

Program Number 31-623-1 Technical Diploma • Two Terms

ABOUT THE PROGRAM

Food Manufacturing and Processing is a unique technical diploma program designed with the help of local food industry partners to meet the needs of the workplace by providing the knowledge, skills, and abilities essential to food production. Employment in food manufacturing continues to remain strong, even with changes in the economy. This program is a combination of sanitation, hazard analysis and critical control points, lean manufacturing principles, quality concepts, and high speed packaging. Graduates of this program are prepared for entry level leadership roles in the food manufacturing industry.

PROGRAM OUTCOMES

- Develop critical thinking and problem-solving skills
- Apply appropriate regulations and guidelines
- Identify, monitor, evaluate and report health and sanitation hazards
- Demonstrate ability to set up, operate and monitor production processes
- Apply good manufacturing processes
- Apply tactics and strategies in utilization of quality improvement processes

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

PROGRAM ADMISSIONS STEPS

- Work with Career Coach to:
 - Submit application and \$30 fee.
 - Submit official transcripts (high school and other colleges).

ENROLLMENT PROCESS

After you are admitted to your program you will meet with your Advisor to plan your first semester schedule, review your entire plan of study, discuss placement assessment results and complete any additional enrollment requirements. Enrollment requirements for this program's courses include:

- Complete an assessment for placement (Accuplacer or ACT).
- Complete Functional Abilities Statement of Understanding form.
- Meet with your program's advisor.

APPROXIMATE COSTS

- \$140 per credit (resident)
- Other fees vary by program (books, supplies, materials, tools, uniforms, health related exams, etc.) Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

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

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10623101	Quality Concepts	3
10109161	Sanitation Sterilization in Food Production	2
10804123	Math with Business Applications	3
10623161	Hazard Analysis in Food Production (HACCP)	2
31462340	Industrial Technology Packaging	1
31462342	Safety in Manufacturing	1
10623103	Introduction to Manufacturing Lab Practices	3
		15
Term 2		
10623118	Lean Manufacturing Overview	3
10623106	Food Processing Regulations	2
10801196	Oral/Interpersonal Communication	3
10623104	Food Management Safety Systems	2
10196189	Teambuilding and Problem Solving	3
10623105	Applied Food Microbiology	3
		16
		TOTAL 31

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details.



APPLIED FOOD MICROBIOLOGY...provides an overview of the relationship of microorganisms to foodborne illness and intoxications. Requires no previous knowledge or experience with biology. Includes discussion of the organisms commonly identified in foodborne illness while exploring how microorganisms can affect food quality, spoilage, and safety. Explores the growing use of probiotics with the food industry. Lab activities include techniques and procedures used in the identification and qualification of pathogens.

FOOD MANAGEMENT SAFETY SYSTEMS...will examine all aspects of an effective plant food safety system. Includes development, examining requirements (state and federal), roles and responsibilities to ensure a comprehensive program of practices and policies for a manufacturing facility. Topics such as internal auditing, management systems, food defense and others will be covered in this class.

FOOD PROCESSING REGULATIONS...prepares the learner to identify, locate, understand, and apply the federal and state regulations governing the food industry to the manufacturing site and processing operations. Review USDA product recall regulations and third party audits.

HAZARD ANALYSIS IN FOOD PRODUCTION...develops the ability to identify the critical safety issues involved in the handling, processing, packaging, and sanitation control for safe food production. Students will analyze hazards and critical control points in food production methods and develop record keeping and verification skills needed for the implementation and maintenance of a HACCP plan. Case studies in poultry, dairy processing, cheese, meat, and thermal vegetable processing will be examined.

INDUSTRIAL TECHNOLOGY - PACKAGING...introduces participants to the types of packaging machinery and processes. Topics will include safety, packaging materials, package sealing, machine operations, changeovers and food safety. Participants will operate a packaging machine, metal detector, print coder, check weigher and perform basic maintenance and troubleshooting of a packaging machine.

INTRODUCTION TO MANUFACTURING LAB PRACTICES...introduces the learner to beginning laboratory concepts and procedures. Emphasis will be placed on general laboratory safety, basic equipment utilization, and calibration techniques. An introduction to scientific inquiry will be addressed. Proper techniques in documentation as it relates to quality control in verification of a quality system will be introduced. Concepts in data analysis will be reviewed as it relates to creation of a laboratory notebook.

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.

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 equivalent and COREQUISITE: 10838105 Intro Reading and Study Skills or equivalent or CONDITION: 610061 Agribusiness/ Agronomy Basic program admissions requirements met

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

QUALITY CONCEPTS.... provides an overview of quality systems, methods and analysis using Minitab software. 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 ISO9000 and Six Sigma will be explored. Minitab software will be taught and utilized to collect and analyze data. 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 MANUFACTURING...will provide instruction on a variety of general industry safety standards (1910) including lock-out-tag-out, PPE equipment, and hazard communication. Participants will receive the Department of Labor 10-hour OSHA card. Participants will also complete First Aid/CPR training dealing with scene safety, universal precautions, patient assessment, trauma emergencies, and medical emergencies. Adult CPR is included. Upon completion, the student receives and LTC First Aid Certification.

SANITATION STERILIZATION IN FOOD PRODUCTION...covers how every food production operation needs to have a food safety system in place that is designed specifically to guarantee that the food being processed and packaged will be safe to eat. In this course learners will examine the microbiology behind the sanitation and sterilization practices in place in the food processing and production industry. Learners will gain a keen perspective on the importance of sanitation and sterilization and will practice sanitation and sterilization techniques.

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.