 31462309 Industrial Maintenance Intro

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 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. COREQ: 10804113 Coll Tech Math 1A or 10804115 Coll Tech Math 1 or 10804198 Calculus 1 or 10804118 Intern Algebra w/ Apps

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 to Reading & Study Skills or Reading placement assmnt equiv or CONDITION: 610062 Agribusiness/Financial Basic prog adm met

ELECTRICAL ROBOTIC MAINTENANCE...introduces students to causes of error codes and their repair with Fanuc R30IB controller. Students will also be trained in DCS, Ethernet communication and I/O. PREEQUISITES: 10620169 Robotic Mechanical Maintenance, 10620122 Industrial Wiring and 10620168 Robotics Introduction

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 or 10620155 Hydraulics and Pneumatics COREQUISITE: 10620110 AC Fundamentals or 10660110 AC Fundamentals

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 or 10620110 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. COREQ: 10442100 Welding Intro or PREREQS: 31442346 Ind Maint Intro to Welding or 31442300 Welding 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: 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 PSYCHOLOGY...introduces 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 the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings. PREREQ: Rdg plcmnt assmnt equiv or COREQ: 10838105 Intro to Rdg & 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 & Msrmt or PREREQUISITE: 31462325 Maint Tools & Msrmt or CONDITION: 324571 Welding Fab

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

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.

MICROCONTROLLER PROGRAMMING...introduces the student to concepts in basic digital programming, programming logic, electronic components, and Digital and Analog I/O.

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: 10462107 Tools and Measurement or PREREQUISITE: 31462325 Maintenance Tools and Measurement or CONDITION: 324571 Welding Fab

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: 10462127 Bearings and Lubrication or PREREQUISITE: 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.

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. COREQUISITE: 10620155 Hydraulics & Pneumatics and 10462119 Power Transmission

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.

SAFETY AND WELDING FUNDAMENTALS...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 welded joints found in industry. The learner will process material using the two major hand-held cutting processes - Oxyfuel and PAC.

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. PREREQUISITE: 10620122 Industrial Wiring

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 30-531-3
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 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

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 2022-2023 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 your 1st Time Program Counseling/Registration 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

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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)
Prerequisite Courses		
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 40

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 program counselor for details. The tuition and fees are approximate based on 2022-2023 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 or WI EMR Certification 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 30531307 EMT Part 1 Lecture or WI EMR Certification and CONDITION: 305313 EMT or 315311 EMT-Paramedic program requirements 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 requirements met and PREREQUISITES: 30531307, 30531309, 10531105, 10531106 EMT Lecture/Lab Parts 1 and 2 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 depts, operating rooms, intensive care units, and/or rotations with lab or respiratory staff. COREQUISITE: 10531911 EMS Funds and CONDITION: 105311 Paramedic Tech or 105312 Fire Medic or 315311 EMT Paramedic prog admission reqs met

PARAMEDIC CLINICAL 2...provides student with 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 Tech or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531930 Paramedic Clin 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

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.

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 courses at the LTC Cleveland campus. 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:
 Whitney Boucher, Program Counselor
 920.693.1222 • whitney.boucher@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	Intro to Renewable Energy & Sustainability (<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 2022-2023 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 WDNR 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.

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 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:
 Whitney Boucher, Program Counselor
 920.693.1222 • whitney.boucher@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		
10506148	Environmental Chemical Analysis <i>(Held at NWTC)</i>	4
10506168	Intro to GIS <i>(Held at NWTC)</i>	2
10506161	Hydraulics and Hydrology <i>(Held at NWTC)</i>	3
10607105	AutoCAD & Civil 3D <i>(Held at NWTC)</i>	2
10804114	College Tech Math 1B <i>(Held at NWTC)</i>	2
10801195	Written Communications	3
		16
Term 3		
10506175	Wastewater Treatment-Liquid <i>(Held at NWTC)</i>	3
10620220	Pumps: Fluid Moving Devices <i>(Held at NWTC)</i>	1
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
10506176	Wastewater Treatment-Solids & Adv. <i>(Held at NWTC)</i>	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 64

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 2022-2023 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 Mtnc 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 the 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. PREREQUISITES: 10804113 Col Tech Math 1A, 10804107 Col Math, or 10834110 Elem Algebra or equivalent and COREQUISITES: 10838105 Intro Reading & Study Skills or equivalent

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

- Prepare for incident response and emergency operations.
- Integrate pathophysiological principles and assessment findings to provide appropriate patient care.
- 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 competencies listed for paramedic certification(s).
- Perform essential firefighting skills to reduce loss of life and property.

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 your 1st Time Program Counseling/Registration 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 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 (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

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 program counselor for details. The tuition and fees are approximate based on 2022-2023 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 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: 10503145 Firefighting Principles 1 and 10503146 Firefighting Principles 2

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 and operate fire department emergency apparatus. 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. THIS COURSE REQUIRES STUDENTS TO HAVE A CDL INSTRUCTIONAL PERMIT BY THE 3RD WEEK OF CLASS. CONDITION: 105312 Fire Medic prog reqs met

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 I. 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: 105311 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

Program Number 20-800-1 Liberal Arts - Associate of Arts • Four Terms

ABOUT THE PROGRAM

The Associate of Arts Degree Transfer Program serves students who intend to transfer to a four-year university. The program provides students with an excellent foundation to continue in higher education, with an emphasis in humanities and social sciences, focusing electives on furthering those content areas or on business education.

By completing the degree through LTC, students can transfer directly with junior status to Lakeland University or University of Wisconsin-Green Bay. Students will have enough flexibility for broad major exploration, regardless of a transfer destination. With an optional 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

- Develop critical thinking skills to pose questions, process information, and make decisions.
- Recognize the contributions of diverse cultures to the improvement of the human condition in a global society.
- Compute and analyze data using mathematical, statistical, and logical methods to solve problems.
- Use the scientific method within the natural science environment.
- Analyze and apply social science theories.
- Communicate by:
 - Listening actively.
 - Reading and comprehending written materials in the content area.
 - Researching, synthesizing, and organizing 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 your 1st 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

Financial Aid eligible pending HLC approval.

SPECIAL NOTE

- This program works in partnership with Lakeland University and University of Wisconsin-Green Bay. The receiving institution has final determination in the acceptance of credits.
- Students must earn a grade of C or better in each course for degree program completion.
- Credit for Prior Learning awarded for courses may be reviewed by receiving institutions.

CONTACT

LTC Admissions Advisor
920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10809198	Introduction to Psychology	3
10801198	Speech	3
10801196	Oral/Interpersonal Communication	3
10809172	Introduction to Diversity Studies	3
	ELECTIVE	3
		15
Term 2		
10801136	English Composition 1	3
10809166	Intro to Ethics: Theory and Apps	3
10809196	Introduction to Sociology	3
10804189	Introductory Statistics	3
	ELECTIVE	3
		15
Term 3		
20801223	English Composition 2	3
10809144	Macroeconomics	3
20802211	Spanish 1 OR 20802212 Spanish 2* OR 20809217 Race, Class, and Gender*	4/3
10806134	General Chemistry OR 10806114 General Biology	4
10546101	Stress Management: Fitness for Life	1
		14/15
Term 4		
20801204	Introduction to Literature	3
10806112	Principles of Sustainability	3
10809143	Microeconomics OR 10809122 Introduction to American Government	3
	ELECTIVES	6
		15
		TOTAL 60
ELECTIVES:		
10101111	Accounting 1	4
10102110	Introduction to Business	3
10196193	Human Resource Management	3
10104102	Principles of Marketing	3
10182131	Supply Chain Management	3
10804198	Calculus 1	4
20802212	Spanish 2	4
20809217	Race, Class, and Gender	3
INSTITUTION-SPECIFIC ELECTIVE OPTIONS:		
10809188	Developmental Psychology	3
	<i>Transfers to Lakeland University only</i>	
10806189	Basic Anatomy	3
	<i>Transfers to UW Green Bay only</i>	
*Spanish 2 or Race, Class, and Gender alternative if satisfied one year of world language in high school with "C" or better. Students taking Race, Class, and Gender will need an additional 1 credit of electives.		
<i>Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your program counselor for details. The tuition and fees are approximate based on 2022-2023 rates and are subject to change prior to the start of the academic year.</i>		

Term 1

Term 2

Term 3

Term 4

ENGLISH COMPOSITION 1...is designed for learners to develop knowledge and skills in all aspects of the writing process. Planning, organizing, writing, editing and revising are applied through a variety of activities. Students will analyze audience and purpose, use elements of research, and format documents using standard guidelines. Individuals will develop critical reading skills through analysis of various 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

ENGLISH COMPOSITION 2...advances composition skills, emphasizing well-reasoned argumentative writing. This course cultivates critical thinking and college-level discourse. Students conduct research using library and web-based sources, observations, and interviews, using a formal documentation style. Students will read and analyze professional non-fiction texts to understand how writers develop and present ideas through writing.

GENERAL CHEMISTRY...covers the 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. COREQUISITE: 78854773 Math Essentials for Chemistry and Reading enrollment requirements met or PREREQUISITES: Math and Reading enrollment 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 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 ETHICS: THEORY AND APPS...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 LITERATURE...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. PREREQUISITE: 10831103 Intro to College Writing or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

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

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. COREQUISITE: 10838105 Intro Rdg & Study Skills or Rdg placement assessment equivalent

MACROECONOMICS...is an introductory course. Basic social choices regarding economic systems, basic economic aggregates, fiscal policy, the banking system, monetary policy, and international trade are the principle topics discussed in the course. Balance is drawn between theory, analysis, and a critique of the institutions that characterize modern mixed-capitalist economies. Conflicting social goals, economic constraints, and environmental concerns provide the framework through which the macroeconomy is analyzed. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

MICROECONOMICS...examines behavior of individual decision makers, primarily consumers and firms. Topics include choices of how much to consume and to produce, the functioning of perfectly and imperfectly competitive markets, the conditions under which markets may fail, and arguments for and against government intervention. Student applies the fundamental tools of economics to real world problems. COREQUISITE: 10838105 Intro Rdg & Study Skills or Rdg 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

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

SPANISH 1...is for students beginning the study of Spanish. Emphasizes development of basic communicative skills through practice in listening, speaking, reading and writing. Stresses vocabulary and grammar to enhance students' ability to speak and write in Spanish. Study of customs and values provides an increased awareness of Spanish speaking cultures. On completion students are expected to participate in uncomplicated conversations on everyday topics.

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: FITNESS FOR LIFE...introduces strategies of stress management, including exercises, meditation, relaxation techniques, and mindfulness to develop resiliency, self-regulation, and coping skills.

Program Number 20-800-2 Liberal Arts - Associate of Science • Four Terms

ABOUT THE PROGRAM

The Associate of Science Degree Transfer Program serves students who intend to transfer to a four-year university. The program provides students with an excellent foundation to continue in higher education, with an emphasis in math and science, focusing electives on furthering those content areas or on business education.

By completing the degree through LTC, students can transfer directly with junior status to Lakeland University or University of Wisconsin-Green Bay. Students will have enough flexibility for broad major exploration, regardless of a transfer destination. With an optional pre-business focus, students receive the education necessary to be successful in business 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

- Develop critical thinking skills to pose questions, process information, and make decisions.
- Recognize the contributions of diverse cultures to the improvement of the human condition in a global society.
- Compute and analyze data using mathematical, statistical, and logical methods to solve problems.
- Use the scientific method within the natural science environment.
- Analyze and apply social science theories.
- Communicate by:
 - Listening actively.
 - Reading and comprehending written materials in the content area.
 - Researching, synthesizing, and organizing 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 your 1st 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

Financial Aid eligible pending HLC approval.

SPECIAL NOTE

- This program works in partnership with Lakeland University and University of Wisconsin-Green Bay. The receiving institution has final determination in the acceptance of credits.
- Students must earn a grade of C or better in each course for degree program completion.
- Credit for Prior Learning awarded for courses may be reviewed by receiving institutions.

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Catalog No.	Class Title	Credit(s)
Term 1		
10804189	Introductory Statistics	3
10806112	Principles of Sustainability	3
10809198	Introduction to Psychology	3
10809172	Introduction to Diversity Studies	3
	ELECTIVE	3
		15
Term 2		
10801136	English Composition 1	3
10804198	Calculus 1	4
10806114	General Biology	4
10809166	Intro to Ethics: Theory and Apps	3
10546101	Stress Management: Fitness for Life	1
		15
Term 3		
20801223	English Composition 2	3
10806134	General Chemistry	4
20802211	Spanish 1 OR 20802212 Spanish 2* OR 20809217 Race, Class and Gender*	4/3
	ELECTIVE	3
		14/13
Term 4		
10801198	Speech	3
10806154	General Physics 1	4
10809144	Macroeconomics OR 10809196 Introduction to Sociology	3
20801204	Introduction to Literature	3
	ELECTIVE	3
		16

TOTAL 60

ELECTIVES:

10101111	Accounting 1	4
10102110	Introduction to Business	3
10196193	Human Resource Management	3
10104102	Principles of Marketing	3
10182131	Supply Chain Management	3
10801196	Oral/Interpersonal Communication	3
10809122	Introduction to American Government	3
20802212	Spanish 2	4
20809217	Race, Class, and Gender	3

INSTITUTION-SPECIFIC ELECTIVE OPTIONS:

10804133	Math and Logic <i>Transfers to Lakeland University only</i>	3
10806189	Basic Anatomy <i>Transfers to UW Green Bay only</i>	3

*Spanish 2 or Race, Class, and Gender alternative if satisfied one year of world language in high school with "C" or better. Students taking Race, Class, and Gender will need an additional 1 credit of electives.

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your program counselor for details. The tuition and fees are approximate based on 2022-2023 rates and are subject to change prior to the start of the academic year.

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 requirements met

ENGLISH COMPOSITION 1...is designed for learners to develop knowledge and skills in all aspects of the writing process. Planning, organizing, writing, editing and revising are applied through a variety of activities. Students will analyze audience and purpose, use elements of research, and format documents using standard guidelines. Individuals will develop critical reading skills through analysis of various 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

ENGLISH COMPOSITION 2...advances composition skills, emphasizing well-reasoned argumentative writing. This course cultivates critical thinking and college-level discourse. Students conduct research using library and web-based sources, observations, and interviews, using a formal documentation style. Students will read and analyze professional non-fiction texts to understand how writers develop and present ideas through writing.

GENERAL BIOLOGY...introduces general biological concepts and principles. Emphasis is on cell structure and function, genetics, evolution, and taxonomical relationships. Consideration is also given to diversity among the various kingdoms. COREQUISITE: 10838105 Intro to Reading and Study Skills or CONDITION: Reading placement assessment equivalent

GENERAL CHEMISTRY...covers the 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. COREQUISITE: 78854773 Math Essentials for Chemistry and Reading enrollment requirements met or PREREQUISITES: Math and Reading enrollment requirements met

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.

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 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 ETHICS: THEORY AND APPS...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 LITERATURE...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. PREREQUISITE: 10831103 Intro to College Writing or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

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. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

MACROECONOMICS...is an introductory course. Basic social choices regarding economic systems, basic economic aggregates, fiscal policy, the banking system, monetary policy, and international trade are the principle topics discussed in the course. Balance is drawn between theory, analysis, and a critique of the institutions that characterize modern mixed-capitalist economies. Conflicting social goals, economic constraints, and environmental concerns provide the framework through which the macroeconomy is analyzed. 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

SPANISH 1...is for students beginning the study of Spanish. Emphasizes development of basic communicative skills through practice in listening, speaking, reading and writing. Stresses vocabulary and grammar to enhance students' ability to speak and write in Spanish. Study of customs and values provides an increased awareness of Spanish speaking cultures. On completion students are expected to participate in uncomplicated conversations on everyday topics.

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: FITNESS FOR LIFE...introduces strategies of stress management, including exercises, meditation, relaxation techniques, and mindfulness to develop resiliency, self-regulation, and coping skills.

Program Number 10-201-2
Associate Degree in Applied Science • Four Terms

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

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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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	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	Print Design and Publication	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 2022-2023 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...will explore the latest trends in Web design and development. Students will apply advanced techniques to create progressive and contemporary websites. 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. PREREQ: 10104136 Retail Marketing/Ecommerce 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 10201173 Web Dev Advanced and 102012 Graphic and Web 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 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.

PRINT DESIGN AND PUBLICATION...will focus on creating and designing print material using desktop publishing software. The emphasis is on design and preparing files for print. A variety of documents, including brochures, annual reports, flyers, magazine articles, and multipage documents are created. Students also explore packaging design fundamentals using dielines and folds. 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

Health Information professionals (HIM) are highly trained in the latest information management technology applications. They have an understanding of healthcare workflow processes, from large hospital systems to small physician practices, and are vital to the daily operation management of health information and electronic health records (EHR). They ensure a patient's health information is complete, accurate, and protected. The Bureau of Labor Statistics cites HIM as one of the fastest growing occupations in the US.

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.
- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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).

This program is partially Competency-Based. Competency-Based Education (CBE) is learning at your own pace by mastering competencies through a combination of online work and in person demonstration of skills. Competency-Based courses are noted with an asterisk (*).

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10501115	Medical Terminology Part 1*	1
10501116	Medical Terminology Part 2*	1
10501117	Medical Terminology Part 3*	1
10103191	Word - Level 1	1
10501107	Digital Literacy for Healthcare	2
10530182	Human Diseases for Health Professions	3
10530141	Introduction to the Healthcare System*	1
10530142	Introduction to the Medical Record*	1
10530143	Medical Record Processes*	1
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
10530133	ICD Diagnosis Coding Part 1*	1
10530134	ICD Diagnosis Coding Part 2*	1
10530135	ICD Diagnosis Coding Part 3*	1
10103101	Access - Level 1	1
		16
Term 3		
10530130	CPT Coding Part 1*	1
10530131	CPT Coding Part 2*	1
10530132	CPT Coding Part 3*	1
10809198	Introduction to Psychology	3
10530136	Introduction to PCS Coding*	1
10530137	Application of PCS Coding *	1
10530147	HIM/Coding Practicum Part 1*	1
10530148	HIM/Coding Practicum Part 2*	1
10801196	Oral/Interpersonal Communication	3
10809196	Introduction to Sociology	3
		16
Term 4		
10530138	Healthcare Revenue Mgmt: Payment Methodologies*	1
10530139	Healthcare Revenue Mgmt: Revenue Compliance*	1
10530140	Healthcare Revenue Mgmt: Revenue Cycle*	1
10530193	Healthcare Quality Management	2
10530177	Healthcare Stats & Research	2
10530194	HIM Organizational Resources	2
10530144	3M Coding System*	1
10530145	Find a Code Coding System*	1
10530146	Nuance Coding System*	1
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 2022-2023 rates and are subject to change prior to the start of the academic year.

3M CODING SYSTEM...prepares the learner to utilize 3M Coding System to complete coding scenarios. COREQUISITES: 10530131 CPT Coding Part 2, 10530132 CPT Coding Part 3, 10530134 ICD Diagnosis Coding Part 2, 10530135 ICD Diagnosis Coding Part 3, 10530137 Application of PCS Coding

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.

APPLICATION OF PCS CODING...prepares the learner to assign ICD-PCS procedure codes as they apply to all of the body systems and miscellaneous procedures. COREQUISITE: 10530136 Introduction to PCS Coding

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

CPT CODING PART 1...prepares the learner to apply the rules of CPT Medical Coding as they relate to the format and conventions, evaluation and management, medicine, and ancillary services (lab/x-ray) and HCSPS.

CPT CODING PART 2...prepares the learner to apply the rules of CPT Medical Coding as they relate to digestive, urinary, reproductive, neurologic, and sensory systems. COREQUISITE: 10530130 CPT Coding Part 1

CPT CODING PART 3...prepares the learner to apply the rules of CPT Medical Coding as they relate to the integumentary, musculoskeletal, circulator, respiratory systems, and anesthesia. COREQUISITE: 10530131 CPT Coding Part 2

DIGITAL LITERACY FOR HEALTHCARE...focuses on 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.

FIND A CODE CODING SYSTEM...prepares the learner to utilize Find a Code Coding System to complete coding scenarios. COREQUISITE: 10530144 3M Coding System

HC REV MANAGEMENT: PAYMENT METHODOLOGIES...prepares the learner to compare government and non-government payers and payment methodologies.

HC REV MANAGEMENT: REVENUE COMPLIANCE...prepares the learner to apply various payment methodologies while ensuring compliance with regulations and future trends. COREQUISITE: 10530138 HC Revenue Mgmt Payment Methodologies

HC REV MANAGEMENT: REVENUE CYCLE...prepares learner to conduct activities of and manage the revenue cycle. COREQ: 10530139 HC Revenue Mgmt Revenue Compliance

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 Foundations of HIM or 10530143 Medical Record Processes

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 or 10530143 Medical Record Processes

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 or 10530143 Medical Record Processes

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 or 10530143 Medical Record Processes

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 or 10530148 HIM/Coding Practicum Part 2 and 10530162 Foundations of HIM or 10530143 Medical Record Processes and CONDITION: 105304 Health Information Management program requirements met

HIM/CODING PRACTICUM PART 1...prepares learner to evaluate the Patient Registration, Medical Coding, and Medical Claims process in a clinical setting. COREQS: 10530131 CPT Coding Pt 2, 10530132 CPT Coding Pt 3, 10530134 ICD Diagnosis Coding Pt 2, 10530135 ICD Diagnosis Coding Pt 3, 10530137 Application of PCS Coding

HIM/CODING PRACTICUM PART 2...prepares the learner to complete a Resume Preparation, Interview Process and Portfolio Project. COREQUISITES: 10530131 CPT Coding Part 2, 10530132 CPT Coding Part 3, 10530134 ICD Diagnosis Coding Part 2, 10530135 ICD Diagnosis Coding Part 3, 10530137 Application of PCS Coding

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 or 10501117 Med Term-Part 3

ICD DIAGNOSIS CODING PART 1...prepares the learner to examine the rules of ICD classification systems and assign ICD diagnosis codes to infectious, endocrine, metabolic, digestive, respiratory systems, injuries, poisonings, and signs/symptoms.

ICD DIAGNOSIS CODING PART 2...prepares the learner to assign ICD diagnosis codes as they relate to neoplasms, nervous, eye, ear, genitourinary, pregnancy, perinatal, and congenital disorders. COREQUISITE: 10530133 ICD Diagnosis Coding Part 1

ICD DIAGNOSIS CODING PART 3...prepares learner to assign ICD diagnosis codes as they relate to blood, circulatory, behavioral/mental health, skin, musculoskeletal diseases, and miscellaneous factors influencing health care. COREQUISITE: 10530133 ICD Diagnosis Coding Part 1

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 or 10530143 Medical Record Processes 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 Rdg & Study Skills or Reading placement assessment equiv

INTRODUCTION TO PCS CODING...prepares the learner to examine the rules of the ICD-PCS procedure coding classification system and assign codes that describe the root operation of the PCS classification system.

INTRODUCTION TO PSYCHOLOGY...introduces 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, and vocational settings. PREREQ: Rdg plcmnt assmnt equiv or COREQ: 10838105 Intro to Rdg & 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 THE HC SYSTEM...prepares the learner to evaluate various influences on the healthcare system such as external forces, types of organizations, and roles and responsibilities of healthcare providers.

INTRODUCTION TO THE MEDICAL RECORD...prepares the learner to demonstrate professional ethical standards while examining data collection tools and information governance. COREQUISITE: 10530141 Intro to the Healthcare System

MEDICAL RECORDS PROCESSES...prepares the learner to perform medical record processes and examine data sources while maintaining quality standards. COREQUISITE: 10530142 Intro to the Medical Record

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.

MEDICAL TERMINOLOGY - PART 2...apply the rules of Medical Language as they relate to the circulatory, respiratory, and immunologic systems. COREQUISITE: 10501115 Medical Terminology - Part 1

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

NUANCE CODING SYSTEM...prepares the learner to utilize Nuance Coding system to complete coding scenarios. COREQUISITE: 10530145 Find a Code Coding System

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 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. PREREQ: 10831103 Intro to College Wrtg or Wrtg plcmnt assmnt equiv and COREQ: 10838105 Intro to Rdg & Study Skills or Rdg plcmnt assmnt equiv

ABOUT THE PROGRAM

The High School Equivalency Diploma (HSED) 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 I
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.
- Incorporate employment law into business 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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	Power Point - Level 1	1
		15
Term 3		
10804123	Math with Business Applications	3
10116109	Career Planning & Networking	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 2022-2023 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

CAREER PLANNING & NETWORKING...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.

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. Learners will also learn the proper way to conduct a workplace investigation.

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: 10116109 Career Planning & Networking and CONDITION: Verification of eligibility by instructor coord of Hum Res prog (student must have at least 30 credits of Hum Res prog 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

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.

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.

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 coord of Hum Res prog (student must have at least 30 credits of Hum Res prog 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.
- Incorporate employment law into business practices.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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ADMISSIONS AND FIRST SEMESTER ENROLLMENT STEPS

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FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 NOTE

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CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2022)		
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 2023)		
10101106	Payroll Applications	2
10196191	Supervision	3
10809198	Introduction to Psychology	3
		8
Term 3 (Summer 2023)		
10801195	Written Communication	3
10116103	Training for Organizations	3
		6
Term 4 (Fall 2023)		
10116105	Recruitment and Retention of Employees	3
10116127	HR Technology	2
10116109	Career Planning & Networking	1
		6
Term 5 (Spring 2024)		
10804123	Math with Business Applications	3
10116125	Human Resource Employment Law	3
10809172	Introduction to Diversity Studies	3
		9
Term 6 (Summer 2024)		
10801196	Oral Interpersonal Communication OR 10801198 Speech (3 cr)	3
10103161	Power Point - Level 1	1
		4
Term 7 (Fall 2024)		
10116107	Labor Relations and Negotiations	2
10116102	Compensation & Benefits Administration	3
10101155	Accounting for Professionals	3
		8
Term 8 (Spring 2025)		
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 2025)		
10809195	Economics	3
		3
		TOTAL 60

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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.
- Incorporate employment law into business 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

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10103121	Excel - Level 1	1
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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 2022-2023 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. Learners will also learn the proper way to conduct a workplace investigation.

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.

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 to 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 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 your 1st 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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
10804107	College Mathematics	3
10442100	Welding Introduction	1
10410103	OSHA 30 for Construction	2
		12
January Term		
10601101	HVAC Foundations	1
10601102	HVAC Duct Systems	1
		2
Term 2		
10601103	HVAC Piping-Applications	1
10601104	HVAC Electrical-Theory	1
10601105	HVAC Electrical-Applications	1
10601106	HVAC Heating Systems-Theory	1
10601107	HVAC Heating Systems-Applications	1
10601108	HVAC Heating Systems-Startup/ Troubleshoot	1
10601111	HVAC Airflow-Principles	1
10601112	HVAC Air Conditioning-Theory	1
10601113	HVAC Air Conditioning-Applications	1
10601114	HVAC Air Conditioning Startup/ Troubleshoot	1
10601123	HVAC Installations-Introduction	2
10601126	HVAC Installations-Troubleshoot/Service	1
10601127	HVAC Hydronic Heating Systems-Theory	1
10601128	HVAC Hydronic Heating Systems- Applications	1
		15
		TOTAL 29

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your program counselor for details. The tuition and fees are approximate based on 2022-2023 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 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

HVAC AIR CONDITIONING-APPLICATIONS...allows the learner to apply their knowledge and air conditioning theory in a laboratory setting on actual air conditioning and refrigeration systems. Students will gain hands-on experience identifying and operating various air conditioning and refrigeration systems. COREQUISITE: 10601112 HVAC Air Conditioning – Theory

HVAC AIR CONDITIONING-STARTUP/TROUBLESHOOT...permits the learner to commission a residential air conditioning system and apply their previous knowledge and skill to troubleshoot common cooling system faults as well as replace frequently damaged components. COREQUISITE: 10601113 Air Conditioning – Apps

HVAC AIR CONDITIONING-THEORY...explains the fundamental operating concepts of the refrigeration cycle. Common systems, components, and refrigerants will be discussed and the association between temperature and pressure of cooling systems will be explored.

HVAC AIRFLOW-PRINCIPLES...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.

HVAC DUCT SYSTEMS...introduces the learner to sheet metal layout and duct fabrication. Students will gain experience in the sheet metal fabrication lab and hone their skills in sheet metal HVAC fabrication. Alternative ducting materials such as fiberglass and fabric ducting will also be discussed.

HVAC ELECTRICAL-APPLICATIONS...allows learners to apply the concepts learned in their Electrical Theory class. Learners will use multimeters to gain basic parameters and troubleshoot various HVAC electrical components. COREQUISITE: 10601104 HVAC Electrical – Theory

HVAC ELECTRICAL-THEORY...presents to the learner the basic electrical theory of Alternating and Direct Current. Students will study transformers, motors, and other HVAC specific electrical components.

HVAC FOUNDATIONS...provides students with the foundations of HVAC. Students will learn about the HVAC industry, the fundamentals of HVAC installation and service techniques, basic tools and, as well as trade mathematics. Professional licensure, certification, and various HVAC career paths will also be discussed.

HVAC HEATING SYSTEMS-APPLICATIONS...allows hands-on application of the knowledge learned in the heating systems theory class. Students will be identifying the various heating system components and differentiating the various heating systems. COREQUISITE: 10601106 HVAC Heating Systems – Theory

HVAC HEATING SYSTEMS-STARTUP/TROUBLESHOOT...permits the learner to commission various heating systems and apply their previous knowledge and skill to troubleshoot common heating system faults as well as replace frequently damaged components. COREQUISITE: 10601107 HVAC Heating Systems-Applications

HVAC HEATING SYSTEMS-THEORY...focuses on the types of heating systems, forms of heat transfer and how they relate to the various HVAC heating systems. The basic operations of gas, oil, electric, and hydronic heating systems will be presented. COREQUISITES: 10601101 HVAC Foundations, 10601102 HVAC Duct Systems, 10601103 HVAC Piping Applications or PREREQUISITE: 10601110 Mechanical Service Apps

HVAC HYDRONIC HEATING SYSTEMS-APPLICATIONS...continues the student's hydronic heating education to include practical application with in-floor heating systems, radiators, boilers, and other common hydronic systems and components. COREQUISITE: 10601127 HVAC Hydronic Heating Systems – Theory

HVAC HYDRONIC HEATING-THEORY...introduces the learner to hydronic heating systems, where fluid (usually water) is used to transfer heat. The various heating sources (gas oil, or electricity) for heating the water boiler will be presented and discussed.

HVAC INSTALLATIONS-INTRODUCTION...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 HVAC systems as well as troubleshooting and servicing systems.

HVAC INSTALLATIONS-TROUBLESHOOT/SERVICE...provides a capstone experience for HVAC students to challenge themselves in troubleshooting common heating and cooling system errors and faults as well as in identifying and replacing faulty system components. COREQUISITE: 10601123 HVAC Installations – Introduction

HVAC PIPING APPLICATIONS...presents to learners the copper, PVC, flexible, and black iron piping practices. Students will learn the skills to measure, cut, form, and connect various HVAC piping materials. This course will include extensive practice with threading, press fitting, brazing, and gluing practices for piping applications.

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.

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 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 2022-2023 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. PLC applications and assessment projects are planned. 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 2022-2023 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 • 10 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—get started with the always-evolving career in electro-mechanical technology.

PROGRAM OUTCOMES

- Perform work safely.
- Troubleshoot basic electrical and mechanical systems and devices.
- Repair basic electrical and mechanical 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 not eligible for financial aid. Talk with your Admissions Advisor about your payment options.

RELATED PROGRAMS

- Certificate embedded in the Electro-Mechanical Automation Technology Associate degree
- Maintenance Mechanic
- Electro-Mechanical Maintenance Technician
- Manufacturing Engineering Technology
- Industrial Electrician Apprenticeship
- Maintenance Technician Apprenticeship

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
COURSES		
10620122	Industrial Wiring	2
10620155	Hydraulics and Pneumatics	3
10620169	Robotic Mechanical Maintenance	1
10804113	College Technical Math 1A	3
10462107	Tools and Measurement	1

TOTAL 10

*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 2022-2023 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 Mtnc Trades Math or 31420320 Machine Tool Math or math placement assessment equivalent

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: 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.

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.

Program Number 61-442-2
Certificate • 10 credits

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.
- 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.

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
COURSES		
10442100	Safety and Welding Fundamentals	1
31442310	SMAW-Flat Position (Stick)	1
31442350	Metal Manufacturing Processes	1
31442351	Precision Measurement and Layout	1
31442320	GMAW-Flat Position (Wire/Mig)	1
31442322	GMAW-Horizontal Position (Wire/Mig)	1
31442324	Flux Core Arc-Flat/Horizontal Position	1
31442385	Weld Print 1 Print Fundamentals	1
31442308	Weld Examination	1
31442382	Welding Math Basics	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 2022-2023 rates and are subject to change prior to the start of the academic year.

FLUX CORE ARC-FLAT/HORIZONTAL (WIRE/MIG)...will have learners demonstrate safe shop working practices while welding fillet welds in flat and horizontal positions using the FCAW welding process. Learners will perform single bevel groove welds and V-groove welds in flat and horizontal positions using the FCAW, and will perform groove welds with and without backing material. COREQUISITE: 31442322 GMAW-Horizontal Position (Wire/Mig)

GMAW-FLAT POSITION (WIRE/MIG)...prepares the learner to demonstrate safe shop work practices; learners will perform set up and shut down of GMAW and MCAW equipment; weld mild steel using the GMAW and MCAW welding processes, and weld in the flat position using the GMAW process. PREREQUISITE: 31442300 Welding Intro or COREQUISITES: 10442100 Safety and Welding Fundamentals or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

GMAW-HORIZONTAL POSITION (WIRE/MIG)...will use safe shop work practices while producing 3/4" fillet welds using the GMAW and MCAW welding processes and 1/4" fillet welds while welding tube to plate in the horizontal position. Learners will produce groove weldments in flat and horizontal positions, using .035 hard wire, .052 Metal Core and Metal electrode wires. COREQUISITE: 31442320 GMAW-Flat Position (Wire/Mig)

METAL MANUFACTURING PROCESSES...prepares the learner to communicate using proper terminology that is used in industry as it pertains to the use of hand/power tools and measurement. The learner will demonstrate good safety practices while in a work place environment, demonstrate the proper use of hand and power tools. The learner will complete steel fabrications using hand/power tools and classify and install industrial fasteners. The learner will be introduced to material handling operations by using the overhead crane and fork lift. COREQUISITE: 31442351 Precisions Measurement and Layout and 10442100 Safety and Welding Fundamentals or 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

PRECISION MEASUREMENT AND LAYOUT...prepares the learner to communicate proper measurement terminology that is used in industry; will develop safety practices for the workplace while using measuring equipment; 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 and analyze a variety of steel fabrications while using measuring equipment.

SAFETY AND WELDING FUNDAMENTALS...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.

SMAW-FLAT POSITION (STICK)...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. PREREQUISITE: 31442300 Welding Intro or COREQUISITES: 10442100 Safety and Welding Fundamentals or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

WELD EXAMINATION...is a study of the basic principles of weld quality. Emphasis will be on identifying and testing ferrous and non-ferrous materials. Learners will be introduced to hardening of ferrous material using the Oxyfuel process. The learner will be introduced to the inspection process of welds through NDT (non-destructive testing) and DT (destructive testing).

WELD PRINT 1 PRINT FUNDAMENTALS...prepares the learner to interpret manufacturing drawing by applying orthographic projection principles, by recognizing types of lines used in print reading. How manufacturing prints are dimensioned. Develop print reading strategies by locating the bill of materials, title blocks, and revision blocks. Learners will be introduced to the AWS welding symbols and how they relate to manufacturing drawing.

WELDING MATH BASICS...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 two math credits need for the Welding program.

Program Number 61-420-1
Certificate • 10 credits

ABOUT THE PROGRAM

Learn CNC (computer numerical control) 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 basic industrial/engineering drawings.
- Apply precision measuring methods to part inspection.
- Perform basic machine tool equipment set-up and operation
- Perform programming, set-up 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 your First Time Program Counseling/Registration Session with your assigned Program Counselor/Success Coach to plan your first semester schedule, review your entire plan of study and discuss the results of the Student Success Questionnaire.

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 not eligible for financial aid. Talk with your Admissions Advisor about payment options.

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.

This program offers flexible start dates throughout the year. Students can attend classes anytime Monday through Thursday from 8am-8pm.

RELATED PROGRAMS

- Certificate is embedded in the Machine Tool Operation and CNC Technician Technical Diplomas
- Machinist Apprenticeship
- Tool & Die Apprenticeship
- Millwright Apprenticeship

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@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
31420342	Lathe-Hole Producing and Threading	1
31420350	Mill-Squaring	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 2022-2023 rates and are subject to change prior to the start of the academic year.

DRILLS AND SAWS...learner will demonstrate use of sawing and drilling machines safely. COREQUISITE: 31420310 Shop Tools and Fasteners or PREREQUISITES: 31420394 Industrial Maintenance Machine Tool Intro or 10420194 Machine Tool Intro or CONDITION: 324571 Welding FabTech enrollment requirements met

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 Technician, 104622 Electro-Mech Maintenance Technician, or 314622 Maintenance Mechanic program requirements met

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 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 Industrial Maintenance Machine Tool Lathes and Mills or 31420348 Machine Tool Mills 1 for Fabricators

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, 104622 Electro-Mech Maintenance Technician, or 314622 Maintenance Mechanic program requirements met

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 basic industrial equipment.
- Communicate technical information.

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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 may need to supply their own safety glasses and welding gloves.

RELATED PROGRAMS

- Certificate embedded in the Maintenance Mechanic and Electro-Mechanical Maintenance Technician Technical Diplomas
- Electro-Mechanical Automation Technology
- Maintenance Mechanic/Millwright Journeyworker

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	3
	Calculus 1* (4 cr)	
10462107	Tools and Measurement	1
10442100	Safety and Welding Fundamentals	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 2022-2023 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 Mtrc 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.

SAFETY AND WELDING FUNDAMENTALS...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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 2022-2023 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 usersupport, 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 10-151-2
 Associate Degree in Applied Science • Four Terms**

ABOUT THE PROGRAM

Cybersecurity Specialists implement, maintain, and audit the security of an organization's computer networks and systems. Learn to protect data confidentiality, integrity and availability using current real-world technology, processes, and procedures. Emphasis is placed on vigilant security awareness, threat detection and implementing appropriate incident responses.

PROGRAM OUTCOMES

- Identify security strategies.
- Implement secure infrastructures.
- Conduct security testing.
- Analyze security data.
- Mitigate risk.
- Develop security documentation.

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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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
10801198	Speech OR 10801196 Oral/Interpersonal Communication	3
10809196	Introduction to Sociology OR 10809122 Introduction to American Government OR 10809166 Introduction to Ethics	3
		15
Term 3		
10809198	Introduction to Psychology	3
10150125	Linux	2
10150129	Virtualization	2
10150163	Networking 3	3
10151104	Intrusion Detection	3
10151137	Incident Response	3
		16
Term 4		
10151164	Penetration Testing	3
10151133	Network Forensics and Threat Hunting	3
10150165	Networking 4	3
10150179	Network Security	3
10151115	Cybersecurity Capstone	2
		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 2022-2023 rates and are subject to change prior to the start of the academic year.

CYBERSECURITY CAPSTONE...enhances the student's ability operate in the cybersecurity field. Participants will collect and correlate digital forensics information, and showcase their cybersecurity knowledge in this independent, self-paced, project-based capstone course. PREREQUISITE: 10150163 Networking 3

INCIDENT RESPONSE...introduces the student to the tools and techniques commonly used for detecting threats to an enterprise infrastructure. Learners will implement strategies for documenting and reporting detected events based on industry standard compliance frameworks. PREREQUISITE: 10150176 Networking 2

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

INTRUSION DETECTION...introduces the learner to the most commonly used tools organizations use to detect and prevent network intrusions. Participants will get hands-on experience implementing and configuring intrusion detection and intrusion prevention systems (IDS/IPS). PREREQUISITE: 10150176 Networking 2

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

NETWORK FORENSICS AND THREAT HUNTING...provides the learner with a first look at some of the tools, techniques, and procedures used for network-based forensics and threat hunting. Participants will collect and correlate current and historic network data to create a profile of an attack for post-incident investigations and reporting or proactive threat hunting. PREREQUISITE: 10150163 Networking 3

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

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.

PENETRATION TESTING...provides the learner with an overview of the tools and techniques commonly used for penetration testing. Through hands-on exercises, students will learn the proper selection and application of a given tool for the intended task. Also included are strategies for documenting and reporting on the outcome of the test. Students will demonstrate the ability to plan and execute a basic network security audit in a simulated business environment. PREREQUISITE: 10150163 Networking 3

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

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

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

**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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

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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 2022-2023 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 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.
- 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.

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 • Admissions@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 2022-2023 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

**Program Number 10-152-7
 Associate Degree in Applied Science • Four Terms**
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 documentation.
- 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

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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 and 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 2022-2023 rates and are subject to change prior to the start of the academic year.

ADVANCEMENTS IN WEB AND DEVELOPMENT...will explore the latest trends in Web design and development. Students will apply advanced techniques to create progressive and contemporary websites. PREREQUISITE: 10152196 Web Dev 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. PREREQ 10104136 Retail Marketing/Ecommerce 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 10201173 Web Dev Advanced and 102012 Graphic and Web req 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 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 plcmnt assmnt equiv and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Rdg plcmnt assmnt equiv

MOBILE DEVICE DEVELOPMENT 1...introduces students to using common development tools, using GitHub, using modern JavaScript, using JavaScript array prototype methods, using typescript, using common UI elements for a mobile app, testing code, and analyzing the pros and cons of the available methods of mobile app development. PREREQUISITES: 10152187 Web Development 3 and 10152199 Web Development 2 and 10201118 Advancements in Web and Development.

MOBILE DEVICE DEVELOPMENT 2...introduces students to advanced mobile development topics including using components, creating web components, creating Angular components, creating JSX, creating React components, using application state in a React app, adding routing to a React app, implementing styling in a mobile app, and binding dynamic data to React components. 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 10152109 Object-Oriented Programming 1 and COREQUISITE: 10152106 Integrated Web Concepts 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

**Program Number 30-152-4
 Technical Diploma • Two Terms**
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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

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 2022-2023 rates and are subject to change prior to the start of the academic year.

ADVANCEMENTS IN WEB AND DEVELOPMENT...will explore the latest trends in Web design and development. Students will apply advanced techniques to create progressive and contemporary websites. PREREQUISITE: 10152196 Web Dev 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 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 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.
- 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

• \$143.45 per credit tuition (WI resident) plus \$8.61 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, Registrar
920.693.1733 • chou.yang@gotoltc.edu

General Education 15 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

Career Clusters of Emphasis:

Agriculture, Food & Natural Resources
Arts, AV Technology & Communications
Business, Management & Administration
Education & Training
Information Technology
Law, Public Safety & Security
Manufacturing
Marketing, Sales & Service
Science, Technology, Engineering & Math

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 2022-2023 rates and are subject to change prior to the start of the academic year.

Program Number 10-110-1
Associate Degree in Applied Science • Four Terms
ABOUT THE PROGRAM

The program of study for the Associate Degree in Legal Studies/Paralegal is ABA (American Bar Association) 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 your 1st 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 (Fall)		
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 (Spring)		
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 (Fall)		
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 (Spring)		
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 program counselor for details. The tuition and fees are approximate based on 2022-2023 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 31-420-1 Technical Diploma • Two Terms

ABOUT THE PROGRAM

Learn CNC (computer numerical control) 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 set-up and operation
- Perform programming, set-up 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 your First Time Program Counseling/Registration Session with your assigned Program Counselor/Success Coach 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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.

This program offers flexible start dates throughout the year. Students can attend classes anytime Monday through Thursday from 8am-8pm.

RELATED PROGRAMS

- CNC Technician Technical Diploma
- Machinist Apprenticeship
- Tool & Die Apprenticeship
- Millwright 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 2D 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 2022-2023 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 2D USING CAM...prepares the learner to create lathe toolpaths using CAM software. COREQUISITE: 31420342 Lathe-Hole Producing and Threading

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 Industrial Maintenance Machine Tool 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-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 Industrial Maintenance 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 or 104622 Electro-Mech Maintenance Technician or 314622 Maintenance Mechanic

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 Industrial Maintenance Machine Tool Lathes and Mills or 31420348 Machine Tool Mills 1 for Fabricators

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 or 104622 Electro-Mech Maintenance Technician or 314622 Maintenance Mechanic

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 2022-2023 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 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 MMMP	1
50423713	Precision Measurements for MMMP	0.5
50423717	Electricity for MMMP	0.5
		2
Term 2		
50423711	Print Reading for MMMP	1
50423740	Mechanical Fastening and Safety for MMMP	1
		2
Term 3		
50423741	Equipment Installation for MMMP	1
50423714	Rigging for MMMP	1
		2
Term 4		
50423738	Sheet Metal and Structural Steel for MMMP	0.75
50423716	Metallurgy for MMMP	0.5
50423715	Welding for MMMP	0.75
		2
Term 5		
50423742	Power Transmission Principles for MMMP	0.5
50423743	Power Transmission Drives for MMMP	1.5
		2
Term 6		
50423731	Couplings and Alignment for MMMP	0.5
50423744	Bearings and Lubrication for MMMP	1
50423724	Preventative and Predictive Maintenance for MMMP	0.5
		2
Term 7		
50423720	Pipefitting and Valves for MMMP	0.75
50423722	Packings, Seals, and Gaskets for MMMP	0.5
50423732	Pumps for MMMP	0.75
		2
Term 8		
50423721	Hydraulic Systems for MMMP	1
50423745	Pneumatic Systems for MMMP	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 2022-2023 rates and are subject to change prior to the start of the academic year.

BEARINGS AND LUBRICATION FOR MMMP...examines bearing types and applications, and compares various equipment bearings. Apprentices will develop skills related to bearing inspection, selection, removal, mounting, and diagnosing bearing failures. Apprentices will also examine the types, principles, and applications of bearing and machine lubricants and lubricating systems. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

COUPLINGS AND ALIGNMENT FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

ELECTRICITY FOR MMMP...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 MMMP...provides knowledge regarding common practice procedures for the layout of equipment installations, planning for moving equipment, and methods for setting and leveling equipment. This class will also examine the principles of concrete as well as anchoring of equipment in concrete. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

HYDRAULIC SYSTEMS FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

MATH FOR MMMP...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 FASTENING AND SAFETY FOR MMMP...examines safety as it relates to hand and power tools and explores the theory and application of torque in the MMMP Trades. Apprentices will compare fasteners and their uses, analyze fastener failures, and install various mechanical fasteners. In addition, apprentices will compare adhesives and sealant types and applications, develop skills related to applying them in repair applications, interpreting SDS information, and handling hazardous materials. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

METALLURGY FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

PACKINGS, SEALS, AND GASKETS FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

PIPEFITTING AND VALVES FOR MMMP...introduces apprentices to principles, application and types of pipe, materials, fittings, tubing, and valves, and develops skills related to layout, installation, and maintenance. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

PNEUMATIC SYSTEMS FOR MMMP...provides instruction to apprentices concerning many aspects of inspecting, servicing, and troubleshooting pneumatic systems and components. The concepts of compressed air systems and vacuum systems will also be evaluated. Apprentices will learn safety related issues and be taught proper safety procedures for working with pneumatic systems and components and examine preventive maintenance techniques commonly used on the job. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

POWER TRANSMISSION DRIVES FOR MMMP...examines drive transmission systems and their applications, including gear drives, chain drives, belt drives, and conveyor systems. Apprentices will compare different types of gear drive systems and components, chain drive systems and components, belt drive systems and components, as well as different types of conveyors and their related components. Apprentices will develop skills necessary for inspecting, troubleshooting, removing, selecting, and installing components used in the various mechanical drive transmission systems. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

POWER TRANSMISSION PRINCIPLES FOR MMMP...examines the physics and principles of simple machines and how those principles are used in the development of the skills necessary for inspecting mechanical power transmission systems and troubleshooting mechanical drive systems. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

PRECISION MEASUREMENTS FOR MMMP...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...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

PRINT READING FOR MMMP...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 MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

RIGGING FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

SHEET METAL AND STRUCTURAL STEEL FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

WELDING FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

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.
- Maintain industrial equipment.
- Troubleshoot industrial equipment.
- Repair industrial equipment.
- 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 may need to supply their own safety glasses and welding gloves.

RELATED PROGRAMS

- Millwright Apprenticeship
- Electro-Mechanical Maintenance Technician
- 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	Safety and Welding Fundamentals	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
10462127	Bearings and Lubrication	2
10462117	Power Transmission	3
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 2022-2023 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 Intro or 31462309 Industrial Maintenance Intro

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 Mtnr 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 Industrial Maintenance Intro to Welding or 31442300 Welding 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: 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 or CONDITION: 324571 Welding Fab

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

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: 10462107 Tools and Measurement or PREREQUISITE: 31462325 Maintenance Tools and Measurement or CONDITION: 324571 Welding Fab

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: 10462127 Bearings and Lubrication or PREREQUISITE: 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. COREQUISITE: 10620155 Hydraulics and Pneumatics and 10462119 Power Transmission

SAFETY AND WELDING FUNDAMENTALS...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.

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. PREREQUISITE: 10620122 Industrial Wiring

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.

*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 2022-2023 rates and are subject to change prior to the start of the academic year.*

Catalog No.	Class Title	Credit(s)
Term 1		
50423710	Math for MMMP	1
50423713	Precision Measurements for MMMP	0.5
50423717	Electricity for MMMP	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 MMMP	1
50423740	Mechanical Fastening and Safety for MMMP	1
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		
50423741	Equipment Installation for MMMP	1
50423714	Rigging for MMMP	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 and Structural Steel for MMMP	0.75
50423716	Metallurgy for MMMP	0.50
50423715	Welding for MMMP	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		
50423742	Power Transmission Principles for MMMP	0.5
50423743	Power Transmission Drives for MMMP	1.5
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 MMMP	0.5
50423744	Bearings and Lubrication for MMMP	1
50423724	Preventative and Predictive Maintenance for MMMP	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 MMMP	0.75
50423722	Packings, Seals, and Gaskets for MMMP	0.5
50423732	Pumps for MMMP	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	Hydraulic Systems for MMMP	1
50423745	Pneumatic Systems for MMMP	1
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

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 Apprentice or 504641 Maintenance Techn Apprentice reqs 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 Apprentice or 504641 Maintenance Techn Apprentice reqs met

BEARINGS AND LUBRICATION FOR MMMP...examines bearing types and applications, and compares various equipment bearings. Apprentices will develop skills related to bearing inspection, selection, removal, mounting, and diagnosing bearing failures. Apprentices will also examine the types, principles, and applications of bearing and machine lubricants and lubricating systems. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

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 Apprentice or 504641 Maintenance Technician Apprentice reqs 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 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements 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 Apprentice or 504641 Maintenance Techn Apprentice 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

COUPLINGS AND ALIGNMENT FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

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 MMMP...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 MMMP...provides knowledge regarding common practice procedures for the layout of equipment installations, planning for moving equipment, and methods for setting and leveling equipment. This class will also examine the principles of concrete as well as anchoring of equipment in concrete. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

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 Apprentice or 504641 Maint Tech Apprentice reqs 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

HYDRAULIC SYSTEMS FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

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 Apprentice reqs met

IE PROGRAMMABLE LOGIC CONTROLLERS 3...examines third course of three for industrial electrician apprentices. PLC applications and assessment projects are planned. CONDITION: 504131 Ind Electrician Appr or 504641 Main Tech Appr reqs 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 Ind Electrician Apprentice or 504641 Maintenance Technician Apprentice reqs 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

MATH FOR MMMP...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 FASTENING AND SAFETY FOR MMMP...examines safety as it relates to hand and power tools and explores the theory and application of torque in the MMMP Trades. Apprentices will compare fasteners and their uses, analyze fastener failures, and install various mechanical fasteners. In addition, apprentices will compare adhesives and sealant types and applications, develop skills related to applying them in repair applications, interpreting SDS information, and handling hazardous materials. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

METALLURGY FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

PACKINGS, SEALS, AND GASKETS FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

PIPEFITTING AND VALVES FOR MMMP...introduces apprentices to principles, application and types of pipe, materials, fittings, tubing, and valves, and develops skills related to layout, installation, and maintenance. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

PNEUMATIC SYSTEMS FOR MMMP...provides instruction to apprentices concerning many aspects of inspecting, servicing, and troubleshooting pneumatic systems and components. The concepts of compressed air systems and vacuum systems will also be evaluated. Apprentices will learn safety related issues and be taught proper safety procedures for working with pneumatic systems and components and examine preventive maintenance techniques commonly used on the job. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

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

POWER TRANSMISSION DRIVES FOR MMMP...examines drive transmission systems and their applications, including gear drives, chain drives, belt drives, and conveyor systems. Apprentices will compare different types of gear drive systems and components, chain drive systems and components, belt drive systems and components, as well as different types of conveyors and their related components. Apprentices will develop skills necessary for inspecting, troubleshooting, removing, selecting, and installing components used in the various mechanical drive transmission systems. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

POWER TRANSMISSION PRINCIPLES FOR MMMP...examines the physics and principles of simple machines and how those principles are used in the development of the skills necessary for inspecting mechanical power transmission systems and troubleshooting mechanical drive systems. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

PRECISION MEASUREMENTS FOR MMMP...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...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 preventive and predictive maintenance. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

PRINT READING FOR MMMP...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 MMMP...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 preventive maintenance on pumps. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

RIGGING FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

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

SHEET METAL AND STRUCTURAL STEEL FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

WELDING FOR MMMP...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. PREREQUISITES: 50423170 Math for MMMP, 50423713 Precision Measure for MMMP, 50423717 Electricity for MMMP, 50423711 Print Reading for MMMP, 50423740 Mech Fastening and Safety for MMMP

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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
10804113	College Technical Math 1A OR 10804198 Calculus 1* (4 cr)	3
10620105	DC Fundamentals	2
10196189	Team Building and Problem Solving	3
10620168	Robotics Introduction	2
10606101	Basic Mechanical Drafting	2
10620124	Microcontroller Programming	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
10620138	Programmable Controllers - Allen Bradley	3
10801195	Written Communications	3
		15
Term 3		
10623118	Lean Manufacturing Overview	3
10196188	Project Management	3
10620140	Programmable Controllers - Allen Bradley Advanced	2
10623101	Quality Concepts	3
10801196	Oral/Interpersonal Communication	3
10606160	Manufacturing Processes	3
		17
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
10620171	Robotics 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 2022-2023 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: 10834109 Pre-Algebra 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 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: 10804113 Coll 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.

MICROCONTROLLER PROGRAMMING...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. 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.

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, Studio5000 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.

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 adv robot programming commands to include use of Fanuc IRvision on both Fanuc Robotic arm and Delta Robots. Once a student completes both Robotic Introduction and Robotics Advanced they will be well prepared to take the Fanuc Certification test by NOCTI. PREREQ: 10620168 Robotics Introduction. This class qualifies for 48 hrs 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 Wrtg or Writing placement assessment equivalent and COREQUISITE: 10838105 Intro to Rdg & 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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	3
	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
10664120	Industrial 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 2022-2023 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 or 10804198 Calculus 1 or 10804118 Intern Algebra with Apps

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 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 visualize the data captured.

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

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 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

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, Studio5000 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.

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. COREQUISITES: 10620140 Programmable Controls AB Advanced

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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
10182131	Supply Chain Management	3
10196189	Teambuilding & Problem Solving	3
10623118	Lean Manufacturing Overview	3
10801195	Written Communication	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
10116125	Human Resource Employment Law	3
10182110	Negotiations	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	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 2022-2023 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.

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. Learners will also learn the proper way to conduct a workplace investigation.

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.

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

NEGOTIATIONS...is an exciting introduction into negotiations where the following topics will be discussed: nature of negotiations, framing, strategy, integrated negotiations, distributed negotiations, communication, perception, bias, leverage, ethics, global negotiations, and managing difficult negotiations. It is a must course for students desiring to exceed in business.

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 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. **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/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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 2022)		
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 2023)		
10809198	Introduction to Psychology	3
10623193	ISO 9001 Internal Auditor	3
10196107	Principles of Management	3
10196188	Project Management	3
		12
Term 3 (Summer 2023)		
10801195	Written Communication	3
		3
Term 4 (Fall 2023)		
10182110	Negotiations	3
10101155	Accounting for Professionals	3
10623118	Lean Manufacturing Overview	3
10105128	Personal Branding	2
		11
Term 5 (Spring 2024)		
10623110	Lean Six Sigma - Measure and Analyze	4
10623123	Blueprint Reading and Metrology	3
10623101	Quality Concepts	3
10116125	Human Resource Employment Law	3
		13
Term 6 (Summer 2024)		
10801196	Oral/Interpersonal Communication	3
		3
Term 7 (Fall 2024)		
10449114	Safety in the Workplace	3
10196129	Portfolio Assessment-Manufacturing Management	1
		4
		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 2022-2023 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.

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. Learners will also learn the proper way to conduct a workplace investigation.

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.

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

NEGOTIATIONS...is an exciting introduction into negotiations where the following topics will be discussed: nature of negotiations, framing, strategy, integrated negotiations, distributed negotiations, communication, perception, bias, leverage, ethics, global negotiations, and managing difficult negotiations. It is a must course for students desiring to exceed in business.

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

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

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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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

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Catalog No.	Class Title	Credit(s)
Term 1		
10606100	Mechanical Drafting Standards/Procedures	1
10606101	AutoCAD-2D Computer Aided Design	2
10606108	SolidWorks 1-Parametric Modeling	2
10606102	Product Design & Rapid Prototyping	1
10606104	Manufacturing Processes and Materials	2
10420107	Machining Applications	1
10103121	Excel - Level 1	1
10804113	College Technical Math 1A OR 10804198	3
	Calculus 1* (4 cr)	
10801196	Oral/Interpersonal Communication	3
		16
Term 2		
10606106	Tolerancing and GD&T	3
10606134	Statics	4
10606109	SolidWorks 2-Modeling/Details for Designers	2
10606110	SolidWorks 3-Working Drawings for Designers	2
10606111	SolidWorks-Advanced Modeling	2
10806154	General Physics 1	4
		17
Term 3		
10606117	Design of Machine Elements	3
10606118	Kinematics	3
10606119	Strength of Materials	3
10606120	Reverse Engineering	2
10620130	Mechanical Drive Systems	3
10620169	Robotic Mechanical Maintenance	1
10444104	HSM for Solidworks	1
		16
Term 4		
10606197	Portfolio-Mechanical Design/Engineering	1
10606190	Design for Manufacture and Assembly (DFMA)	2
10606189	Quality Systems	2
10606198	Engineering Technology Applications	4
10801195	Written Communication	3
10809196	Introduction to Sociology OR 10809195	3
	Economics	
10809198	Introduction to Psychology	3
		18
		TOTAL 67

*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 2022-2023 rates and are subject to change prior to the start of the academic year.

AUTOCAD-2D COMPUTER AIDED DESIGN...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 student to solve linear, quadratic, and relational equations; graph; formula rearrangement; solve systems of equations; percent; proportions; and operations on polynomials. Emphasis on the application of skills to technical problems. PRERQS: 10834109 Pre-Algebra or 10804107 College Math or 31457318 Ind Mtnc Trades Math or 31420320 Mach Tool Math or Math plcmnt assmnt equiv

DESIGN FOR MANUFACTURE AND ASSEMBLY (DFMA)...introduces learners to and will apply the concept of Design for Manufacturing and Assembly (DFMA) to an industrial assembly. DFMA is an engineering methodology that focuses on reducing time-to-market and the total production cost by prioritizing both the ease of manufacture for the product's parts and the simplified assembly of those parts into the final product. PREREQUISITE: 10420103 Machining Applications, 10606102 Product Design & Rapid Prototyping, 10606106 Tolerancing and GD&T, 10606111 SolidWorks 3-Working Drawings for Designers, and 10606160 Mfg Processes & Applications or 10606104 Mfg Processes/ Materials

DESIGN OF MACHINE ELEMENTS...introduces student to the various components found on machinery, including shafts, bearings, power transmissions, gears, and selection of standard machine elements from manufacturers' catalogs, and use of spreadsheet solutions. PREREQ: 10606130 Strength of Materials or COREQ: 10606119 Strength of Materials

ENGINEERING TECHNOLOGY APPLICATIONS...applies the knowledge and skills gained throughout the Mechanical Design and Engineering Technology program. This is a capstone course in which the learner will create a project portfolio that will showcase a full set of working drawings to produce an industrial assembly and all the design calculations to ensure function and lifecycle requirements. The learner will create a physical, working prototype in the MDET Fab Lab as part of this capstone project. PREREQUISITES: 10606117 Design of Machine Elements, 10606118 Kinetics, 10606110 SolidWorks 3-Working Drawings for Designers, 10606106 Tolerancing and GD&T

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.

HSM FOR SOLIDWORKS...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. 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.

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 equiv or COREQUISITE: 10838105 Intro to Reading and Study Skills

INTRODUCTION TO SOCIOLOGY...introduces students to 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. COREQ: 10838105 Intro to Rdg & Study Skills or Rdg plcmnt assmnt equiv

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 Technical Math 1 or 10804113 College Technical Math 1A or 10804198 Calculus 1 or 10804118 Interm Algebra with Apps

MACHINING APPLICATIONS...takes a hands-on approach to the subject of machining processes including milling, turning and drilling. Students will use the machines common to a machine shop to build a functional gearbox during their time in this course. The use of calipers, micrometers and coordinate measuring machines will also be used to verify the work. COREQUISITE: 10606104 Manufacturing Processes and Materials

MANUFACTURING PROCESSES AND MATERIALS...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. In addition, the student will also explore metallurgy, computer-age machining and methods in advanced manufacturing technology.

MECHANICAL DRAFTING STANDARDS & PROCEDURES...develops skills in creating engineering sketches through application of drafting standards and procedures. Principles covered include view selection, orthographic projection, section and auxiliary views, and their utilization in working drawings. Need for engineering sketching is reinforced through a hands-on project requiring measurement, inspection and sketching of orthographic views.

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

PORTFOLIO-MECHANICAL DESIGN/ENGINEERING...acquaints students with the process and the development of a plan for securing employment in the mechanical design and engineering field. Includes letters of introduction, resume design, personal data sheets, portfolio design and job interview techniques. Students will create profiles on the college job search site and LinkedIn. PREREQUISITE: 10606110 SolidWorks 3-Working Drawings for Designers and 1606117 Design of Machine Elements

PRODUCT DESIGN AND RAPID PROTOTYPING...introduces students to rapid prototyping methods and the operation of various types of rapid prototyping equipment available in the Mechanical Design & Engineering Technology program's Fab Lab. Research and use 3D printers including FDM and related material usage, will be explored through hands-on lab activities to develop a working prototype. COREQ: 10606108 SolidWorks 1-Param Mod

QUALITY SYSTEMS...introduces the learner to the theories and concepts of Statistical Process Control, Six Sigma and Lean Manufacturing. PREREQUISITES: 10804115 College Tech Math 1 or 10804113 College Tech Math 1A

REVERSE ENGINEERING...prepares students to take an existing assembly, take it apart, measure it using micrometers, calipers and coordinate measuring machines. Using the measurements, students will then create a full set of working drawings including appropriate tolerances. Students will also be introduced to a reverse engineering scanner system and software, used for reverse engineering applications in the SolidWorks 3D modeling environment. PREREQUISITES: 10606111 SolidWorks-Advanced Modeling and 10606104 Manufacturing Processes and Materials

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.

SOLIDWORKS 1-PARAMETRIC MODELING...introduces the students to the concepts and commands of parametric solid modeling. Students create sketches and add relationships to the sketch segments, extrude the sketches to create models, and add features such as fillets, cut extrude, chamfers, holes, draft, shell, lofts and sweeps. Emphasis is placed on the design intent of the parametric solid models.

SOLIDWORKS 2-MODELING/DETAILS FOR DESIGNERS...is the second course in the study of parametric solid modeling using SolidWorks as it applies to the mechanical design field. Students extract 2D documentation from the 3D models and add details to the drawings. Advanced software applications are explored including assembly modeling techniques, configurations, detail drawing generation, surfaces, multibody parts, additional work with sweeps and lofts, and preparation for the CSWA (Certified SolidWorks Associate) exam. PREREQUISITES: 10606100 Mechanical Drafting Standards/Procedures and 10606108 SolidWorks 1 - Parametric Modeling

SOLIDWORKS 3-WORKING DRAWINGS FOR DESIGNERS...focuses on the creation of complete sets of engineering detail and assembly drawings including the accompanying engineering documentation, bill of materials and the application of geometric dimensioning and tolerancing standards. Emphasis is placed on product design analysis, tolerance stack ups and the application of GD&T. COREQUISITE: 10606109 SolidWorks 2-Modeling/Details for Designers

SOLIDWORKS-ADVANCED MODELING...introduces students to advanced modeling and design techniques for part design in sheet metal, weldments, castings and mold design. COREQUISITES: 10606110 SolidWorks 3-Working Drawings for Designers and 10606106 Tolerancing and GD&T

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. PREREQUISITE: 10606134 Statics

TOLERANCING AND GD&T...provides the learner with the skills to apply and interpret tolerancing standards for both rectangular and geometric tolerancing (ASME 14.5M-2018) on part drawings, including form, profile, orientation, runout, and positional tolerances. Additionally the learning will design mating parts and tolerance stack ups with and without GD&T.

WRITTEN COMMUNICATION...teaches 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 for this course. Also develops critical reading and thinking skills through the analysis of a variety of written documents. PREREQ: 10831103 Intro to College Wrtg or Wrtg plcmnt assmnt equiv and COREQ: 10838105 Intro to Rdg & Study Skills or Rdg plcmnt assmnt equiv

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 2022-2023 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 work in a lab/shop/training center setting to create touchscreens, set-up networks, and configure systems. 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

SERVO 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 your 1st Time Program Counseling/Registration 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.
- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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		
31501302	Medical Terminology	3
31501304	Culture of Healthcare	2
31501307	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 program counselor for details. The tuition and fees are approximate based on 2022-2023 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.

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.

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: 31501302 or 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: 31501307 or 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 & Disease and 31509303 Med Assist Lab Proc 1 & CONDITION: Reading placement assessment and 315091 Med Assist program requirements

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; COREQUISITE: 31509305 Medical Assistant Lab Procedures 2, 31501308 Pharmacology for Allied Health, and 31509310 Medical Assistant Practicum

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 I and COREQUISITES: 31509306 Medical Assistant Clinical Procedures 2, 31501308 Pharmacology for Allied Health, and 31509310 Medical Assistant Practicum

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 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, 31501304 or 10501104 Cult of Hlthcare, 31509302 Human Body Hlth Disease and COREQUISITES: 31509306 MA Cl Prc 2, 31509305 MA Lab Prc 2, 31501308 Phrm-Allied Hlth, 10501102 Hlth Ins/Reimb, 31509309 Med Law/Ethics/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 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 Health/Disease, 31509310 MA Practicum, and 31509305 MA Lab Proc 2

Program Number 31-530-3
Technical Diploma • Two Terms
ABOUT THE PROGRAM

The Medical Coder program allows students to work at their own pace to prepare students 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. Medical coders are also employed in consulting firms, coding and billing services, insurance companies, governmental agencies, and computer software companies. The medical coder reviews medical documentation provided by physicians and other health care providers and translates this into numerical codes. The coders assign and sequence 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 your 1st 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.
- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 a combination of online work and in person demonstration of skills. 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		
10501115	Medical Terminology Part 1	1
10501116	Medical Terminology Part 2	1
10501117	Medical Terminology Part 3	1
10501107	Digital Literacy for Healthcare	2
10530141	Introduction to the Healthcare System	1
10530142	Introduction to the Medical Record	1
10530143	Medical Record Processes	1
10530182	Human Diseases for Health Professions	3
10806189	Basic Anatomy	3
10103101	Access - Level 1	1
		15
Term 2		
10530130	CPT Coding Part 1	1
10530131	CPT Coding Part 2	1
10530132	CPT Coding Part 3	1
10530133	ICD Diagnosis Coding Part 1	1
10530134	ICD Diagnosis Coding Part 2	1
10530135	ICD Diagnosis Coding Part 3	1
10530136	Introduction to PCS Coding	1
10530137	Application of PCS Coding	1
10530144	3M Coding System	1
10530145	Find a Code Coding System	1
10530146	Nuance Coding System	1
10530147	HIM/Coding Practicum Part 1	1
10530148	HIM/Coding Practicum Part 2	1
10530138	Healthcare Revenue Mgmt: Payment Methodologies	1
10530139	Healthcare Revenue Mgmt: Revenue Compliance	1
10530140	Healthcare Revenue Mgmt: Revenue Cycle	1
		16

TOTAL 31

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your program counselor for details. The tuition and fees are approximate based on 2022-2023 rates and are subject to change prior to the start of the academic year.

3M CODING SYSTEM...prepares the learner to utilize 3M Coding System to complete coding scenarios. COREQUISITES: 10530131 CPT Coding Part 2, 10530132 CPT Coding Part 3, 10530134 ICD Diagnosis Coding Part 2, 10530135 ICD Diagnosis Coding Part 3, 10530137 Application of PCS Coding

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.

APPLICATION OF PCS CODING...prepares the learner to assign ICD-PCS procedure codes as they apply to all of the body systems and miscellaneous procedures. COREQUISITE: 10530136 Introduction to PCS Coding

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 PART 1...prepares the learner to apply the rules of CPT Medical Coding as they relate to the format and conventions, evaluation and management, medicine, and ancillary services (lab/x-ray) and HCSPS.

CPT CODING PART 2...prepares the learner to apply the rules of CPT Medical Coding as they relate to digestive, urinary, reproductive, neurologic, and sensory systems. COREQUISITE: 10530130 CPT Coding Part 1

CPT CODING PART 3...prepares the learner to apply the rules of CPT Medical Coding as they relate to the integumentary, musculoskeletal, circulator, respiratory systems, and anesthesia. COREQUISITE: 10530131 CPT Coding Part 2

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.

FIND A CODE CODING SYSTEM...prepares the learner to utilize Find a Code Coding System to complete coding scenarios. COREQUISITE: 10530144 3M Coding System

HC REV MANAGEMENT: PAYMENT METHODOLOGIES...prepares the learner to compare government and non-government payers and payment methodologies.

HC REV MANAGEMENT: REVENUE COMPLIANCE...prepares the learner to apply various payment methodologies while ensuring compliance with regulations and future trends. COREQUISITE: 10530138 HC Revenue Mgmt Payment Methodologies

HC REV MANAGEMENT: REVENUE CYCLE...prepares the learner to conduct activities of and manage the revenue cycle. COREQUISITE: 10530139 HC Revenue Mgmt Revenue Compliance

HIM/CODING PRACTICUM PART 1...prepares the learner to evaluate the Patient Registration, Medical Coding, and Medical Claims process in a clinical setting. COREQUISITES: 10530131 CPT Coding Part 2, 10530132 CPT Coding Part 3, 10530134 ICD Diagnosis Coding Part 2, 10530135 ICD Diagnosis Coding Part 3, 10530137 Application of PCS Coding

HIM/CODING PRACTICUM PART 2...prepares the learner to complete a Resume Preparation, Interview Process and Portfolio Project. COREQUISITES: 10530131 CPT Coding Part 2, 10530132 CPT Coding Part 3, 10530134 ICD Diagnosis Coding Part 2, 10530135 ICD Diagnosis Coding Part 3, 10530137 Application of PCS Coding

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 or 10501117 Medical Terminology-Part 3

ICD DIAGNOSIS CODING PART 1...prepares the learner to examine the rules of ICD classification systems and assign ICD diagnosis codes to infectious, endocrine, metabolic, digestive, respiratory systems, injuries, poisonings, and signs/symptoms.

ICD DIAGNOSIS CODING PART 2...prepares the learner to assign ICD diagnosis codes as they relate to neoplasms, nervous, eye, ear, genitourinary, pregnancy, perinatal, and congenital disorders. COREQUISITE: 10530133 ICD Diagnosis Coding Part 1

ICD DIAGNOSIS CODING PART 3...prepares the learner to assign ICD diagnosis codes as they relate to blood, circulatory, behavioral/mental health, skin, musculoskeletal diseases, and miscellaneous factors influencing health care. COREQUISITE: 10530133 ICD Diagnosis Coding Part 1

INTRODUCTION TO PCS CODING...prepares the learner to examine the rules of the ICD-PCS procedure coding classification system and assign codes that describe the root operation of the PCS classification system.

INTRODUCTION TO THE HC SYSTEM...prepares the learner to evaluate various influences on the healthcare system such as external forces, types of organizations, and roles and responsibilities of healthcare providers.

INTRODUCTION TO THE MEDICAL RECORD...prepares the learner to demonstrate professional ethical standards while examining data collection tools and information governance. COREQUISITE: 10530141 Intro to the Healthcare System

MEDICAL RECORDS PROCESSES...prepares the learner to perform medical record processes and examine data sources while maintaining quality standards. COREQUISITE: 10530142 Intro to the Medical Record

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.

MEDICAL TERMINOLOGY - PART 2...apply the rules of Medical Language as they relate to the circulatory, respiratory, and immunologic systems. COREQUISITE: 10501115 Medical Terminology - Part 1

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

NUANCE CODING SYSTEM...prepares the learner to utilize Nuance Coding system to complete coding scenarios. COREQUISITE: 10530145 Find a Code Coding System

Program Number 30-510-5
Technical Diploma • One Term

ABOUT THE PROGRAM

This course is designed for current certified nursing assistants looking to grow professionally by learning the role and scope of the medication assistant and how to administer select medications safely. Course content includes basic principles of medication administration, simple math calculations, the scope of the medication assistant, and simulated and clinical experiences.

PROGRAM OUTCOMES

- Adhere to the scope and practice of a medication assistant.
- Administer medications as allowed by DHS 129 regulations.
- Adhere to the rights of medication administration and safety.
- Protect client rights and confidentiality.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

APPLICATION REQUIREMENTS

- Contact Health & Human Services Division.
- You must have a sponsoring employer and contract before attending.

Catalog No.	Class Title	Credit(s)
	Term 1	
30510109	Medication Assistant	3

TOTAL 3

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your program counselor for details. The tuition and fees are approximate based on 2022-2023 rates and are subject to change prior to the start of the academic year.



MEDICATION ASSISTANT...prepares experienced nursing assistant, current on the Federal Nursing Assistant Directory, to administer medications to residents of a Skilled Care Nursing Facility. The scope of the course covers the role of the Medication Assistant, legalities of medication administration, control and storage of drugs, techniques of administering drugs, and record keeping. The combination of lecture/discussion classes, practice labs, and clinical experience also covers drug actions and impact on body systems, utilization of drug reference materials, and recognition of drug side effects. Qualifies the graduate for inclusion in the State of Wisconsin Nursing Assistant Directory as trained and approved to administer medications. **CONDITION:** 305105 Medication Assistant admission requirements met

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.
- 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

• \$143.45 per credit tuition (WI resident) plus \$8.61 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

REAL EXPERIENCE FOR THE REAL WORLD

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 Radiation Safety Internship	2
10624134	Radiation Shielding	2
10624135	Radiation Shielding Lab	1
		17
Term 4		
10624140	Radiochemistry	3
10624148	Reactor Theory and Operation	3
10624133	Radiological Emergencies	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.

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 2022-2023 rates and are subject to change prior to the start of the academic year.

2022-23

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 Mtnc 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 COREQUISITE: 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/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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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.

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 2022-2023 rates and are subject to change prior to the start of the academic year.

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 Mtnc 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.
- Schedule your First Time Program Counseling/Registration Session with your assigned program counselor to plan your schedule and discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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	3
	30543200 Nursing Assistant (2 cr)	

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 2022-2023 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/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.

FUTURE SEMESTER ENROLLMENT STEPS

- Pass HESI exam (Health Occupations Entrance assessment) with a 75% or higher.
- Complete and submit health form.
- Complete chemistry requirement.
- Meet math requirements (Accuplacer score of 263 or equivalent)
- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 Basic Life Support (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, GA 30326. 404-975-5000 Fax 404-975-5020. www.acenursing.org

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

REAL EXPERIENCE FOR THE REAL WORLD

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.

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 2022-2023 rates and are subject to change prior to the start of the academic year.

2022-23

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 placement assessment 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, Covid vaccine, and flu vaccine. Student must have completed third semester courses. Course requires a minimum grade of "C" or better. COREQUISITE: 10543113 Nursing Complex Health Alt II and CONDITION: 105431 Nursing - Associate Degree enrollment reqs 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), Covid vaccine, 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 Nrgs Hlth Alt, 10543106 Nrgs 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 Nrgs Complex Hlth Alt 1 and 10543112 Nrgs Adv Skills and 10543110 Nrgs Mental Hlth Comm Concepts and 10543111 Nrgs 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), Covid vaccine, 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 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 courses. Student needs a current TB test, AHA CPR card (1 and 2 person, adult, infant & child, AED), Covid vaccine, 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, Covid vaccine, 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 Nrgs Fund & 10543102 Nrgs Skills & 10543103 Nrgs 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 Nrgs Hlth Alt, 10543106 Nrgs 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 Nrgs Complex Hlth Alterations 1 and 10543112 Nursing Advanced Skills and 10543110 Nrgs Mental Hlth Comm Concepts and 10543111 Nrgs 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 Nrgs Hlth Alt, 10543106 Nrgs 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, Covid vaccine, and flu vaccine. Student must have completed all third semester courses. Course requires a minimum grade of "C" or better. COREQUISITE: 10543115 Nrgs 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. PREREQUISITE: 10806177 or 10806177OL 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 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. PREREQUISITE: 10543101 Nrgs Fund and 10543102 Nrgs Skills and 10543103 Nrgs Pharm and 10543104 Nrgs: 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 Nrgs Fundamentals, 10543102 Nrgs Skills, 10543103 Nrgs Pharmacology, 10543104 Nrgs Intro Clinical Prac, and CONDITION: 105431 Nursing-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. CONDITION: 105431 Nursing-Assoc Degree Enrollment Reqs Met and PREREQ: 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 PREREQUISITE: 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 Wrtg 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

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

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

Keyboard Speedbuilding assessments must be proctored at an LTC testing site.

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	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
10116109	Career Planning & Networking	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 2022-2023 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.

CAREER PLANNING & NETWORKING...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.

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

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-Lev 1 or equiv

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.

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.
- 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.

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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

Keyboard Speedbuilding assessments must be proctored at an LTC testing site.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@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
10106130	Office Professionalism	3
10106138	Web Technologies	2
		8
		TOTAL 13

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 2022-2023 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 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.

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.

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

Program Number 31-516-4
Technical Diploma • Three Terms

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.
- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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)
Prerequisite Courses		
10501115	Medical Terminology - Part 1	1
10501116	Medical Terminology - Part 2	1
10501117	Medical Terminology - Part 3	1
Term 1		
31509311	Human Body - Part 1	1
31509312	Human Body - Part 2	1
31509313	Human Body - Part 3	1
Term 2		
31516320	Basic Optical Concepts	1
31516316	Frame Characteristics	1
31516318	Ophthalmic Lens Selections	1
31516317	Eyewear Adjustment	1
31516319	Frame Styling and Purchasing	1
31516321	Lens Power and Protection	1
31516322	Compare Multifocal Lenses	1
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
31501305	Pharmacology - Part 1	1
31501306	Pharmacology - Part 2	1
		14
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 29

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 2022-2023 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. PREREQUISITE: 10501117 Medical Terminology - Part 3 and 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 your 1st Time Program Counseling/Registration 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 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)
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 program counselor for details. The tuition and fees are approximate based on 2022-2023 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 to 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: 105311 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 the online Student Success Questionnaire.
- Schedule your 1st 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.

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
COURSES		
31501302	Medical Terminology	3
31501304	Culture of Healthcare	2
31501307	Digital Literacy for Healthcare	2

TOTAL 7

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your program counselor for details. The tuition and fees are approximate based on 2022-2023 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.

Program Number 10-536-1

Associate Degree in Applied Science • Four Terms

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 workplace. 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.
- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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		
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	2
10536141	Pharmacy Computer Lab	2
10536138	Pharmacy Community Clinical	2
		14
Term 3		
10104102	Principles of Marketing OR 10182108 Purchasing	3
10801195	Written Communication OR 10801141 Introduction to Mass Communications OR 10801136 English Composition 1	3
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 10102110 Introduction to Business (3 cr)	3
10196191	Supervision	3
10536150	Advanced Pharmacy Services Applications	3
10809166	Introduction to Ethics: Theory & Application OR 10809172 Introduction to Diversity Studies	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 2022-2023 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 Mgmt

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 Mgmt 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

Program Number 31-536-1 Technical Diploma • Two Terms

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.
- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 an 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

REAL EXPERIENCE FOR THE REAL WORLD

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	2
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 2022-2023 rates and are subject to change prior to the start of the academic year.

2022-23

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

ABOUT THE PROGRAM

Paralegals work under the supervision of lawyers in a range of tasks—researching the law; preparing for hearings; 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 communication, and enjoy researching and analyzing facts, you might find a career as a paralegal very rewarding. This credential is appropriate for those persons who already have earned a bachelor's degree.

PROGRAM OUTCOMES

- Apply ethical principles in a legal environment.
- 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.
- Submit official college transcripts for proof of bachelor's degree
- 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10110101	Introduction to Paralegalism and Legal Ethics	3
10110105	Legal Writing	3
10110103	Civil Litigation 2	3
10110168	Criminal Law - Paralegal	3
		12
Term 2		
10110102	Civil Litigation 1	3
10110104	Legal Research	3
10110106	Family Law	3
10110114	Administration of Estates	3
		12
		TOTAL 24

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 2022-2023 rates and are subject to change prior to the start of the academic year.

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

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

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 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.

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

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

- Integrate Practical Nursing identity reflecting integrity, responsibility, and nursing standards.
- Communicate basic information using multiple sources in nursing practice.
- Utilize theoretical knowledge to participate in decision making.
- Apply the nursing process to basic client care across diverse populations.
- 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 gotolc.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. 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 your 1st 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.

FUTURE SEMESTER ENROLLMENT STEPS

- Pass HESI (Health Occupations Entrance assessment) with a 70% or higher.
- Complete and submit health form.
- Meet math requirement (Accuplacer score of 263 or equivalent)
- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 per credit student activity fee.
- Material fee varies depending on course. Other fees vary by program. Visit gotolc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotolc.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 Basic Life Support (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, GA 30326, 404-975-5000 Fax 404-975-5020. www.acenursing.org

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotolc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall)		
31809188	Developmental Psychology	3
31801195	Written Communication	3
6		
Term 2 (Spring)		
31509302	Human Body in Health and Disease OR 31806177	3
	General Anatomy & Physiology (4cr)	
31801196	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: Clin Care Across Lifespan	2
31543308	Nsg: Intro Clinical Care Mgt	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 program counselor for details. The tuition and fees are approximate based on 2022-2023 rates and are subject to change prior to the start of the academic year.

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, Covid vaccine, 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, Covid vaccine, 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, Covid vaccine, 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: 31806177 Gen A & P or 31509302 Hum Body Hlth Disease, 31809188 Developmental Psych, 31801196 Oral/Interpersonal Comm, 31801195 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, 31543302 Nursing Skills, 31543303 Nursing Pharmacology 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, 31543302 Nursing Skills, 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. PREREQUISITES: 31806177 Gen A & P or 31509302 Hum Body Hlth Disease, 31809188 Developmental Psych, 31801196 Oral/Interpersonal Comm, 31801195 Written Comm and CONDITION: 315431 Practical Nursing admission reqs 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. Some Saturday hours are required. PREREQUISITES: 31806177 Gen A & P or 31509302 Hum Body Hlth Disease, 31809188 Developmental Psych, 31801196 Oral/Interpersonal Comm, 31801195 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

Program Number 10-623-2
Associate Degree in Applied Science • Four Terms

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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		
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	3
10809198	Introduction to Psychology OR 10809188 Developmental Psychology	3
		17
Term 2		
10182110	Negotiations	3
10801198	Speech OR 10801196	3
10804123	Math with Business Applications	3
10623193	ISO 9001 Internal Auditor	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 2022-2023 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 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, POCUS, 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

NEGOTIATIONS...is an exciting introduction into negotiations where the following topics will be discussed: nature of negotiations, framing, strategy, integrated negotiations, distributed negotiations, communication, perception, bias, leverage, ethics, global negotiations, and managing difficult negotiations. It is a must course for students desiring to exceed in business.

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/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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 2022)		
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 2023)		
10623193	ISO 9001 Internal Auditor	3
10623101	Quality Concepts	3
10182110	Negotiations	3
10623110	Lean Six Sigma - Measure and Analyze	4
		13
Term 3 (Summer 2023)		
10801195	Written Communication	3
10623111	Lean Six Sigma - Improve and Control	4
		7
Term 4 (Fall 2023)		
10623112	Lean Six Sigma - Implementation	3
10809198	Introduction to Psychology	3
10623114	Lean Six Sigma - Black Belt	4
10101155	Accounting for Professionals	3
		13
Term 5 (Spring 2024)		
10623123	Blueprint Reading and Metrology	3
10105128	Personal Branding	2
10196188	Project Management	3
10182102	Service Operations Management	3
		11
Term 6 (Summer 2024)		
10801196	Oral/Interpersonal Communications	3
		3
		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 2022-2023 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 reqs 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 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, POKYS, 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

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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

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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

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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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 2022-2023 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

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 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 (textbook material) and application (hands-on clinical experience). The clinical experience will consist of rotations in a hospital and clinic setting where the students will work with practicing radiographers to learn the equipment and to become proficient in the field.

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.
- Watch Radiography informational video prior to your Program Counseling Session.
- 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete health requirements.
- Attend Career Experience session.
- Complete CPR BLS Healthcare Provider certification.
- Obtain or provide evidence of CNA course competencies within the past 5 years.
- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 and Gateway Technical College. As a radiography student, you will 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)
Prerequisite Courses		
10806177	General Anatomy and Physiology	4
10806134	General Chemistry	4
10501101	Medical Terminology	3
		11
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
		3
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 69

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 2022-2023 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

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

GENERAL CHEMISTRY...covers the 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. COREQUISITE: 78854773 Math Essentials for Chemistry and Reading enrollment requirements met or PREREQUISITES: Math and Reading enrollment requirements met

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

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

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

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.
- 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.

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 • Admissions@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 2022-2023 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 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 2022-2023 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

Program Number 10-182-1
Associate Degree in Applied Science • Four Terms

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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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		
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	3
		14
Term 2		
10105128	Personal Branding	2
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
10804123	Math w/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	3
10809195	Economics	3
10182110	Negotiations	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 2022-2023 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 MGMT...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 Management

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

NEGOTIATIONS...is an exciting introduction into negotiations where the following topics will be discussed: nature of negotiations, framing, strategy, integrated negotiations, distributed negotiations, communication, perception, bias, leverage, ethics, global negotiations, and managing difficult negotiations. It is a must course for students desiring to exceed in business.

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

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.

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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

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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

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CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2022)		
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 2023)		
10623193	ISO 9001 Internal Auditor	3
10182122	Logistics	3
10809198	Introduction to Psychology	3
10196188	Project Management	3
		12
Term 3 (Summer 2023)		
10801195	Written Communication	3
		3
Term 4 (Fall 2023)		
10182110	Negotiations	3
10101155	Accounting for Professionals	3
10809195	Economics	3
10105128	Personal Branding	2
		11
Term 5 (Spring 2024)		
10182115	Computer Simulation for Operational Management	3
10182102	Service Operations Management	3
10623110	Lean Six Sigma - Measure and Analyze	4
		10
Term 6 (Summer 2024)		
10801196	Oral/Interpersonal Communication	3
		3
Term 7 (Fall 2024)		
10182160	Global Supply Chain Management	3
10182114	Enterprise Resource Planning and Control	3
10182107	Portfolio Assessment - Supply Chain	1
		7
		TOTAL 60

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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.

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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

NEGOTIATIONS...is an exciting introduction into negotiations where the following topics will be discussed: nature of negotiations, framing, strategy, integrated negotiations, distributed negotiations, communication, perception, bias, leverage, ethics, global negotiations, and managing difficult negotiations. It is a must course for students desiring to exceed in business.

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

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 10-499-5
 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 and 6 additional credits of either general education electives or Associate degree level Technical Studies.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

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

APPROXIMATE COSTS

• \$143.45 per credit tuition (WI resident) plus \$8.61 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	6
	Level Technical Studies: 6 Credits Required	
		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 2022-2023 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.

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 2022-2023 rates and are subject to change prior to the start of the academic year.

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
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
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
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
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
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
Term 7		
50420732	Electrical Discharge Machining for Machine Trades	1
50420728	Basic Stamping Diemaking for Machine Trades	1
Term 8		
50420730	Stamping Die Design Applications for Machine Trades Apprentice	1
50420729	Mold Making for Machine Trades Apprentices	1
TOTAL 16		

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. Learners 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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)
Term 1		
10442100	Safety and Welding Fundamentals	1
31442308	Weld Examination	1
31442350	Metal Manufacturing Processes	1
31442351	Precision Measurement and Layout	1
31442310	SMAW-Flat Position (Stick)	1
31442312	SMAW-Horizontal Position (Stick)	1
31442314	SMAW-Vertical Position (Stick)	1
31442316	SMAW-Overhead Position (Stick)	1
31442320	GMAW-Flat Position (Wire/Mig)	1
31442322	GMAW-Horizontal Position (Wire/Mig)	1
31442324	Flux Core Arc-Flat/Horizontal Position	1
31442326	Flux Core Arc-Vertical/Overhead Position	1
31442304	Welding Submerged Arc (SAW)	1
31442330	GTAW Mild Steel Flat/Horizontal Position	1
31442332	GTAW Mild Steel Out of Position (Heli-Arc/TIG)	1
31442334	GTAW Stainless/Aluminum Horizontal Positions	1
31442336	GTAW Stainless/Aluminum Out of Position	1
31442318	Pipe Welding Fundamentals	1
31442382	Welding Math Basics	1
31442385	Weld Print 1 Print Fundamentals	1
31442340	Welding Advance Process 1	1
31442342	Welding Advance Process 2	1
31442357	Welding Fabrication Introduction	2
31442343	Weld Print 2 Weld/Welding Symbols	1
31801361	Interpersonal Skills	1
31801360	Workplace Fundamentals	1
		27

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	Weld Print 3 for Fabricators	1
31442337	Weld Inspection and Processes	1
31442339	Metal 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	Welding Geometry and Formulas	1
10606113	SolidWorks 1 - Modeling Fundamentals	2
		27

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 2022-2023 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 Flux Core Arc-Vertical/Overhead Position, 31442316 SMAW-Overhead Position (Stick), and 31442336 GTAW Stainless/Aluminum Out of Position

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

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 Shop Tools and Fasteners or 31420394 Ind Mtn Machine Tool Intro or 10420194 Machine Tool Introduction or CONDITION: 324571 Welding Fab Tech program requirements met

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. COREQUISITE: 31442307 Welding Measurement 2 and 31442309 Weld Print 3 for Fabricators

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 AutoCAD-2D Computer Aided Design and 31457331 Fabrication 1 or PREREQUISITE: 31442331 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

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. COREQUISITE: 31420310 Shop Tools and Fasteners or 31420394 Ind Mtn Machine Tool Introduction or 10420194 Machine Tool Introduction or CONDITION: 324571 Welding Fabrication Technician, 104622 Electro-Mech Maintenance Technician, or 314622 Maintenance Mechanic program requirements met

METAL FINISHING...provides learning so that the student will develop and demonstrate skills needed to properly finish weldments. Surface finish is an important element in any specification of steel or alloys regardless of the intended use. Students will demonstrate proficiency in grinding and finishing procedures within given tolerances for surface finish and flatness.

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, 104622 Electro-Mech Maintenance Technician, or 314622 Maintenance Mechanic program requirements met

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. PREREQUISITE: 31620335 Introduction to Robotics 2 or COREQUISITE: 10620167 Robotics-Teach Pendant/Controls

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 and 10620179 Robotics-Editing Programs

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

SOLIDWORKS 1-MODELING FUNDAMENTALS...introduces the students to the concepts and commands of parametric solid modeling. Students create sketches and add relationships to the sketch segments, extrude the sketches to create models, and add features such as fillets, cut extrude, chamfers, holes, draft, shell, lofts and sweeps. Emphasis is placed on the design intent of the parametric solid models.

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. COREQUISITE: 31442307 Welding Measurement 2

WELD PRINT 3 FOR FABRICATORS...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. COREQUISITE: 31442343 Weld Print 2 Weld/Welding Symbols

WELDING GEOMETRY AND FORMULAS...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 Welding Math Basics 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. COREQUISITE: 31442351 Precision Measurement and Layout

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-recongnized 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 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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)
10442100	Safety and Welding Fundamentals	1
31442308	Weld Examination	1
31442350	Metal Manufacturing Processes	1
31442351	Precision Measurement and Layout	1
31442310	SMAW-Flat Position (Stick)	1
31442312	SMAW-Horizontal Position (Stick)	1
31442314	SMAW-Vertical Position (Stick)	1
31442316	SMAW-Overhead Position (Stick)	1
31442320	GMAW-Flat Position (Wire/Mig)	1
31442322	GMAW-Horizontal Position (Wire/Mig)	1
31442324	Flux Core Arc-Flat/Horizontal Position	1
31442326	Flux Core Arc-Vertical/Overhead Position	1
31442304	Welding Submerged Arc (SAW)	1
31442330	GTAW Mild Steel Flat/Horizontal Position	1
31442332	GTAW Mild Steel Out of Position (Heli-Arc/TIG)	1
31442334	GTAW Stainless/Aluminum Horizontal Positions	1
31442336	GTAW Stainless/Aluminum Out of Position	1
31442318	Pipe Welding Fundamentals	1
31442382	Welding Math Basics	1
31442385	Weld Print 1 Print Fundamentals	1
31442340	Welding Advance Process 1	1
31442342	Welding Advance Process 2	1
31442357	Welding Fabrication Introduction	2
31442343	Weld Print 2 Weld/Welding Symbols	1
31801361	Interpersonal Skills	1
31801360	Workplace Fundamentals	1

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 2022-2023 rates and are subject to change prior to the start of the academic year.

FLUX CORE ARC-VERTICAL/OVERHEAD POSITION...teaches the learner to use safe shop work practices while creating welds in the vertical and overhead positions. Learners will create fillet and groove welds in vertical and overhead positions. Students will be introduced to pipe welding while using the FCAW welding process. COREQUISITE: 31442324 Flux Core Arc-Flat/Horizontal Position

FLUX CORE ARC-FLAT/HORIZONTAL (WIRE/MIG)...will have learners demonstrate safe shop working practices while welding fillet welds in flat and horizontal positions using the FCAW welding process. Learners will perform single bevel groove welds and V-groove welds in flat and horizontal positions using the FCAW, and will perform groove welds with and without backing material. COREQUISITE: 31442322 GMAW-Horizontal Position (Wire/Mig)

GMAW-FLAT POSITION (WIRE/MIG)...prepares the learner to demonstrate safe shop work practices; learners will perform set up and shut down of GMAW and MCAW equipment; weld mild steel using the GMAW and MCAW welding processes, and weld in the flat position using the GMAW process. PREREQUISITE: 31442300 Welding Intro or COREQUISITES: 10442100 Safety and Welding Fundamentals or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

GMAW-HORIZONTAL POSITION (WIRE/MIG)...will use safe shop work practices while producing 3/4" fillet welds using the GMAW and MCAW welding processes and 1/4" fillet welds while welding tube to plate in the horizontal position. Learners will produce groove weldments in flat and horizontal positions, using .035 hard wire, .052 Metal Core and Metal electrode wires. COREQUISITE: 31442320 GMAW-Flat Position (Wire/Mig)

GTAW MILD STEEL FLAT/HORIZONTAL POSITION...teaches the learner to use safe shop work practices while creating welds in the flat and horizontal positions. Learners will create fillet and groove welds in flat and horizontal positions on mild steel while using the GTAW welding process. PREREQ: 31442300 Welding Intro or COREQS: 10442100 Safety & Welding Fund or 31442346 Ind Maint Welding Intro or 31442345 Auto Serv Weld

GTAW MILD STEEL OUT OF POSITION...teaches the learner to use safe shop work practices while creating welds in the vertical and overhead positions. Learners will create fillet and groove welds in vertical and overhead positions on mild steel while using the GTAW welding process; learner will be introduced to the GTAW Pulse welding process while welding mild steel in the 2F position. COREQ: GTAW Mild Steel Flat/Horizontal Position

GTAW STAINLESS/ALUMINUM HORIZONTAL POSITION...teaches the learner to use safe shop work practices while creating welds in the flat and horizontal positions. Learners will create fillet and groove welds in flat and horizontal positions on Stainless Steel and Aluminum while using the GTAWP/GTAW welding 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: GTAW Mild Steel Out of Position (Heli-Arc/TIG)

GTAW STAINLESS/ALUMINUM OUT OF POSITION...teaches learner to use safe shop work practices while creating welds in the vertical and overhead positions. Learners will create fillet and groove welds in vertical and overhead positions on Stainless Steel and Aluminum while using the GTAWP/GTAW welding process. 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: GTAW Stainless/Aluminum Horizontal Positions

INTERPERSONAL SKILLS...prepares the learner to model interpersonal skills, ethics and diversity.

METAL MANUFACTURING PROCESSES...prepares learner to communicate using proper terminology that is used in industry as it pertains to use of hand/power tools and measurement. Learner will demonstrate good safety practices while in a work place environment, demonstrate the proper use of hand and power tools. Learner will complete steel fabrications using hand/power tools and classify and install industrial fasteners. Learner will be introduced to material handling operations by using the overhead crane and fork lift. COREQ: 31442351 Precisions Msrmt & Layout and 10442100 Safety & Welding Fund or 31442300 Welding Intro or 31442346 Ind Maint Welding Intro or 31442345 Auto Serv Weld

PIPE WELDING FUNDAMENTALS...teaches the learner to use safe shop work practices while creating welds as it pertains to pipe welding. The learner will weld circumferential padding plates and groove welds in the flat position. Students will make 1/4" and 3/8" fillets in the 2F position while using the SMAW, FCAW and GTAW welding processes. Learners will weld T, Y, K connection welds in the flat and horizontal positions while using the SMAW, GMAW, FCAW and GTAW welding processes. COREQUISITES: 31442326 Flux Core Arc-Vertical/Overhead Position, 31442316 SMAW-Overhead Position (Stick), and 31442336 GTAW Stainless/Aluminum Out of Position

PRECISION MEASUREMENT AND LAYOUT...prepares the learner to communicate proper measurement terminology that is used in industry; will develop safety practices for the workplace while using measuring equipment; 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 and analyze a variety of steel fabrications while using measuring equipment.

SAFETY AND WELDING FUNDAMENTALS...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.

SMAW-FLAT POSITION (STICK)...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. PREREQUISITE: 31442300 Welding Intro or COREQUISITES:10442100 Safety and Welding Fundamentals or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding/Industrial Maint Welding Intro or 31442345 Auto Servicing/Welding

SMAW-HORIZONTAL POSITION (STICK)...teaches the learner to use safe shop work practices while creating welds in the horizontal position; 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; perform Groove welds in the horizontal position. COREQUISITE: 31442310 SMAW-Flat Position (Stick)

SMAW-OVERHEAD POSITION (STICK)...teaches learner to use safe shop work practices while creating welds in the overhead position. Learners will create fillet welds and groove welds in the overhead position. Learners will be introduced to pipe welding while using the SMAW welding process. COREQUISITE: 31442314 SMAW-Vert Position (Stick)

SMAW-VERTICAL POSITION (STICK)...teaches the learner to use safe shop work practices while creating welds in the vertical position; Students will experience the art of welding in the vertical position. To understand the vertical position, students will perform padding plates and fillet welds in the vertical position; Groove welds in the vertical position. Groove welds will be with and without backing. COREQUISITE: 31442312 SMAW-Horizontal Position (Stick)

WELD EXAMINATION...is a study of the basic principles of weld quality. Emphasis will be on identifying and testing ferrous and non-ferrous materials. Learners will be introduced to hardening of ferrous material using the Oxyfuel process. The learner will be introduced to the inspection process of welds through NDT (non-destructive testing) and DT (destructive testing).

WELD PRINT 1 PRINT FUNDAMENTALS...prepares learner to interpret manufacturing drawing by applying orthographic projection principles, by recognizing types of lines used in print reading. How manufacturing prints are dimensioned. Develop print reading strategies by locating the bill of materials, title blocks, and revision blocks. Learners will be introduced to the AWS welding symbols and how they relate to manufacturing drawing.

WELD PRINT 2 WELD/WELDING SYMBOLS...prepares the learner to indicate key elements of a welding drawing, identify common joint types and edge preparations, correlate welds with basic joint types, Distinguish between the different types of welds and their respective symbols, Identify the location of a weld with respect to the joint using the elements included on a print and explain the rules governing the use of the arrow, reference line, supplementary symbols, and combined welding symbols. COREQUISITE: 31442385 Weld Print 1 Print Fundamentals

WELDING ADVANCE PROCESS 1...the learner will demonstrate safe shop working practices while welding out of position. The Learner will perform V-groove welds in the 3G and 4G position using the SMAW, FCAW and GTAW welding processes. Students will perform CAC cutting and be introduced to dye penetrant testing. Students will create intermittent fillet welds in the horizontal position using the GMAW welding processes. COREQUISITES: 31442326 Flux Core Arc-Vertical/Overhead Position, 31442316 SMAW-Overhead Position (Stick), and 31442336 GTAW Stainless/Aluminum Out of Position

WELDING ADVANCE PROCESS 2...the learner will demonstrate safe shop working practices while welding out of position. The learner will perform V-groove welds in the 3G and 4G position using the SMAW, FCAW and GTAW welding processes. By creating these Grooves, the student will have an opportunity to become a certified welder with the AWS. Students will create staggered intermittent fillet welds in the 2F position using the SMAW welding processes. 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 assembly drawings which would include the learner's ability to read and interpret simple drawings, Create sketches using appropriate welding symbols, follow written procedures, and process materials parts to proper size to fit steel fabrications. Learners will be introduced to metal finishing techniques needed to complete steel fabrications. COREQUISITE: 31442385 Weld Print 1 Print Fundamentals 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 MATH BASICS...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 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 Flux Core Arc-Vent/Overhead and PREQUISITE: 31442300 Welding Intro or COREQUISITES: 10442100 Safety and Welding Fundamentals or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

WORKPLACE FUNDAMENTALS...prepares the learner to incorporate problem solving, creativity and communication skills into daily workplace habits.

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.

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 1st 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 Admissions Advisor at 920-693-1162.

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 & Safety**	2
10482110	Energy and Solar Power	1
10620122	Industrial Wiring	2
10620155	Hydraulics & Pneumatics	3
10620105	DC Fundamentals	2
10804113	College Technical Mathematics 1A OR 10804198 Calculus 1* (4 cr)	3
		16
Term 2		
10482106	Wind Technician 2 - Tools and Maintenance**	3
10482124	Wind Technician 3 Lab**	1
10620138	Programmable Controllers - Allen Bradley	3
10620110	AC Fundamentals	2
10620141	Industrial Controls & Motors	3
		12
Summer Term		
10482132	Turbine Maintenance** OR 10482103 Wind Farm Practical Experience (2 cr)**	2
10482126	Wind Technician 4**	3
		5
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 60

*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, equipped body weight of 130-310 pounds.

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your program counselor for details. The tuition and fees are approximate based on 2022-2023 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 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 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

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 or 10620155 Hydraulics and Pneumatics COREQUISITE: 10620110 AC Fundamentals or 10660110 AC Fundamentals

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

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: 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 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 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

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 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. 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 SAFETY...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. This course 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. COREQUISITE: 10482101 Wind Systems Introduction

WIND TECHNICIAN 2 - TOOLS AND MAINTENANCE...develops skills in repair and maintenance of commercial and medium size wind turbines. Industry standards, training manuals, and field experience are course standards. Students are trained in the proper use of hand tools and both hand and hydraulic torque tools. COREQUISITE: 10482104 Wind Technician 1 - Rescue & Safety

WIND TECHNICIAN 3 LAB...familiarizes students with schematic reading and prepares the learner to use schematics for troubleshooting and LOTO. Students will demonstrate proficiency in performing a variety of maintenance functions on the GE 1.5 nacelle including filter changes, generator brush maintenance and brake system maintenance. COREQUISITE: 10482106 Wind Technician 2 - Tools & 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 Mtnc or 10482103 Wind Farm Practical Experience and 10482128 Wind Tech 5

WIND TECHNICIAN 5 LAB...demonstrates proficiency in the use of a multimeter for troubleshooting and LOTO. Students will demonstrate proficiency in troubleshooting motors and safely changing out motors as well as accessing and working in the hub of the GE 1.5. 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, 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 equiv and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading plcmnt assessment equiv

Program Number 10-482-1
Associate Degree in Applied Science
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.

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 1st 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 Admissions Advisor at 920-693-1162.

CONTACT

LTC Admissions Advisor
 920.693.1162 • Admissions@gotoltc.edu

REAL EXPERIENCE FOR THE REAL WORLD

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2022)		
10482110	Energy and Solar Power	1
10620105	DC Fundamentals	2
10804113	College Technical Math 1A OR 10804198 Calculus 1* (4 cr)	3
		6
Term 2 (Spring 2023)		
10620155	Hydraulics & Pneumatics	3
10620138	Programmable Controllers - Allen Bradley	3
10620-110	AC Fundamentals	2
		8
Term 3 (Fall 2023)		
10482101	Wind Systems Intro	3
10482104	Wind Technician 1 - Rescue and Safety**	2
10620122	Industrial Wiring	2
		7
Term 4 (Spring 2024)		
10482106	Wind Technician 2 - Tools & Maintenance**	3
10482124	Wind Technician 3 Lab**	1
10620141	Industrial Controls & Motors	3
		7
Term 5 (Summer 2024)		
10482126	Wind Technician 4**	3
10482132	10482132 Turbine Maintenance** OR Wind Farm Practical Experience	2
		5
Term 6 (Fall 2024)		
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 2025)		
10809195	Economics OR 10809196 Introduction to Sociology	3
10801196	Oral/Interpersonal Communication	3
		6
Term 8 (Fall 2025)		
10620164	Electromechanical Systems	2
10620195	Industrial Troubleshooting	1
10482133	Wind Systems Networking	2
10482128	Wind Technician 5 Lab**	2
		7
Term 9 (Spring 2026)		
10801195	Written Communication	3
10809198	Introduction to Psychology	3
		6
		TOTAL 60

*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, equipped body weight of 130-310 pounds.

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your program counselor for details. The tuition and fees are approximate based on 2022-2023 rates and are subject to change prior to the start of the academic year.

2022-23

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 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

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 or 10620155 Hydraulics and Pneumatics COREQUISITE: 10620110 AC Fundamentals or 10660110 AC Fundamentals

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

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: 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 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 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

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 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. 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 SAFETY...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. This course 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. COREQUISITE: 10482101 Wind Systems Introduction

WIND TECHNICIAN 2 - TOOLS AND MAINTENANCE...develops skills in repair and maintenance of commercial and medium size wind turbines. Industry standards, training manuals, and field experience are course standards. Students are trained in the proper use of hand tools and both hand and hydraulic torque tools. COREQUISITE: 10482104 Wind Technician 1 - Rescue & Safety

WIND TECHNICIAN 3 LAB...familiarizes students with schematic reading and prepares the learner to use schematics for troubleshooting and LOTO. Students will demonstrate proficiency in performing a variety of maintenance functions on the GE 1.5 nacelle including filter changes, generator brush maintenance and brake system maintenance. COREQUISITE: 10482106 Wind Technician 2 - Tools & 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

WIND TECHNICIAN 5 LAB...demonstrates proficiency in the use of a multimeter for troubleshooting and LOTO. Students will demonstrate proficiency in troubleshooting motors and safely changing out motors as well as accessing and working in the hub of the GE 1.5. 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, 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 equiv and COREQUISITE: 10838105 Intro to Rdg & Study Skills or Reading plcmnt assessment 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 Bureau of Labor Statistics 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.

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 1st 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.*

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 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 Safety**	2
10482110	Energy and Solar Power	1
10620122	Industrial Wiring	2
10620155	Hydraulics & Pneumatics	3
10620105	DC Fundamentals	2
10804113	College Technical Mathematics 1A	3
		16
Term 2		
10482106	Wind Technician 2-Tools & Maintenance**	3
10482124	Wind Technician 3 Lab**	1
10620138	Programmable Controllers-Allen Bradley	3
10620110	AC Fundamentals	2
10620141	Industrial Controls & Motors	3
		12
Summer Term		
10482132	Turbine Maintenance	2
10482126	Wind Technician 4 **	3
		5
Term 3		
10482133	Wind Systems Networking	2
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
		15
		TOTAL 48

*Students who plan to also achieve a Bachelor's degree are encouraged to take this transferable course - 10804198 Calculus 1.

**These class dates and times may be rescheduled due to inclement weather. Students must be within safe-climbing, equipped body weight of 130-310 pounds.

Curriculum and program acceptance requirements are subject to change. Program start dates vary; check with your program counselor for details. The tuition and fees are approximate based on 2022-2023 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 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 or 10804198 Calculus 1 or 10804118 Interm Algebra with Apps

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 or 10620155 Hydraulics and Pneumatics COREQUISITE: 10620110 AC Fundamentals or 10660110 AC Fundamentals

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

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: 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 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.

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 SAFETY...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. This course 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. COREQUISITE: 10482101 Wind Systems Introduction

WIND TECHNICIAN 2 - TOOLS AND MAINTENANCE...develops skills in repair and maintenance of commercial and medium size wind turbines. Industry standards, training manuals, and field experience are course standards. Students are trained in the proper use of hand tools and both hand and hydraulic torque tools. COREQUISITE: 10482104 Wind Technician 1 - Rescue & Safety

WIND TECHNICIAN 3 LAB...familiarizes students with schematic reading and prepares the learner to use schematics for troubleshooting and LOTO. Students will demonstrate proficiency in performing a variety of maintenance functions on the GE 1.5 nacelle including filter changes, generator brush maintenance and brake system maintenance. COREQUISITE: 10482106 Wind Technician 2 - Tools & 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 Mtnc or 10482103 Wind Farm Practical Exp & 10482128 Wind Tech 5

WIND TECHNICIAN 5 LAB... demonstrates proficiency in the use of a multimeter for troubleshooting and LOTO. Students will demonstrate proficiency in troubleshooting motors and safely changing out motors as well as accessing and working in the hub of the GE 1.5. 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 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 first semester schedule, review your entire plan of study and discuss the results of the Student Success Questionnaire.

FUTURE SEMESTER ENROLLMENT STEPS

- Complete online Student Success Tutorial prior to registering for second semester.

APPROXIMATE COSTS

- \$143.45 per credit tuition (WI resident) plus \$8.61 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 36 additional credits for the Wind Technician technical diploma.

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 Safety	2
10482110	Energy and Solar Power	1
		6
Term 2		
10482106	Wind Technician 2 - Tools 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, equipped body weight of 130-310 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 2022-2023 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

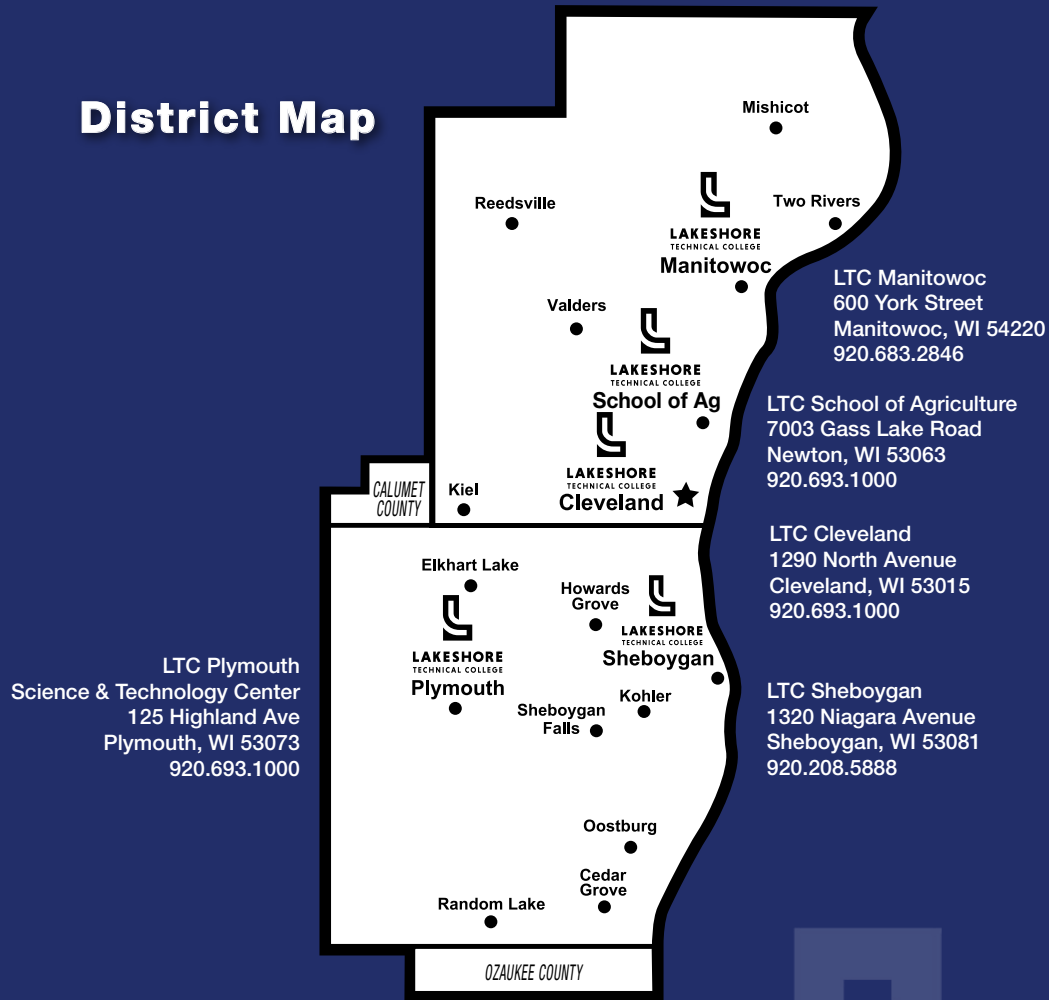
WIND SYSTEMS INTRODUCTION... prepares the learner to assess the global energy picture, analyze the causes of wind flow and wind flow properties, write a site assessment, explore small, medium, and large wind turbine designs, assess the environmental effects of wind turbines, perform business assessments 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 SAFETY... 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. This course 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. COREQUISITE: 10482101 Wind Systems Introduction

WIND TECHNICIAN 2 - TOOLS AND MAINTENANCE... develops skills in repair and maintenance of commercial and medium size wind turbines. Industry standards, training manuals, and field experience are course standards. Students are trained in the proper use of hand tools and both hand and hydraulic torque tools. COREQUISITE: 10482104 Wind Technician 1 - Rescue & Safety

WIND TECHNICIAN 3 LAB... familiarizes students with schematic reading and prepares the learner to use schematics for troubleshooting and LOTO. Students will demonstrate proficiency in performing a variety of maintenance functions on the GE 1.5 nacelle including filter changes, generator brush maintenance and brake system maintenance. COREQUISITE: 10482106 Wind Technician 2 - Tools & Maintenance

District Map



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