

**2020-21 LAKESHORE
TECHNICAL COLLEGE
CATALOG**

Lakeshore Build

Accounting	2	IT-Web and Software Developer	102
Accounting Assistant	8	IT-Web Development Specialist	104
Administrative Professional	10	Machine Tool Operation	106
Advanced EMT	12	Machinist Apprentice	108
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Automotive Collision Repair & Refinish Technician	20	Maintenance Technician Apprentice	114
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Lakeshore Technical College does not discriminate on the basis of race; color; creed; national origin; ancestry; religion; age; sex; sexual orientation/gender; marital status; pregnancy; disability; arrest or conviction record; political affiliation; veteran status; genetic testing; or service in the armed forces in its services, employment programs, and /or its educational programs and activities.

It is the policy of Lakeshore Technical College not to discriminate on the basis of disability in admission or access to or treatment in its programs or activities. Lakeshore Technical College provides reasonable accommodations to assist persons with disabilities which affect their ability to access or participate in its programs or activities. Persons who wish to request assistance or reasonable accommodations should contact Student Services at 1.888.GO.TO.LTC (1.888.468.6582)

DISCLAIMER

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

STUDENT HANDBOOK

The most up-to-date student handbook is available online at: [**gotoltc.edu/Student-Handbook**](http://gotoltc.edu/Student-Handbook).

MISSION

To enrich lives and strengthen the economy by preparing a workforce that is skilled, diverse, and flexible.

VISION

To meet the needs of the future with innovation and excellence.

ACCREDITATION AND AFFILIATION

Lakeshore Technical College is accredited by the Higher Learning Commission (HLC), one of six regional accrediting bodies authorized by the U.S. Department of Education. College accreditation includes approval to offer distance education courses and programs. The commission can be reached at: The Higher Learning Commission, 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604. Phone: 800.621.7440.

HISTORY OF LTC

Lakeshore Technical College (LTC) is a public, nonprofit organization that was established in 1967 as the Lakeshore Vocational, Technical, and Adult Education School. The history of LTC 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. LTC 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 does not discriminate on the basis of race, color, national origin, sex, disability or age in employment, admissions or its programs or activities. The vice president of human resources and talent development has been designated to handle inquiries regarding the College's nondiscrimination policies.

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

ABOUT THE PROGRAM

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

PROGRAM OUTCOMES

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

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete online Student Success Questionnaire.
- Schedule a Program Advising Session to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

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

RELATED PROGRAMS

- Accounting Assistant Technical Diploma Program
- Tax Preparer Certificate

CONTACT

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920.693.1162 • CareerCoach@gotoltc.edu

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

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



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

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

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

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

ACCOUNTING CAPSTONE...provides the learner with the opportunity to synthesize the theory and processes learned in the Accounting program via a capstone project. This course is an exercise in professional analysis and preparedness--reemphasizing the need for professional communication. PREREQUISITES: 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 or 10101123 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: 10101123 Income Tax or 10101122 Income Tax

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

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

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

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

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

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

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

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

ABOUT THE PROGRAM

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		8
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10101180	Spreadsheet Data Management	2
		6
Term 3 (Summer 2021)		
10101135	Payroll Accounting	3
10101182	Accounting Software Applications	2
10801195	Written Communication	3
		8
Term 4 (Fall 2021)		
10101115	Accounting 3	4
10809195	Economics	3
		7
Term 5 (Spring 2022)		
10101118	Accounting 4	2
10101124	Auditing	2
10809196	Introduction to Sociology	3
		7
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10801196	Oral/Interpersonal Communication	3
10809198	Introduction to Psychology	3
		6
Term 7 (Fall 2022)		
10101125	Accounting Cost 1	4
10101122	Income Tax	3
10101128	Income Tax 2	2
		9
Term 8 (Spring 2023)		
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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 Acctng 1 or 10101150 Office Acctng

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 or 10101123 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: 10101123 Income Tax or 10101122 Income Tax

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

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

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

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

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

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

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

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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

RELATED PROGRAMS

- Accounting Associate Degree
- Tax Preparer Certificate

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@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 2020-2021 rates and are subject to change prior to the start of the academic year.



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

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

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

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

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

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

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

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

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

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

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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

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

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



ACCESS - LEVEL 1...introduces students to the process of creating a database, building and populating a table, establishing table relationships, and creating queries, forms, and reports. This course is offered in a self-paced format.

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

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

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

ECOMMUNICATIONS...prepares the learner to apply proofreading skills -- punctuation, grammar, spelling, word usage, capitalization, number usage--to edit or compose error-free business documents; transcribe and correctly format business documents from dictation, dictate podcasts and other items; exposure to speech recognition functions; take and key meeting minutes; and facilitation of meetings. PREREQ: 10106131 Document Formatting or 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 area-life event and/or assisting an organization through a service learning experience. PREREQUISITE: 10106167 Microsoft Office Integration or Microcomputer Business Applications 3

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...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. This course is offered in a self-paced format. PREREQUISITE: 10103121 Excel - Level 1 or equivalent

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

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

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

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

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

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

MS PROJECT...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: 10106168 Microcomputer Bus Apps 2 or 10103122 Excel-Lev 2 or equiv

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: 10106168 Microcomputer Business Apps 2 or 10103121 Excel-Level 1 or equivalent or CONDITION: 191452 Entrepreneurship & Business certificate enrollment reqs met

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

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

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

POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects. This course is offered in a self-paced format.

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

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

SMALL BUSINESS APPLICATIONS...will explore upcoming software/hardware trends for small businesses. Applications that are easy access and affordable will be covered, as well as devices such as iPads, SmartPhones, and tablets. Emphasis will be placed on researching and learning the most efficient way to accomplish tasks for a small business PREREQUISITES: 10103192 Word - Level 2 and 10103122 Excel - Level 2.

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 or Microcomputer Business Applications 3

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 student to multi-column documents, templates, and the mail merge feature while applying WordArt, themes, styles, quick parts, and other advanced document formatting features. This course is offered in a self-paced format. PREREQUISITE: 10103191 Word - Level 1 or equivalent

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

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

ABOUT THE PROGRAM

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

PROGRAM OUTCOMES

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

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

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

APPROXIMATE COSTS

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

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

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

TOTAL 6

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



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

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

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

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

ABOUT THE PROGRAM

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

PROGRAM OUTCOMES

- Develop an agri-business 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTES

Students may alternately choose to earn the Agriculture Technician Technical Diploma after completing Term 1 and Term 2 coursework. In addition, for students who are not seeking a diploma, select courses in this program will provide focused certificates of learning in agribusiness crops and soils, agribusiness financial, and agribusiness livestock. Graduates of the Dairy Herd Management program can earn their Dairy Business Management associate degree with one additional year of coursework.

MPTC CLASSES

This program is shared with Moraine Park Technical College. MPTC district students follow LTC's admissions process; however, they are able to attend classes at a MPTC campus classroom by receiving both in-person and video conference instruction. MPTC Agribusiness Science & Technology program students will be issued a laptop from LTC while learning and applying the program's software applications.

ONLINE STUDENTS

Out-of-district students and working adults are able to take Term 1 & 2 courses in the online format. Instructor led field trips and off campus activities are not an included requirement. Some activities may also be required.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

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

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

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



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

AGRIBUSINESS INTERNSHIP...provides the student the opportunity to choose from a broad variety of occupational experiences in the agribusiness industry. Student will work with faculty to develop a plan and to identify, coordinate, and evaluate work-associated learning experiences as they relate to the major career focus of the student. COREQUISITES: 10006110 Agricultural Finance, 10006122 Principles Crop Production, 10006124 Principles of Animal Breeding, & 10006126 Agribusiness Economics

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: 10006110 or 10006110OL Agribusiness Economics

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

AGRICULTURE BUSINESS ACCOUNTING...provides the learner with a study of accounting systems and methods appropriate for farms and agricultural businesses including the application of basic information-recording skills to allow for the construction of financial statements and filing of income tax forms. Students will produce and analyze financial statements and apply managerial accounting concepts by utilizing relevant financial software. PREREQUISITES: 10006110 Agricultural Finance or 10006110OL Agricultural Finance – Online or COREQUISITES: 10804123 Math w/Business Apps and 10801196 Oral/Interpersonal Comm and 31001 Hort Tech Diploma

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 recordkeeping 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. PREREQUISITES: 10006124 or 10006124OL Principles of Animal Breeding

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

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

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

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 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 DILHR. COREQUISITE: 10006130 or 10006130OL Agricultural Marketing and Sales

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 Mng

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 Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

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 or 10006113OL 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. COREQUISITES: 10006136 or 10006136OL Principles of Agronomy

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 or 10006114OL 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 10006116OL Intro to Soil Science Online or 10001123 Site & Soil Analysis or 1009105 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 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 agri-business 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTES

Students may alternately choose to earn the Agriculture Technician Technical Diploma after completing Term 1 and Term 2 coursework. In addition, for students who are not seeking a diploma, select courses in this program will provide focused certificates of learning in agribusiness crops and soils, agribusiness financial, and agribusiness livestock. Graduates of the Dairy Herd Management program can earn their Dairy Business Management associate degree with one additional year of coursework.

MPTC CLASSES

This program is shared with Moraine Park Technical College. MPTC district students follow LTC's admissions process; however, they are able to attend classes at a MPTC campus classroom by receiving both in-person and video conference instruction. MPTC Agribusiness Science & Technology program students will be issued a laptop from LTC while learning and applying the program's software applications.

ONLINE STUDENTS

Out-of-district students and working adults are able to take Term 1 & 2 courses in the online format. Instructor led field trips and off campus activities are not an included requirement. Some activities may also be required.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2020)		
10006112	Farm Business Management	3
10006116	Intro to Soil Science	3
10804123	Math with Business Applications	3
		9
Term 2 (Spring 2021)		
10006110	Agricultural Finance	3
10006122	Principles of Crop Production	3
10006126	Agribusiness Economics	3
		9
Term 3 (Fall 2021)		
10006135	Agriculture Business Accounting OR 10101155 Accounting for Professionals (3 cr)	3
10006115	Agricultural Sales & Communications	3
		6
Term 4 (Spring 2022)		
10006130	Agricultural Commodity Marketing	3
10006140	Legal Aspects of Agribusiness	3
		6
Term 5 (Fall 2022)		
10006114	Intro to Animal Science	3
10801195	Written Communications	3
		6
Term 6 (Spring 2023)		
10006124	Principles of Animal Breeding	3
10006128	Agribusiness Internship*	2
10809196	Introduction to Sociology	3
		8
Term 7 (Fall 2023)		
10006146	Precision Ag Technologies	3
10006144	Nutrition Principles	3
10801196	Oral/Interpersonal Communication	3
		9
Term 8 (Spring 2024)		
10006141	Livestock Production Systems & Management	3
10006134	Animal Records	1
10809198	Introduction to Psychology	3
		7
		TOTAL 60

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

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

AGRIBUSINESS INTERNSHIP...provides the student the opportunity to choose from a broad variety of occupational experiences in the agribusiness industry. Student will work with faculty to develop a plan and to identify, coordinate, and evaluate work-associated learning experiences as they relate to the major career focus of the student. COREQUISITES: 10006110 Agricultural Finance, 10006122 Principles Crop Production, 10006124 Principles of Animal Breeding, & 10006126 Agribusiness Economics

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: 10006110 or 10006110OL Agribusiness Economics

AGRICULTURAL FINANCE...introduces learner to major aspects of agribusiness financial management through extensive problem solving, financial analysis and planning. Students will describe and calculate the sweet 16 ratios, business cash flows, inventory controls, budgeting and borrowing considerations of various types of agribusinesses. Relevant software tools will be introduced. PREREQUISITE: 10006112 Farm Business Management or 10006120L Farm Business Management – Online

AGRICULTURE BUSINESS ACCOUNTING...provides the learner with a study of accounting systems and methods appropriate for farms and agricultural businesses including the application of basic information-recording skills to allow for the construction of financial statements and filing of income tax forms. Students will produce and analyze financial statements and apply managerial accounting concepts by utilizing relevant financial software. PREREQUISITES: 10006110 Agricultural Finance or 10006110OL Agricultural Finance – Online or COREQUISITES: 10804123 Math w/Business Apps and 10801196 Oral/Interpersonal Comm and 31001 Hort Tech Diploma

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 recordkeeping 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. PREREQUISITES: 10006124 or 10006124OL Principles of Animal Breeding

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

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

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

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 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 DILHR. COREQUISITE: 10006130 or 10006130OL Agricultural Marketing and Sales

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 Mng

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 Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

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 or 10006113OL 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. COREQUISITES: 10006136 or 10006136OL Principles of Agronomy

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 or 10006114OL 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 10006116OL Intro to Soil Science Online or 10001123 Site & Soil Analysis or 1009105 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 Rdg & Study Skills or Reading placement assessment equivalent

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

ABOUT THE PROGRAM

Successful individuals employed in agriculture occupations need a basic understanding of industry specific financial operations, goal-setting, human relations, crops and soil management, as well as livestock 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTES

This diploma is embedded within the Agribusiness Science & Technology Associate degree. This means that Agriculture Technician graduates have the opportunity to also complete their associate degree with one more year of college.

MPTC CLASSES

This program is shared with Moraine Park Technical College. MPTC district students follow LTC's admissions process; however, they are able to attend classes at a MPTC campus classroom by receiving both in-person and video conference instruction. MPTC Agriculture Technician program students will be issued a laptop from LTC while learning and applying the program's software applications.

ONLINE STUDENTS

Out-of-district students and working adults, as well as high school students are able to take courses in the online format. Instructor led field trips and off campus activities are not an included requirement.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

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

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

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



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

AGRIBUSINESS INTERNSHIP...provides the student the opportunity to choose from a broad variety of occupational experiences in the agribusiness industry. Student will work with faculty to develop a plan and to identify, coordinate, and evaluate work-associated learning experiences as they relate to the major career focus of the student. COREQUISITES: 10006110 Agricultural Finance, 10006122 Principles Crop Production, 10006124 Principles of Animal Breeding, & 10006126 Agribusiness Economics

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

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 PC DART, CowManager, and DairyCOMP 305, will be utilized. PREREQUISITES: 10006124 or 10006124OL Principles of Animal Breeding

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

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

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

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

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 or 10006114OL 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 10006116OL Intro to Soil Science Online or 10091105 Dairy Feeding Management or 10001123 Site & Soil Analysis

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

ABOUT THE PROGRAM

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

PROGRAM OUTCOMES

- Straighten collision damaged sheet metal.
- Refinish automobile body parts.
- Replace non-structural panels and parts.
- Perform auto collision welding procedures.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

- \$138.90 per credit tuition (WI resident) plus \$8.33 per credit student activity fee. \$10 per credit online or hybrid fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.
- Students are eligible to purchase Snap-On tools as part of their tuition in Terms 1, 2 and 3 at an approximate total cost of \$2,300.

FINANCIAL AID

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

SPECIAL NOTE

- The program is accredited by NATEF (National Automotive Technicians Education Foundation).
- Students are prepared and take two of the I-CAR Welding Certifications. They are the MIG Steel and MIG Aluminum ICAR Welding Exams.
- Students are well prepared to take the ASE (Automotive Service Excellence) Exam.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

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

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



AUTO COLLISION ELECTRICAL MECHANICAL...prepares the learner to examine and troubleshoot basic electrical circuits, interpret electrical circuit diagrams, service automotive batteries, lighting systems, and passive restraint systems. The learner will perform soldering and splicing of electrical components. Students will also learn how to diagnose and service automotive air conditioning systems and have the opportunity to become EPA certified. COREQUISITE: 31405320 Intro to Auto Collision

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

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

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

AUTO COLLISION WIRE WELDING...introduces the learner to information and skills necessary to safely operate gas metal arc welding, aluminum welding, and oxyacetylene cutting as it applies to auto collision. Upon completion, the student is prepared to take the I-CAR steel weld qualification test. COREQUISITE: 31405340 Intro to Auto Refinishing

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

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

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

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

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

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

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

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

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

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

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

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

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

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

INTRODUCTION TO AUTO REFINISHING...introduces the learner to auto collision and refinishing course procedures, practices, and grading policy and develops safer work habits and attitudes. COREQUISITE: 31405320 Intro to Auto Collision

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

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

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

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

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

ABOUT THE PROGRAM

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

PROGRAM OUTCOMES

- Practice safe techniques when servicing automobiles
- Estimate automotive repair and order replacement parts
- Communicate and respond to customers' needs
- Use tools and equipment to diagnose and service automobile systems including:
 - Automotive internal combustion engines
 - Automotive transmission/transaxle systems
 - Automotive manual drive train and axle systems
 - Automotive steering and suspension steering systems
 - Automotive brake systems
 - Automotive electrical/electronic systems
 - Automotive heating and air conditioning systems
 - Engine performance systems
- Demonstrate professionalism appropriate for the auto service industry
- Perform maintenance and light repair of automotive steering and suspension systems
- Perform maintenance and light repair of automotive brake systems
- Perform maintenance and light repair of automotive electrical and electronic systems

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

- \$138.90 per credit tuition (WI resident) plus \$8.33 per credit student activity fee. \$10 per credit online or hybrid fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.
- Students are eligible to purchase Snap-On tools as part of their Term 1, 2 and 3 enrollments. The total tool cost is approximately \$2,400.

FINANCIAL AID

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

SPECIAL NOTES

- The Spring Terms 2 and 4 are 17 weeks in length.
- You'll need to drive manual transmissions and have a valid driver's license.
- This program is certified by NATEF (National Automotive Technicians Education Foundation). Students are well-prepared to take the ASE (Automotive Service Excellence) Exam.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
31809362	Psychology for Life	1
10106116	Computer Essentials	1
31404301	Auto Orientation and Safety	1
31442345	Auto Servicing Welding	1
31404370	Auto Brakes	3
31404312	Auto Mechanical Math and Measuring	1
31404311	Auto Electrical Math 1	1
31404310	Auto Introduction to Electricity 2	1
31404313	Auto Electricity Fundamentals 3	2
		12
Term 2		
31404372	Auto Suspension and Steering	3
31404376	Auto Engine Repair	4
31404323	Auto Wiring Mechanics 4	2
31404326	Auto Basic Electrical 5	3
		12
Term 3		
31801359	Communication Skills for the Workplace	2
31404328	Auto Air Conditioning	2
31404316	Differential and Manual Transmissions	3
31404327	Auto Electrical Systems 6	2
31404329	Auto Engine Performance 1	3
		12
Term 4		
31404334	Automatic Transmissions	5
31404333	Auto Engine Performance 2	2
31404385	Auto Engine Performance 3	5
		12
		TOTAL 48

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



AUTO AIR CONDITIONING...provides the student with a thorough knowledge of the operation, diagnosis, and repair procedures of heating and air conditioning systems used by domestic and import automotive manufacturers. U.S. EPA, Section 609, certification is included. PREREQUISITE: 31404301 Auto Orientation & Safety

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

AUTO BRAKES...prepares the student with the theory of mechanical and hydraulic components of domestic and imported automotive braking systems, including antilock braking systems and traction controls; servicing techniques of new systems and procedures; and basic braking systems with hands-on applications. COREQUISITE: 31404301 Auto Orientation & Safety

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

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

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

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

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

AUTO ENGINE PERFORMANCE 3...prepares the learner to diagnose and repair advanced powertrain systems using specialized diagnostic equipment. Engine performance concerns on turbocharged, non-turbocharged, diesel, and hybrid engines will be addressed. COREQUISITE: 31404384 Auto Engine Performance 2

AUTO ENGINE REPAIR...prepares the student for engine reconditioning and related component repair procedures, engine rebuilding and cooling and lubrication systems, and service procedures. PREREQUISITE: 31404301 Auto Orientation & Safety

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

AUTO MECHANICAL MATH AND MEASURING...prepares the learner with the required math skills needed for the automotive servicing industry. Students will perform a variety of measurements using U.S. Standard and metric measuring instruments. Conversions, units of measure, and calculations will also be discussed.

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...prepares the student to make repairs commonly practiced in the auto industry, including safe techniques of brazing, cutting, SMAW, and GMAW.

AUTO SUSPENSION AND STEERING...prepares the student to perform testing and replacement procedures of suspension components; front and four-wheel alignment procedures for automotive and light trucks; and service procedures, including power steering diagnosis and repair. COREQUISITE: 31404301 Auto Orientation & Safety

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

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

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

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

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

PSYCHOLOGY FOR LIFE...prepares the learner to select behavior modification techniques, demonstrate techniques for enhancing memory, analyze expressions of emotion, use conflict for common good, employ techniques to reduce conflict/frustration, use several methods to reduce stress, interpret personality types, ascertain contributors to perception, and apply methods of problem-solving.

Program Number 31-404-3 Technical Diploma

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

- Practice safe techniques when servicing automobiles
- Estimate automotive repair and order replacement parts
- Communicate and respond to customers' needs
- Use tools and equipment to diagnose and service automobile systems including:
 - Automotive internal combustion engines
 - Automotive transmission/transaxle systems
 - Automotive manual drive train and axle systems
 - Automotive steering and suspension steering systems
 - Automotive brake systems
 - Automotive electrical/electronic systems
 - Automotive heating and air conditioning systems
 - Engine performance systems
- Demonstrate professionalism appropriate for the auto service industry
- Perform maintenance and light repair of automotive steering and suspension systems
- Perform maintenance and light repair of automotive brake systems
- Perform maintenance and light repair of automotive electrical and electronic systems

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

- \$138.90 per credit tuition (WI resident) plus \$8.33 per credit student activity fee. \$10 per credit online or hybrid fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.
- Students are eligible to purchase Snap-On tools as part of their Term 1, 2 and 3 enrollments. The total tool cost is approximately \$2,400.

FINANCIAL AID

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

SPECIAL NOTES

- The Spring Terms 2 and 4 are 17 weeks in length.
- You'll need to drive manual transmissions and have a valid driver's license.
- This program is certified by NATEF (National Automotive Technicians Education Foundation). Students are well-prepared to take the ASE (Automotive Service Excellence) Exam.

Catalog No.	Class Title	Credit(s)
Term 1 Nights (Fall 2020)		
31404301	Auto Orientation and Safety	1
31809362	Psychology for Life	1
31442345	Auto Servicing Welding	1
31404312	Auto Mechanical Math and Measuring	1
31404372	Auto Suspension and Steering	3
31404311	Auto Electrical Math 1	1
31404310	Auto Introduction to Electricity 2	1
		9
Term 2 Nights (Spring 2021)		
10106116	Computer Essentials	1
31404370	Auto Brakes	3
314043761A	Auto Engine Repair 1A	1
31404313	Auto Electricity Fundamentals 3	2
31404323	Auto Wiring Mechanics 4	2
		9
Term 3 Nights (Summer 2021)		
314043761B	Auto Engine Repair 1B	3
31404326	Auto Basic Electrical 5	3
		6
Term 4 Days (Fall 2021)		
31801359	Communication Skills for the Workplace	2
31404328	Auto Air Conditioning	2
31404316	Differential and Manual Transmissions	3
31404327	Auto Electrical Systems 6	2
31404329	Auto Engine Performance 1	3
		12
Term 5 Days (Spring 2022)		
31404334	Automatic Transmissions	5
31404333	Auto Engine Performance 2	2
31404385	Auto Engine Performance 3	5
		12
		TOTAL 48

AUTO AIR CONDITIONING...provides the student with a thorough knowledge of the operation, diagnosis, and repair procedures of heating and air conditioning systems used by domestic and import automotive manufacturers. U.S. EPA, Section 609, certification is included. PREREQUISITE: 31404301 Auto Orientation & Safety

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

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AUTO SUSPENSION AND STEERING...prepares the student to perform testing and replacement procedures of suspension components; front and four-wheel alignment procedures for automotive and light trucks; and service procedures, including power steering diagnosis and repair. COREQUISITE: 31404301 Auto Orientation & Safety

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

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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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete Notification of Laptop/Steno Rental Equipment form.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Career Coach 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 Career Coach
920.693.1162 • CareerCoach@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 OR 10801136 English Composition 1	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 Skillbuilding 1, 2, or 3 (optional)	3
		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
		TOTAL 61

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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, staff, 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

RELATED PROGRAMS

- Entrepreneurship & Business (19-145-2)

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10103121	Excel - Level I	1
10103191	Word - Level I	1
10196189	Team Building and Problem Solving	3
10102110	Introduction to Business	3
10801195	Written Communication OR 10801136 English Composition 1	3
10804123	Math with Business Applications	3
		14
Term 2		
10101131	Business Accounting	4
10105128	Personal Branding	2
10196193	Human Resource Management	3
10104102	Marketing, Principles of	3
10801198	Speech OR 10801196 Oral/Interpersonal Communication	3
		15
Term 3		
10101107	Managerial Accounting	4
10182102	Service Operations Management	3
10182108	Purchasing	3
10809195	Economics	3
10809198	Introduction to Psychology	3
		16
Term 4		
10102107	Internship - Business Management OR 10138101 Introduction to Global Business OR 10104104 Selling Strategies	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 2020-2021 rates and are subject to change prior to the start of the academic year.



BUSINESS ACCOUNTING...introduces Business Management students to the core concepts of accounting and how a manager uses accounting in running a business. The student will also learn how to use financial statements to manage a business. PREREQUISITE: 10804123 Math with Business Applications

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...assess 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. PREREQUISITES: 10102110 Intro to Business, 10104102 Principles of Marketing, 10196193 Human Resource Mng and COREQUISITE: 10101131 Business Accounting

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

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

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

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

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

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

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

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

MARKETING, PRINCIPLES OF...introduces the student to the consumer decision process model, the bases used to segment a market, basic concepts about goods, services, and ideas, the nature of supply chain and distribution, integrated marketing communications, and the stages of the product life cycle and their impact on the marketing mix.

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

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

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

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

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

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

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

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

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

**Program Number 50-410-1
4-Year Contract**

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

ABOUT THE APPRENTICESHIP

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

ABOUT THE CAREER

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

CAREERS

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

CONSTRUCTION APPRENTICE APPLICATION REQUIREMENTS

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

PROGRAM OUTCOMES

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

APPROXIMATE COSTS

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

PLACEMENT SCORES

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

SPECIAL NOTE

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

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

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

Catalog No.	Class Title	Credit(s)
Term 1		
50410715	Construction Carpentry Safety	1
50410719	Site Development for Carpentry Apprentices	1
2		
Term 2		
50410720	Concrete Forms for Carpentry Apprentices	1
50410721	Shoring & Floor Construction for Carpentry Apprentices	1
2		
Term 3		
50410722	Wall Construction for Carpentry Apprentices	1
50410724	Interior Finishing for Carpentry Apprentices	1
2		
Term 4		
50410716	Scaffold Erector and Tool Safety for Carpentry Apprentices	1
50410726	Roof Framing for Carpentry Apprentices	1
2		
Term 5		
50410727	Stair Design and Building for Carpentry Apprentices	1
50410725	Exterior Finishing and Doors for Carpentry Apprentices	1
2		
Term 6		
50410723	Metal Framing for Carpentry Apprentices	1
50410717	Basic Welding for Carpentry Apprentices	1
2		
		TOTAL 12

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with the Apprenticeship office for details. The tuition and fees are approximate based on 2019-2020 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Complete health requirements.
- Submit Infant/Child CPR/AED certification to program staff.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire. 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.

APPROXIMATE COSTS

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

SPECIAL NOTE

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

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

RELATED PROGRAMS

- Early Childhood Education Associate Degree

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

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

TOTAL 33

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

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

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

ECE: 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: 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: 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 Rdg & Study Skills or Reading placement assessment equivalent

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

ABOUT THE PROGRAM

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

PROGRAM OUTCOMES

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

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Schedule a Program Advising Session with your assigned Program Success Coach/ Advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

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

RELATED PROGRAMS

- Machinist Apprenticeship
- Tool and Die Apprenticeship

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
31420310	Shop Tools and Fasteners	1
31420330	Precision Measuring	1
31420385	Orthographic Projection Print	1
31420325	Machining Math Basic	1
31420338	Drills and Saws	1
31420340	Lathe-Facing and Turning	1
31420350	Mill-Squaring	1
31420386	GD&T Intro	1
31420326	Machining Geometry and Basic Trigonometry	1
31420342	Lathe-Hole Producing and Threading	1
31420351	Mill-Slots and Holes	1
31444301	Mill-G&M Code	1
31444303	CNC Machining Operation	1
31444309	CNC Turning Operation	1
31420359	Safe Heat Treating Operations	1
15		
Term 2		
31801361	Interpersonal Skills	1
31801360	Workplace Fundamentals	1
31444305	Turning-G&M Code	1
31444307	Mill-2D Using CAM	1
31420353	ProtoTrak Mill-Squaring Programming	1
31420354	ProtoTrak Mill-Slot and Hole Programming	1
31420356	Surface Grinder Operations	1
31444311	CNC Turning-Turning and Cut Off Setup	1
31444313	CNC Turning-Hole Producing Setup/Threading	1
31444315	CNC Machining-Facing and End Milling Setup	1
31444317	CNC Machining-Hole/Slot/Engraving Setup	1
31444321	CNC Turning-Toolpaths Using CAM	1
31420361	Complex Print Drawings	1
31420362	Advanced Precision Measuring	1
31420363	GD&T-Inspection	1
15		
Term 3		
31444319	CNC Milling-Adv G&M Code Programming	1
31444323	CNC Machining-Probing/Editing/G&M Code	1
31444325	CNC Machining-Work Holding	1
31444327	CNC Turning-Program Editing	1
31444329	CNC Turning-G&M Code Programming	1
31444331	CNC Machining-G&M Code Programming	1
31444333	CNC Machining-Setup/Operation w/G&M Code 1	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 2020-2021 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 Turning-Setup and Operation and 32444306 CNC Skills Portfolio

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

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

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

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

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

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

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

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 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Complete Notification of Laptop/Steno Rental Equipment form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Career Coach 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 Career Coach
920.693.1162 • CareerCoach@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 OR 10801136 English Composition 1	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 Skillbuilding 1, 2, or 3 (Optional)	3
		6
Term 4		
10170109	Literary 1 - Advanced	2
10170128	Jury Charge 1 - Advanced	2
10170156	Testimony 1 - Advanced	3
10170161	Realtime Reporting Technology Adv	2
10804123	Math with Business Applications OR 10804107 College Math OR 10806112 Principles of Sustainability	3
		12
Term 5		
10170145	Court Reporting Internship	1
10170111	Literary 2 - Advanced	2
10170129	Jury Charge 2 - Advanced	2
10170157	Testimony 2 - Advanced	3
10170146	Four Voice	1
10170141	Court Reporting Procedures	2
10170101	Captioning/CART	3
10170171	Medical Reporting & Terminology	2
		16
		TOTAL 60

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Program Number 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

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

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

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 Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10504118	Introduction 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
10809159	Abnormal Psychology	3
		15
Term 3		
10504917	Intermediate Investigation	1
10504704	Intermediate Patrol Response	3
10504705	Advanced Tactics	4
10504706	Emergency Vehicle Response	2
10504921	Physical Fitness Phase 2	1
10801198	Speech	3
10801196	Oral/Interpersonal Communications	3
		17
Term 4		
10504918	Advanced Investigations	5
10504709	Traffic Response	3
10504171	Advanced Patrol Techniques	3
10504708	Physical Fitness Phase 3	1
10504195	Law Enforcement 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 2020-2021 rates and are subject to change prior to the start of the academic year.



ABNORMAL PSYCHOLOGY...surveys the essential features, possible causes, and assessment and treatment of the various systems of abnormal behavior from the viewpoint of the major theoretical perspectives in the field of abnormal psychology. Students will be introduced to the diagnosis system of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). In addition, the history of the psychology of abnormality will be traced. Cultural and social perspectives in understanding and responding to abnormal behavior will be explored as well as current topics and issues within abnormal psychology. PREREQUISITE: 10809198 Psychology-Introduction or 10809199 Psychology of Human Relations and Reading placement assessment equiv

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...teaches and applies the skills from the Phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Defense and Arrest Tactics (DAAT) and Firearms 2. Student learning will occur through lecture and on campus lab activities. PREREQUISITE: 10504916 or 10504702 Basic Tactics

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 1 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...designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic & 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 equiv

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. Topics include: Professional Communication Skills, Tactical Response, Crisis Management, and Tactical Emergency Casualty Care. Student learning will occur through lecture, on campus lab activities, and Wisconsin Department of Justice 720 Academy Integration Exercises. PREREQUISITE: 10504915 or 10504701 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 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

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.

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. COREQUISITE: 10504706 Emergency Vehicle Response

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

Program Number 10-504-6
Associate Degree in Applied Science

ABOUT THE PROGRAM

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

PROGRAM OUTCOMES

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

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

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

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

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 Career Coach
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2020)		
10801195	Written Communication	3
10809198	Introduction to Psychology	3
10504118	Introduction to Public Safety	2
		8
Term 2 (Spring 2021)		
10504108	Professional Communications in Public Safety	1
10801196	Oral/Interpersonal Communications	3
10809159	Abnormal Psychology	3
		7
Term 3 (Fall 2021)		
10804107	College Mathematics	3
10504170	Public Safety Fitness	1
10801198	Speech	3
10504910	Law Enforcement Career Development	2
		9
Term 4 (Spring 2022)		
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 (Fall 2022)		
10504704	Intermediate Patrol Response	3
10504705	Advanced Tactics	4
10504706	Emergency Vehicle Response	2
10504917	Intermediate Investigations	1
10504921	Physical Fitness Phase 2	1
		11
Term 6 (Spring 2023)		
10504171	Advanced Patrol Techniques	3
10504708	Physical Fitness Phase 3	1
10504709	Traffic Response	3
10504918	Advanced Investigations	5
10504195	Law Enforcement Capstone	2
		14
		TOTAL 60



ABNORMAL PSYCHOLOGY...surveys the essential features, possible causes, and assessment and treatment of the various systems of abnormal behavior from the viewpoint of the major theoretical perspectives in the field of abnormal psychology. Students will be introduced to the diagnosis system of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). In addition, the history of the psychology of abnormality will be traced. Cultural and social perspectives in understanding and responding to abnormal behavior will be explored as well as current topics and issues within abnormal psychology. PREREQUISITE: 10809198 Psychology-Introduction or 10809199 Psychology of Human Relations and Reading placement assessment equiv

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...teaches and applies the skills from the Phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Defense and Arrest Tactics (DAAT) and Firearms 2. Student learning will occur through lecture and on campus lab activities. PREREQUISITE: 10504916 or 10504702 Basic Tactics

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...designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic & 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 equiv

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 Wisconsin 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. Topics include: Professional Communication Skills, Tactical Response, Crisis Management, and Tactical Emergency Casualty Care. Student learning will occur through lecture, on campus lab activities, and Wisconsin Department of Justice 720 Academy Integration Exercises. PREREQUISITE: 10504915 or 10504701 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 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

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.

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. COREQUISITE: 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

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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

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

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

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 Career Coach
920.693.1162 • CareerCoach@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 (Fall)		
10504917	Intermediate Investigation	1
10504704	Intermediate Patrol Responses	3
10504705	Advanced Tactics	4
10504706	Emergency Vehicle Response	2
10504921	Physical Fitness Phase 2	1
		11
Term 3 (Spring)		
10504918	Advanced Investigations	5
10504709	Traffic Response	3
10504708	Physical Fitness Phase 3	1
10504195	Law Enforcement Capstone	2
		11
		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 2020-2021 rates and are subject to change prior to the start of the academic year.



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

ADVANCED TACTICS...teaches and applies the skills from the Phase 2 topics outlined in the Wisconsin Department of Justice 720 Academy. Topics include: Defense and Arrest Tactics (DAAT) and Firearms 2. Student learning will occur through lecture and on campus lab activities. PREREQUISITE: 10504916 or 10504702 Basic Tactics

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. Topics include: Professional Communication Skills, Tactical Response, Crisis Management, and Tactical Emergency Casualty Care. Student learning will occur through lecture, on campus lab activities, and Wisconsin Department of Justice 720 Academy Integration Exercises. PREREQUISITE: 10504915 or 10504701 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 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

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. COREQUISITE: 10504706 Emergency Vehicle Response

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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

RELATED PROGRAMS

- Culinary Arts Associate Degree

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10109108	Dining Room and Beverage Service	2
10109112	Sanitation for Food Service	1
10316101	Product Identification and Purchasing	2
10316102	Skill Development	3
10316104	Introduction to Baking and Pastry	3
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
		14
Term 2		
10316107	Introduction to Stocks, Soups and Sauces	2
10316110	Cooking Methods	3
10316111	Garde Manger	2
10316116	Intro to Restaurant Operations	2
10316117	Advanced Patisserie and Desserts	3
		12
Term 3		
10001115	Culinary Plants - Fall	1
10109158	Hospitality Cost Controls	3
10316122	Classic and Contemporary French Cuisine	3
10316126	Advanced Restaurant Operations	2
10316138	Culinary Leadership	3
		12
Term 4		
10001116	Culinary Plants - Spring	1
10316121	Advanced Garde Manger and Catering	3
10316134	Culinary Internship	2
10316135	European and Fusion Cooking	3
10316136	Nutrition	1
		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 2020-2021 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. PREREQ: 10316104 Intro to Baking

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. Bistro recipes are developed, field tested and applied. PREREQUISITE: 10316116 Intro to Restaurant Operations 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. Adv. cooking methods are applied to batch and single entree preparation. Styles of plating are explored. PREREQUISITES: 10109112 Sanitation for Food Service

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 10316135 European and Fusion Cooking

CULINARY LEADERSHIP...includes review and application of industry-specific skills needed to master the effective management of a profitable and efficient culinary operation. Includes recipe and product development, menu scripting, time management, principles of leadership, staff motivation, developing a community of excellence, staff scheduling, writing a business plan, developing standard operating procedures, resume and portfolio development, professional development planning, interviewing and public speaking skills. COREQUISITE: 10316126 Advanced Restaurant Operations

CULINARY PLANTS - FALL...introduces students to fall culinary plant production through the maintenance of summer vegetables in the field and raised beds, and through fall plantings. Garden cleanup, soil enhancing practices, and hoop house production will be explored; planting of winter crops will be conducted. Season-extension techniques, vegetable-storage techniques, and harvesting crops for winter forcing will be practiced with familiar and exotic crops.

CULINARY PLANTS - SPRING...introduces students to winter vegetable production, planning for the summer season, and spring work in the greenhouse, garden, and hoop house. Students will produce crops for harvest in the heated greenhouse, force winter vegetables, develop a planting plan, harvest vegetables from the unheated hoop house, and learn about different production methods (organic versus sustainable versus conventional).

DINING ROOM AND BEVERAGE SERVICE...introduces learners to dining room and beverage service including wine, spirits, beer, mixology, and non-alcoholic drinks. Helps learners refine their customer service and meal delivery skills through the study and application of proper, customer-oriented dining room service environments including etiquette, dining room safety, set-up, American and French table service, and menu knowledge skills. Concepts include histories of table service, psychology of the customer, and service sequence.

EUROPEAN AND FUSION COOKING...builds on previous semesters and applies skills and methods to production, seasoning, cooking techniques, plate presentation and speed while exploring Central and Eastern Europe, Mediterranean, and Italian cuisine's, along with cuisine's 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: 10316126 Advanced Restaurant Operations or 10316125 Culinary Practicum 3

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

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 STOCKS, SOUPS, AND SAUCES...continues with fundamental principles of classic stocks, soups, and hot and cold sauces. The traditional mother and small sauces are covered. Stabilizing and thickening methods include roux, beurre manie, arrowroot, and puree, reduction, and emulsion techniques. Students practice in the use of tools, utensils, and equipment emphasizing safety and sanitation. CONDITION: 103161 or 103161Z Culinary Arts or 313161 or 313161Z Culinary Technical Diploma program requirements met and PREREQUISITE: 10316102 Skill Development

NUTRITION...examines basic principles of nutrition and explores the nutritional needs for various populations including children, teens, the aging, vegetarians, sports enthusiasts, and those with conditions such as obesity, heart disease, diabetes, gastrointestinal disorders, hypertension and food allergies. Recipe modification, food quality and menu planning for these populations is a focus. Safety, sanitation and cost control concepts are applied. This course includes a service learning component.

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

PRODUCT IDENTIFICATION AND PURCHASING...through identification, the study of origins and seasonality, discussion of quality, use, safe handling and fabrication, learners will explore vegetables, seafood, meats, fruits, herbs, spices, oils, vinegar and the nature of taste and flavor. The USDA grading system and butchery concepts are included. Safety, sanitation and cost control concepts are applied.

INTRO TO RESTAURANT OPERATIONS...exposes students to basic food preparation, emphasized by using fundamental concepts and developing skills and techniques used in professional cookery. Various Cooking Methods, Garde Manger and Patisserie concepts are explored and reinforced.

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: 10316116 Intro to Restaurant Operations

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.

SKILL DEVELOPMENT...introduces the professional kitchen in a real restaurant setting. Fundamental theories of cooking and duties are explored. Knife skills and safety are applied including classic cuts, boning, filet and fabrication techniques. Content includes mise en place for events and menu production, preparing stocks, basic bread baking, timing, multi-tasking, and terminology. Students will practice the use of tools, utensils and equipment emphasizing safety and sanitation. 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

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ADMISSION AND PROGRAM ENROLLMENT STEPS

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- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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CONTACT

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Catalog No.	Class Title	Credit(s)
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10109112	Sanitation for Food Service	1
10109108	Dining Room and Beverage Service	2
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10316102	Skills Development	3
10316104	Introduction to Baking and Pastry	3
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
		14
Term 2		
10316107	Introduction to Stocks, Soups and Sauces	2
10316110	Cooking Methods	3
10316111	Garde Manger	2
10316116	Intro to Restaurant Operations	2
10316117	Advanced Patisserie and Desserts	3
10809172	Introduction to Diversity Studies OR 10809196 Introduction to Sociology	3
		15
Term 3		
10001115	Culinary Plants Fall	1
10109158	Hospitality Cost Controls	3
10316122	Classic and Contemporary French Cuisine	3
10316126	Advanced Restaurant Operations	2
10316138	Culinary Leadership	3
10806112	Principles of Sustainability OR 10804123 Math with Business Applications	3
		15
Term 4		
10001116	Culinary Plants - Spring	1
10316121	Advanced Garde Manger and Catering	3
10316134	Culinary Internship	2
10316135	European and Fusion Cooking	3
10316136	Nutrition	1
10801195	Written Communications OR 10801136 English Composition 1	3
10809198	Introduction to Psychology	3
		16
		TOTAL 60

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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

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. Bistro recipes are developed, field tested and applied. PREREQUISITE: 10316116 Intro to Restaurant Operations or 10316114 Culinary Practicum 2

COOKING METHODS...explores the advanced professional kitchen, covering soups, sauces and cooking methods. Content includes stock preparation, reduction techniques and a wide variety of classic soups, in addition to contemporary sauce preparation, the 5 Mother Sauces and their many derivatives. Adv. cooking methods are applied to batch and single entree preparation. Styles of plating are explored. PREREQUISITES: 10109112 Sanitation for Food Service

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 10316135 European and Fusion Cooking

CULINARY LEADERSHIP...includes review and application of industry-specific skills needed to master the effective management of a profitable and efficient culinary operation. Includes recipe and product development, menu scripting, time management, principles of leadership, staff motivation, developing a community of excellence, staff scheduling, writing a business plan, developing standard operating procedures, resume and portfolio development, professional development planning, interviewing and public speaking skills. COREQUISITE: 10316126 Advanced Restaurant Operations

CULINARY PLANTS - FALL...introduces students to fall culinary plant production through the maintenance of summer vegetables in the field and raised beds, and through fall plantings. Garden cleanup, soil enhancing practices, and hoop house production will be explored; planting of winter crops will be conducted. Season-extension techniques, vegetable-storage techniques, and harvesting crops for winter forcing will be practiced with familiar and exotic crops.

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EUROPEAN AND FUSION COOKING...builds on previous semesters and applies skills and methods to production, seasoning, cooking techniques, plate presentation and speed while exploring Central and Eastern Europe, Mediterranean, and Italian cuisine's, along with cuisine's 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: 10316126 Adv Restaurant Operations or 10316125 Culinary Pract 3

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

HOSPITALITY COST CONTROLS...applies concepts of controlling costs with emphasis on cost-to-sales relationship. Students calculate the costs of goods, selling price and relative percentages, forecast sales, conduct yield analysis and calculate break-even periods.

INTRODUCTION TO BAKING AND PASTRY...introduces learners to the principles and techniques used in the preparation of high-quality baked goods and pastries. Students develop skills in breads, muffins, biscuits, custards, pies, cakes, pastries and specialized desserts. Skills include creaming, blending, meringues, straight dough, custards and frozen desserts. Safety, sanitation and cost control concepts are applied.

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

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

INTRODUCTION TO STOCKS, SOUPS, AND SAUCES...continues with fundamental principles of classic stocks, soups, and hot and cold sauces. The traditional mother and small sauces are covered. Stabilizing and thickening methods include roux, beurre manie, arrowroot, and puree, reduction, and emulsion techniques. Students practice in the use of tools, utensils, and equipment emphasizing safety and sanitation. CONDITION: 103161 or 103161Z Culinary Arts or 313161 or 313161Z Culinary Technical Diploma program requirements met and PREREQUISITE: 10316102 Skill Development

NUTRITION...examines basic principles of nutrition and explores the nutritional needs for various populations including children, teens, the aging, vegetarians, sports enthusiasts, and those with conditions such as obesity, heart disease, diabetes, gastrointestinal disorders, hypertension and food allergies. Recipe modification, food quality and menu planning for these populations is a focus. Safety, sanitation and cost control concepts are applied. This course includes a service learning component.

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

PRINCIPLES OF SUSTAINABILITY...prepares students to develop sustainable literacy, analyze interconnections among physical and biological sciences and environmental systems, summarize effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal/recycling in the U.S., and analyze approaches used by your community. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

PRODUCT IDENTIFICATION AND PURCHASING...through identification, the study of origins and seasonality, discussion of quality, use, safe handling and fabrication, learners will explore vegetables, seafood, meats, fruits, herbs, spices, oils, vinegar and the nature of taste and flavor. The USDA grading system and butchery concepts are included. Safety, sanitation and cost control concepts are applied.

INTRO TO RESTAURANT OPERATIONS...exposes students to basic food prep, emphasized by using fundamental concepts and developing skills and techniques used in professional cookery. Various Cooking Methods, Garde Manger and Patisserie concepts are explored and reinforced.

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: 10316116 Intro to Restaurant Operations

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.

SKILL DEVELOPMENT...introduces professional kitchen in a real restaurant setting. Fundamental theories of cooking and duties are explored. Knife skills and safety are applied including classic cuts, boning, filet and fabrication techniques. Content includes mise en place for events and menu production, preparing stocks, basic bread baking, timing, multi-tasking, and terminology. Students will practice the use of tools, utensils and equipment emphasizing safety and sanitation. CONDITION: 103161 Culinary Arts or 313161 Culinary Tech Dip or 303162 Culinary & Baking Basics Tech Dip prog reqs 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

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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

CONTACT

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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 2020-2021 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.

SKILL DEVELOPMENT...introduces the professional kitchen in a real restaurant setting. Fundamental theories of cooking and duties are explored. Knife skills and safety are applied including classic cuts, boning, filet and fabrication techniques. Content includes mise en place for events and menu production, preparing stocks, basic bread baking, timing, multi-tasking, and terminology. Students will practice the use of tools, utensils and equipment emphasizing safety and sanitation. **CONDITION:** 103161 Culinary Arts or 313161 Culinary Technical Diploma or 303162 Culinary and Baking Basics Technical Diploma program requirements met

Program Number 31-091-1 Technical Diploma • Two Terms

ABOUT THE PROGRAM

Operating a profitable and progressive dairy farm in today's agricultural climate involves learning to work smarter, not just harder. Successful operations are built on solid herds-person skills, effective management skills, and use of technology. If dairy farming is your career dream, completing LTC's Dairy Herd Management program is the way to turn your dream into reality.

PROGRAM OUTCOMES

- Manage herd nutrition.
- Manage herd reproduction.
- Manage herd health.
- Manage herd/farm business.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

Each student will be assigned to a farm for supervised, on-the-job training. An internship agreement will be completed and signed by both the student and farm representative. Graduates of LTC's Dairy Herd Management program receive national AI certification. As part of their educational experience, students are members of the PAS (Professional Agriculture Students) Organization, and they participate in these competitions and activities throughout the year.

If you would like an associate degree focusing on dairy business operations, the Dairy Business Management ITS program may be your choice. Graduates of this Dairy Herd Management technical diploma can attend an additional year of classes to achieve this associate degree focusing on Dairy Business Management.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10091102	Dairy Cattle Management	3
10091103	Dairy Reproductive Management	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	3
10091107	Dairy Employability and Management	3
10091108	Quality Milk Production	3
10091109	On-Farm Internship 2	1
10091113	Dairy Issues and Advocacy	1
		14
		TOTAL 28

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

ANIMAL RECORDS - DAIRY...introduces learner to records management through hands-on applications including the set-up and use of computerized record-keeping software, completion of sample farm record problems utilizing computerized record-keeping systems, as well as the selection and implementation of various computerized record programs. Software tools, such as PCDART, CowManager, and DairyCOMP 305, will be utilized. COREQUISITE: 10091103 Dairy Reproductive Management

DAIRY CATTLE MANAGEMENT...introduces the student to herd health and preventative medicine through understanding cow behavior, signs of illness, metabolic disorders, infectious disease, vaccination programs, and herd records to develop and implement a herd-health protocol. Students will learn and use basic tools and equipment of herd health programs.

DAIRY EMPLOYABILITY AND MANAGEMENT...prepares students to be employees and/or managers on the dairy farm setting. Students will learn about setting goals to reach dairy industry benchmarks, practice basic agricultural Spanish phrases, and develop appropriate dairy farm management and conflict-resolution skills. Team-building activities, mock interviews, and job shadowing will develop skills necessary for successful employment. Students will gather and organize all pieces of their portfolio upon completion of the program.

DAIRY FEEDING MANAGEMENT...provides the student with proper harvesting and storage practices to ensure the best forage for the cow's diet. Students will learn diet specifications for each step of the cow's life cycle, ration formulations, developing feed inventories, and maximizing resource allocations. PREREQUISITE: 10091115 Nutrition Principles - Dairy or 10006144 Nutrition Principles

DAIRY ISSUES AND ADVOCACY...prepares students to be advocates for the dairy industry. With farming becoming more publicized and scrutinized every day, students will learn how to promote and apply these concepts within the industry. Students will learn the skills to talk and respond to dairy farm issues that the industry faces.

DAIRY MANAGEMENT APPLICATIONS...provides students with information to build protocols for dairy farm management. Students will learn about the proper environment, health protocols, and the care of cows in each part of their life cycle. DairyCare 365 and the F.A.R.M. program will also be utilized. One-on-one rotations to selected site farms allow students to learn and practice troubleshooting and problem-solving on the farm. COREQUISITE: 10091102 Dairy Cattle Management

DAIRY REPRODUCTIVE MANAGEMENT...prepares participants for the mating and breeding of the dairy herd. Topics include linear evaluation, selection indexes, anatomy, hormonal cycles, artificial insemination, estrus detection, activity monitors, and genomics. Live cattle for artificial insemination practices are featured.

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

NUTRITION PRINCIPLES - DAIRY...instructs students in utilizing basic nutrition skills to analyze rations and complete basic ration formulations. This course introduces the principles of nutrition as presented on a comparative species basis including characteristics, physiological functions, interrelationships, and deficiency symptoms as they pertain to carbohydrates, fats, proteins, mineral elements, and vitamins. COREQUISITE: 10804123 Math with Business Apps

ON-FARM INTERNSHIP 1...provides the student with the ability and skills to perform industry expectations as a dairy herdsman, including milking, feeding, calf care, scheduling, employer/employee communications, and general farm duties. Students work with their internship farm to complete the internship skills checklist. COREQUISITE: 10091115 Nutrition Principles-Dairy

ON-FARM INTERNSHIP 2...provides the student with enhanced skills, beyond the On-Farm Internship 1 course, to perform industry expectations as a dairy herdsman, including milking, feeding, calf care, scheduling, employer/employee communications, and general farm duties. Students work with their internship farm to complete the internship skills checklist. PREREQUISITE: 10091104 On-Farm Internship 1

QUALITY MILK PRODUCTION...introduces the student to the process of how milk is produced and how to harvest it for a maximum profit to the farmer, including the major principles of milk secretion, the anatomy and physiology of the udder, milk letdown, proper milking practices, mastitis, efficient milking systems, and how to properly milk cows as well as treat and prevent udder infections.

**Program Number 31-091-1
 Technical Diploma**

ABOUT THE PROGRAM

Operating a profitable and progressive dairy farm in today’s agricultural climate involves learning to work smarter, not just harder. Successful operations are built on solid herdsperson skills, effective management skills, and use of technology. If dairy farming is your career dream, completing LTC’s Dairy Herd Management program is the way to turn your dream into reality.

PROGRAM OUTCOMES

- Manage herd nutrition.
- Manage herd reproduction.
- Manage herd health.
- Manage herd/farm business.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Complete On-Farm Placement and Release form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

Each student will be assigned to a farm for supervised, on-the-job training. An internship agreement will be completed and signed by both the student and farm representative. Graduates of LTC’s Dairy Herd Management program receive national AI certification. As part of their educational experience, students are members of the PAS (Professional Agriculture Students) Organization, and they participate in these competitions and activities throughout the year.

If you would like an associate degree focusing on dairy business operations, the Dairy Business Management ITS program may be your choice. Graduates of this Dairy Herd Management technical diploma can attend an additional year of classes to achieve this associate degree focusing on Dairy Business Management.

CONTACT

LTC Career Coach
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2020)		
10091102	Dairy Cattle Management	3
10091103	Dairy Reproductive Management	3
10091117	Animal Records - Dairy	1
		7
Term 2 (Spring 2021)		
10091108	Quality Milk Production	3
10091106	Dairy Management Applications	3
10091113	Dairy Issues and Advocacy	1
		7
Term 3 (Fall 2021)		
10091115	Nutrition Principles - Dairy	3
10091104	On-Farm Internship 1	1
10804123	Math with Business Applications	3
		7
Term 4 (Spring 2022)		
10091105	Dairy Feeding Management	3
10091107	Dairy Employability and Management	3
10091109	On-Farm Internship 2	1
		7
		TOTAL 28



ANIMAL RECORDS - DAIRY...introduces learner to records management through hands-on applications including the set-up and use of computerized record-keeping software, completion of sample farm record problems utilizing computerized record-keeping systems, as well as the selection and implementation of various computerized record programs. Software tools, such as PCDART, CowManager, and DairyCOMP 305, will be utilized. COREQUISITE: 10091103 Dairy Reproductive Management

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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, practice basic agricultural Spanish phrases, and develop appropriate dairy farm management and conflict-resolution skills. 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

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DAIRY MANAGEMENT APPLICATIONS...provides students with information to build protocols for dairy farm management. Students will learn about the proper environment, health protocols, and the care of cows in each part of their life cycle. DairyCare 365 and the F.A.R.M. program will also be utilized. One-on-one rotations to selected site farms allow students to learn and practice troubleshooting and problem-solving on the farm. COREQUISITE: 10091102 Dairy Cattle Management

DAIRY REPRODUCTIVE MANAGEMENT...prepares participants for the mating and breeding of the dairy herd. Topics include linear evaluation, selection indexes, anatomy, hormonal cycles, artificial insemination, estrus detection, activity monitors, and genomics. Live cattle for artificial insemination practices are featured.

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

NUTRITION PRINCIPLES - DAIRY...instructs students in utilizing basic nutrition skills to analyze rations and complete basic ration formulations. This course introduces the principles of nutrition as presented on a comparative species basis including characteristics, physiological functions, interrelationships, and deficiency symptoms as they pertain to carbohydrates, fats, proteins, mineral elements, and vitamins. COREQUISITE: 10804123 Math with Business Apps

ON-FARM INTERNSHIP 1...provides the student with the ability and skills to perform industry expectations as a dairy herdsman, including milking, feeding, calf care, scheduling, employer/employee communications, and general farm duties. Students work with their internship farm to complete the internship skills checklist. COREQUISITE: 10091115 Nutrition Principles-Dairy

ON-FARM INTERNSHIP 2...provides the student with enhanced skills, beyond the On-Farm Internship 1 course, to perform industry expectations as a dairy herdsman, including milking, feeding, calf care, scheduling, employer/employee communications, and general farm duties. Students work with their internship farm to complete the internship skills checklist. PREREQUISITE: 10091104 On-Farm Internship 1

QUALITY MILK PRODUCTION...introduces the student to the process of how milk is produced and how to harvest it for a maximum profit to the farmer, including the major principles of milk secretion, the anatomy and physiology of the udder, milk letdown, proper milking practices, mastitis, efficient milking systems, and how to properly milk cows as well as treat and prevent udder infections.

Program Number 30-508-2 Technical Diploma • One Term

ABOUT THE PROGRAM

Think about your last dental visit. Your dentist likely worked closely with a dental assistant to perform your exam or procedures. Dental assistants are vital to the safe and efficient operation of the dental office—they assist the dentist in the treatment room, in the lab, and with business administration. If you're interested in a career that focuses on helping people and offers plenty of variety in the workday, dental assisting is a great choice for you.

PROGRAM OUTCOMES

- Perform a variety of entry-level supportive dental procedures.
- Manage infection and hazard control.
- Produce diagnostic radiographs/digital images.
- Perform basic laboratory procedures.
- Demonstrate professional behaviors, ethics, and appearance.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Submit Healthcare Provider CPR or Professional Rescuer certification.
- Complete Technical Standards form.
- Submit a Dental Exam form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

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 Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
31508302	Dental Chairside	5
31508304	Dental and General Anatomy	2
31508305	Applied Dental Radiography	2
31508306	Dental Assistant Clinical	3
31508307	Dental Assistant Professionalism	1
10508101	Dental Health Safety	1
10508113	Dental Materials	2
		16

TOTAL 16

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 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 Asst 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: 10508113 Dental Mtls, 31508302 Dental Chairside, 31508304 Dent/Gen Anat, 31508305 Appl Dental Radio, 31508307 Dental Prof, 10508101 Dent Hlth Sfty, and CONDITION: 305082 Dental Asst admission requirements met

DENTAL ASSISTANT PROFESSIONAL...prepares dental assistant students for professional success in a dental practice or another dental health care environment. Students develop professional appearance and image. More importantly, they learn to work within the ethical guidelines and legal framework. In preparation for entering the work force, dental assistants customize or develop their portfolios and lay out an on-going professional development plan. COREQUISITES: 31508304 Dental & General Anatomy, 31508305 Applied Dental Radiography and CONDITION: 305082 Dental Assistant admission requirements met

DENTAL CHAIRSIDE...prepares dental assistant students to chart oral cavity structures, dental pathology, and restorations; assist dentist with basic dental procedures including examinations, pain control, amalgam restoration, and cosmetic restoration. Students will also develop the ability to educate patients about preventative dentistry, brushing/flossing techniques, and dental procedures using lay terminology. Students will apply decoding strategies to the correct use and interpretation of dental terminology. COREQUISITE: 31508306 Dental Asst Clin, 31508304 Dent/Gen Anat, 31508305 Appl Dent Radio, 31508307 Dental Prof, 10508101 Dental Hlth Sfty, 10508113 Dental Mtls and CONDITION: 305082 Dental Asst admissions requirements met

DENTAL HEALTH SAFETY...prepares dental auxiliary students to respond proactively to dental emergencies, control infection, prevent disease, adhere to OSHA Standards, and safely manage hazardous materials. Students also take patient vital signs and collect patient medical/dental histories. CPR certification is a prerequisite; students will be required to show proof of certification before beginning the course. CONDITION: 305082 Dental Asst admission requirements met

DENTAL MATERIALS...prepares dental auxiliary students to handle and prepare dental materials such as liners, bases, cements, amalgam, resin restorative materials, gypsum products, and impression materials. They also learn to take alginate impressions on manikins and clean removable appliances. COREQUISITE: 10508101 Dental Health Safety and CONDITION: 305082 Dental Assistant admission requirements met

Program Number 10-307-1 Associate Degree in Applied Science • Four Terms

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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Complete health requirements.
- Submit Infant/Child CPR/AED certification to program staff.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire. 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.

APPROXIMATE COSTS

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

SPECIAL NOTE

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

Intermediate Practicum, 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 advisor for details.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10307148	ECE: Foundations of Early Childhood Education	3
10307151	ECE: Infant & Toddler Development	3
10307174	ECE: Introductory Practicum	3
10307110	ECE: Social Studies, Art & Music	3
10801195	Written Communications	3
		15
Term 2		
10307179	ECE: Child Development	3
10307188	ECE: Guiding Children's Behavior	3
10307177	ECE: Intermediate Practicum	3
10307108	ECE: Early Language & Literacy	3
10307167	ECE: Health, Safety, and Nutrition	3
10809172	Introduction to Diversity Studies	3
		18
Term 3		
10307112	ECE: STEM	3
10307195	ECE: Family and Community Relationships	3
10307175	ECE: Preschool Practicum	3
10804107	College Mathematics	3
10809196	Introduction to Sociology	3
		15
Term 4		
10307187	ECE: Children with Differing Abilities	3
10307199	ECE: Advanced Practicum	3
10801198	Speech	3
10809198	Introduction to Psychology	3
		12
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 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 & 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 yrs 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 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 prevent the occurrence of 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 Edu Admission Reqs Met or 313071 Child Care Serv Admission Reqs Met

ECE: PRESCHOOL PRACTICUM...will apply as the capstone course in The Registry Preschool Credential. You will be placed or working in an early childhood setting with 3-5 year old children and create a portfolio that prepares you for The Registry commission. In this course 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 requirements met

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

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 Reading & Study Skills or Reading placement assessment equiv

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

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

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

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, 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 10-620-1 Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

Change is constant. Change is rapid. In the world of manufacturing technology change brings more complex systems of assembly, control measurement, and material processing of manufactured products. If you're good at problem solving, like working with automated manufacturing equipment, and you're looking forward to work that continuously challenges you to keep growing your knowledge and skills—consider an always-evolving career in electro-mechanical technology.

PROGRAM OUTCOMES

- Perform work safely.
- Troubleshoot electrical and mechanical systems and devices.
- Repair electrical and mechanical systems.
- Communicate technical information.
- Integrate electrical and mechanical systems and devices.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10620122	Industrial Wiring	2
10620103	Fluid Power 1	2
10620169	Robotic Mechanical Maintenance	1
10620105	DC Fundamentals	2
10804113	College Technical Math 1A	3
10462107	Tools and Measurement	1
10620124	Introduction to Programming Logic	1
10801195	Written Communications	3
		15
Term 2		
10620104	Fluid Power 2	3
10620138	Programmable Controllers - Allen Bradley*	3
10620141	Industrial Controls and Motors	3
10620110	AC Fundamentals	2
10806154	General Physics 1	4
10801196	Oral/Interpersonal Communication	3
		18
Term 3		
10620130	Mechanical Drive Systems	3
10620140	Programmable Controllers - Allen Bradley Advanced*	2
10620147	Electronic Devices/Transducers	2
10620164	Electromechanical Systems	2
10620168	Robotics Introduction*	2
10620193	NEC Codes*	1
10620194	Touch Screen Applications*	2
10620198	Industrial Networks*	2
		16
Term 4		
10620171	Robotics Advanced*	2
10620135	Electrical Robotic Maintenance	1
10620195	Industrial Troubleshooting	1
10620196	Industrial Applications	4
10620197	Analog Controls	2
10620199	Integration of Manufacturing	2
10809196	Introduction to Sociology OR 10809195 Economics (3 cr)	3
10809198	Introduction to Psychology	3
		18
		TOTAL 67

*Class qualifies for continuing education units (CEUs) for electricians.

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



AC FUNDAMENTALS...prepares the student to analyze electrical circuits using AC math, analyze AC waveforms, measure and analyze AC power, analyze capacitors and inductors in DC and AC circuits, analyze AC circuits containing reactance and calculate resonance, apply the elements and properties of basic measuring circuits, and describe transformer characteristics. PREREQUISITE: 10620105 DC Fund or 10660105 DC Fundamentals

ANALOG CONTROLS...introduces instrumentation used for process control. The student will test, calibrate, install, and commission transmitters in varied processes. PREREQUISITE: 10620110 AC Fundamentals, 10620141 Ind Cntrls and Motors, 10620140 PCLs Advanced, 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. PREREQ: 10834110 Elem Algebra wApps or 10804107 College Math or 31457318 Ind Mtrc Trades Math or 31420320 Mach Tool Math or math plcmnt assmnt equiv

DC FUNDAMENTALS...prepares the student to convert values to scientific and engineering notations; calculate math quantities; describe basic atomic theory; identify basic electrical terms; use established symbols standards; describe DC voltage characteristics and current sources and electrical resistance; measure and analyze electrical quantities in series and parallel circuits; and desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1

ELECTRICAL ROBOTIC MAINTENANCE...investigates error codes using the Fanuc A size cabinet with a R30iB controller. Students will identify the cause of the various codes and be trained in the repair. Students will also be trained in motor / gear replacement and robot mastering. PREEQUISITES: 10620169 Robotic Mechanical Maintenance, 10620122 Industrial Wiring and 10620168 Robotics Introduction

ELECTROMECHANICAL SYSTEMS...prepares the student to communicate with, tune, run, and troubleshoot Allen-Bradley servos; utilize electrical control of hydraulic systems, explore PID control of motor speed; and investigate open and closed loop control systems. PREREQUISITES: 10620104 Fluid Power 2 and 10620110 AC Fund or 10660110 AC Fund

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

FLUID POWER 1...prepares the learner to identify hydraulic and pneumatic component symbols; adjust a pressure relief valve; analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits; analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. COREQUISITES: 10804115 College Technical Math 1 or 10804114 College Tech Math 1A

FLUID POWER 2...enhances the learner's ability to read schematics containing fluid power component symbols; assemble systems using schematics; analyze system's operation using a schematic; evaluate the general characteristics and terms of fluids under pressure, fluid conditioning, conductors, reservoirs, accumulators, pressure control; and troubleshoot malfunctioning pressurized systems. PREREQUISITE: 10620103 Fluid Power 1 or 10620155 Industrial Maintenance Hydraulics and Pneumatics

GENERAL PHYSICS 1...presents the applications and theory of basic physics principles. This course emphasizes problem-solving, laboratory investigation, and applications. Topics include unit conversions and analysis, vectors, translational and rotational kinematics, translational and rotational dynamics, heat and temperature, and harmonic motion and waves. PREREQUISITE: 10804113 College Tech Math 1A, 10804115 College Tech Math 1, or 10804118 Intermediate Algebra, or Math placement assessment equivalent.

INDUSTRIAL APPLICATIONS...prepares the learner to configure, install, troubleshoot and maintain automation equipment in a "real world" setting. This course will include writing and configuring automation equipment, wiring and configuring industrial networks, wiring, programming and troubleshooting PLCs and touchscreens. These practices will be applied to create and maintain a manufacturing process. This course is highly computer based. PREREQUISITE: 10620140 Prog Cntrls AB Adv, 10620104 Fluid Power 2, 10620194 Touch Screen Appl, 10620168 Robotics Intro, 10620193 NEC Codes, 10620198 Indust Networks and COREQUISITE: 10620195 Industrial Troubleshooting

INDUSTRIAL CONTROLS AND MOTORS...prepares the learner to select control devices by function and operation; illustrate electrical circuits using symbols, diagrams, and abbreviations; explain the operation of magnetic solenoids and apply motor control techniques and introduces the student to three-phase power motor circuits for industrial applications. PREREQ: 10620122 Ind Wiring & COREQ: 10620110 AC Fund or PREREQ: 10660110 AC Fund

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 hrs 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 Cntrls & Motors, 10620168 Robotics Intro and COREQUISITE: 10620198 Ind Networks

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

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

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

MECHANICAL DRIVE SYSTEMS...prepares the learner to use tools and fasteners safely; identify belt and chain drive components; install and adjust belt and chain drives; apply bearing and lubrication information; perform coupling alignment using straight edge, feeler gauge, and dial indicator and laser methods; identify various gear drives; calculate gear ratios; and analyze first-, second-, and third-class levers.

NEC CODES...introduces the student to National Electric Codes NFPA 70. Prepares the learner to apply NFPA 70 to motor and control installations and repairs. PREREQUISITE: 10620141 Industrial Controls and Motors. This class qualifies for 24 hours of Continuing Education Units (CEUs) for Electricians.

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

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY...prepares 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. Course is highly computer based. This class qualifies for 64 hrs of Continuing Education Units (CEUs) for Electricians.

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY ADVANCED...prepares the student to develop applications utilizing subroutine instructions, analog modules; gain a basic understanding of creating and troubleshooting programs using the ControlLogix, RSLOGIX5000 software. Course is highly computer based. PREREQUISITE: 10620138 Prog Cntrls/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...introduce students to advanced robot programming commands to include use of Fanuc vision on the Fanuc Robots. PREREQUISITE: 10620168 Robotics Intro. 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.

TOOLS AND MEASUREMENT...prepares the learner to use hand tools, precision measuring instruments, and torque tools.

TOUCH SCREEN APPLICATIONS...prepares the student to create, edit, and troubleshoot screens, objects and I/O related to the FactoryTalkME application. Students will create, edit and communicate with Allen-Bradley PLC programs for real-time control utilizing the touchscreen applications. This course is highly computer based. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

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

ABOUT THE PROGRAM

Times are changing in the field of maintenance. Facilities are running with both manual and automated equipment and both need to be maintained and repaired. If you like to troubleshoot, work with your hands, and have an interest in math and electrical and mechanical processes, a career in maintenance is for you. Your expertise and knowledge is needed in today's modern, automated facilities.

PROGRAM OUTCOMES

- Demonstrate safe work procedures.
- Install industrial equipment and systems.
- Maintain industrial equipment and systems.
- Troubleshoot industrial equipment and systems.
- Repair industrial equipment and systems.
- Communicate technical information.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

Students need to supply their own safety glasses and welding gloves.

RELATED PROGRAMS

- Electro-Mechanical Automation Technology
- Millwright Apprenticeship
- Industrial Electrician Apprenticeship
- Maintenance Technician Apprenticeship

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10804113	College Technical Math 1A	3
10462109	Maintenance Introduction	1
10462111	Maintenance Print Reading	2
10462107	Tools and Measurement	1
10620122	Industrial Wiring	2
10420194	Machine Tool Introduction	2
10442100	Welding Introduction	1
10457103	Fabrication Introduction	1
10462115	Layout and Rigging	1
		14
Term 2		
10462123	Pumps, Fluid/Air Handling	2
10620155	Hydraulics and Pneumatics	3
10420103	Lathes 1	1
10420105	Mills 1	1
10462125	Bearings and Lubrication	3
10462119	Power Transmission	2
10462121	Troubleshooting and Machine Repair	3
10801196	Oral/Interpersonal Communication	3
		18
Term 3		
10620169	Robotic Mechanical Maintenance	1
10620124	Introduction to Programming Logic	1
10620168	Robotics Introduction	2
10620105	DC Fundamentals	2
10809198	Introduction to Psychology	3
10801195	Written Communication	3
		12
Term 4		
10620135	Electrical Robotic Maintenance	1
10620110	AC Fundamentals	2
10620104	Fluid Power 2	3
10620138	Programmable Controllers - Allen Bradley	3
10620141	Industrial Controls and Motors	3
10620147	Electronic Devices/Transducers	2
10809195	Economics	3
		17
		TOTAL 61

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



AC FUNDAMENTALS...prepares the student to analyze electrical circuits using AC math, analyze AC waveforms, measure and analyze AC power, analyze capacitors and inductors in DC and AC circuits, analyze AC circuits containing reactance and calculate resonance, apply the elements and properties of basic measuring circuits, and describe transformer characteristics. PREREQUISITE: 10620105 DC Fundamentals or 10660105 DC Fundamentals

BEARINGS AND LUBRICATION...prepares the learner to properly identify, remove, install, and maintain both plain and rolling element bearings used with either a radial or axial load, including ball, cylindrical roller, tapered roller, linear, and thrust bearings; use manufacturers' resources for proper usage and life of bearings; and look at proper types, properties, and application methods of lubrication. PREREQUISITES: 10804113 College Tech Math 1A and 10462109 Maintenance Introduction or 31462309 Industrial Maintenance Introduction

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

DC FUNDAMENTALS...prepares the student to convert values to scientific and engineering notations; calculate math quantities; describe basic atomic theory; identify basic electrical terms; use established symbols standards; describe DC voltage characteristics and current sources and electrical resistance; measure and analyze electrical quantities in series and parallel circuits; and desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1

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

ELECTRICAL ROBOTIC MAINTENANCE...investigates error codes using the Fanuc A size cabinet with a R30iB controller. Students will identify the cause of the various codes and be trained in the repair. Students will also be trained in motor / gear replacement and robot mastering. PREEQUISITES: 10620169 Robotic Mechanical Maintenance, 10620122 Industrial Wiring and 10620168 Robotics Introduction

ELECTRONIC DEVICES/TRANSDUCERS...prepares the student to relate numbering systems with their functions in Electrical Ladder Diagrams and Data Transmission; gain an understanding of temperature and temperature sensing devices, weighing systems, ultrasonic and radar level detection, measuring flow, and pressure. The student will develop the ability to explain the operation of transducers that measure process variables and the transmitters that interface to industrial control systems. Transmitters will be analyzed, configured and calibrated to properly indicate the physical characteristic being measured and provide the information to control systems. PREREQUISITES: 10660110 AC Fundamentals

FABRICATION INTRODUCTION...introduces the learner to various types of structural steel, sheet metal, and pipe, and prepares the learner to perform fabrication from assembly prints, including cutting, welding, bending, straightening, and repair. COREQUISITE: 10442100 Welding Introduction or PREREQUISITES: 31442346 IM Intro to Welding or 31442300 Welding Intro and COREQUISITE: 10462109 Maintenance Intro or PREREQUISITE: Industrial Maintenance Intro

FLUID POWER 2...enhances the learner's ability to read schematics containing fluid power component symbols; assemble systems using schematics; analyze system's operation using a schematic; evaluate the general characteristics and terms of fluids under pressure, fluid conditioning, conductors, reservoirs, accumulators, pressure control; and troubleshoot malfunctioning pressurized systems. PREREQUISITE: 10620103 Fluid Power 1 or 10620155 Industrial Maintenance Hydraulics and Pneumatics

HYDRAULICS AND PNEUMATICS...prepares the learner to identify hydraulic and pneumatic component symbols and terms, adjust a pressure relief valve, analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits, analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. PREREQUISITES: 10462109 Maintenance Intro or 31462309 Industrial Maintenance Intro and 10804113 College Tech Math 1A

INDUSTRIAL CONTROLS AND MOTORS...prepares the learner to select control devices by function and operation; illustrate electrical circuits using symbols, diagrams, and abbreviations; explain the operation of magnetic solenoids and apply motor control techniques and introduces the student to three-phase power motor circuits for industrial applications. PREREQUISITE: 10620122 Industrial Wiring and COREQUISITE: 10620110 AC Fundamentals or PREREQUISITE: 10660110 AC Fundamentals

INDUSTRIAL WIRING...prepares the learner to follow safety procedures; maintain a safe and healthy work environment; construct electrical circuits; measure electrical quantities using a VOM and/or DVM; analyze measured values using electrical circuit laws; construct typical industrial control circuits; and analyze typical industrial control circuits.

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

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

LATHES 1...introduces the student to the characteristics and attributes of turning tools: follow engine lathe safety rules, identify engine lathe components, perform facing and center drilling operations, perform turning operations. COREQUISITE: 10462107 Tools and Measurement or PREREQUISITE: 31462325 Maintenance Tools and Measurement and PREREQUISITE: 10420194 Machine Tool Intro or 31420394 IM Machine Tool Intro

LAYOUT AND RIGGING...prepares the learner to perform layout skills for industrial maintenance to include machine layout, proper rigging, installation, and leveling with emphasis on baseline layout, machine rigging and installation, machine leveling, and alignment procedures. Participants will obtain lift truck operation certification upon completion. COREQUISITE: 10462109 Maintenance Intro or PREREQUISITE: 31462309 Ind Mtrc Intro and COREQUISITE: 10804113 College Tech Math 1A and COREQUISITE: 10462111 Maintenance Print Reading or PREREQUISITE: 31462388 IM Print Reading

MACHINE TOOL INTRODUCTION...prepares the learner with the skills to identify basic types of machining processes, follow standard shop safety rules, use semi-precision and precision measuring tools, perform workpiece layout procedures, identify metal composition and classification, follow cutoff machine safety rules, operate vertical and horizontal cutoff machines, follow sensitive drill press safety rules, identify drill press components, interpret attributes of hole-producing tools, and operate a sensitive drill press.

MAINTENANCE INTRODUCTION...prepares the learner to apply basic safety, mechanics, force, friction, work, and energy; learn terminology related to maintenance; introduction to threaded and non-threaded fasteners and concrete anchoring; learn to use precision measuring tools; introduction to single-phase and three-phase motor wiring. PREREQUISITE: 31462325 Maintenance Tools and Measurement or COREQUISITE: 10462107 Tools and Measurement

MAINTENANCE PRINT READING...prepares the learner to read prints; make isometric sketches; interpret orthographic projection drawings, to include sections, surface finishes, and tolerancing. The course when delivered in the evening is self-paced, open-entry/exit, and designed for individualized student needs.

MILLS 1...prepares the learner to identify vertical milling machine components, select cutting tools and workholding device(s), apply safety rules, set up the vertical milling machine, and mill square surfaces. COREQUISITE: 10420103 Lathes 1 or PREREQUISITE: 31420395 IM Machine Tool Lathes and Mills

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

POWER TRANSMISSION...introduces the learner to belt, chain, and gear drives used in industrial maintenance applications, including v-belts, flat belts, timing belts, conveyor chains, roller chains, bevel gears, worm gears, helical gears, spur gears, couplings, and alignment with emphasis on identification, installation, repair, and maintenance. COREQUISITE: 10462119 Bearings and Lubrication

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY...prepares the student to understand basic PLC structure and terminology; learn to create and troubleshoot basic PLC programs using the RSLOGIX 500 software and the RSLINX communication software; become familiar with communicating with programming SLC-500 PLCs. This course is highly computer based. This class qualifies for 64 hours of Continuing Education Units (CEUs) for Electricians. This class qualifies for 64 hours of Continuing Education Units (CEUs) for Electricians.

PUMPS, FLUID/AIR HANDLING...prepares the learner to identify, install, repair, and maintain common pumps and plumbing applications, including centrifugal pumps, diaphragm pumps, packing and seals, tubing, and installing hose and piping used with fluid and air handling. COREQUISITES: 10462115 Layout and Rigging or 31462302 IM Layout and Rigging and COREQUISITE: 10620155 Hydraulics and Pneumatics

ROBOTIC MECHANICAL MAINTENANCE...introduces the students to the robot teach pendant and robot jogging. Students will be taught to replace servo motors, recalibrate the robot and back up robot software and programs.

ROBOTICS INTRODUCTION...introduces the student to robotic axes, movement control, navigating the teach pendant, robotic frames, basic programming commands such as conditional branching, wait and call instructions. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

TOOLS AND MEASUREMENT...prepares the learner to use hand tools, precision measuring instruments, and torque tools.

TROUBLESHOOTING AND MACHINE REPAIR...prepares the learner to perform essential troubleshooting, repair, and preventive maintenance of various machine tools and installations used in industrial maintenance and to integrate the skills learned in the other maintenance courses to perform complete repair of machine tools. COREQ: 10462119 Power Transmission and 10462123 Pumps, Fluid/Air Handling and PREREQ: 10620122 Ind Wiring

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

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

ABOUT THE PROGRAM

Injuries, trauma, sudden illness—medical emergencies can happen at any time, in any place. Survival often depends on the initial care the injured or severely ill person receives at the scene. If you are calm under pressure, compassionate, good at problem solving, and have the desire to help people in need, a career as an Emergency Medical Technician (EMT) may be an excellent choice for you.

PROGRAM OUTCOMES

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

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM 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.

APPROXIMATE COSTS

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

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 Career Coach
920.693.1162 • CareerCoach@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 2020-2021 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Complete Technical Standards form.
- Complete DMI (District Mutual Insurance) form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Career Coach 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 Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
30531307	EMT Part 1 Lecture	1
30531309	EMT Part 1 Lab	1
10531105	EMT Part 2 Lecture	3
10531106	EMT Part 2 Lab	1
		6
Spring		
10531911	EMS Fundamentals	2
10531912	Paramedic Medical Principles	4
10531913	Advanced Patient Assessment Principles	3
10531914	Advanced Prehospital Pharmacology	3
10531915	Paramedic Respiratory Management	2
10531916	Paramedic Cardiology 1	1
10531926	Paramedic HPS Lab 1	1
10531930	Paramedic Clinical 1	1
		17
Summer		
10531918	Advanced Emergency Resuscitation	1
10531920	Paramedic Trauma	3
10531922	EMS Operations	1
10531927	Paramedic HPS Lab 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 HPS Lab 3	1
		12
		TOTAL 46

To contact CoAEMSP:
8301 Lakeview Parkway, Suite 111-312
Rowlett, TX 75088
214-703-8445 Fax 214-703-8992
www.coaemsp.org

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 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 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 program reqs 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

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 Tech 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

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

PARAMEDIC CAPSTONE...provides the final opportunity to incorporate knowledge and skills through labs and scenario-based practice and evaluations prior to taking the NREMT written and practical exams. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531922 EMS Operations

PARAMEDIC CARDIOLOGY 1...provides the principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and a plan for a patient with a cardiovascular complaint. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531915 Paramedic Respiratory Management

PARAMEDIC CARDIOLOGY 2...continues the paramedic's knowledge of cardiology. Incorporates basic and advanced electrocardiogram rhythm interpretation as well as introduces students to Advanced Cardiovascular Life Support (ACLS).

PARAMEDIC CLINICAL 1...allows paramedics their first experiences providing advanced level skills and assessments on patients in a healthcare setting. Students will be assigned to an area hospital to begin their clinical training and meeting their assigned clinical competencies. Activities may include rotations within hospital emergency departments, operating rooms, intensive care units, and/or rotations with lab or respiratory staff. COREQUISITE: 10531911 EMS Fundamentals and CONDITION: 15311 Paramedic Technician or 105312 Fire Medic or 315311 EMT Paramedic program admission requirements met

PARAMEDIC CLINICAL 2...provides student with the opportunity to enhance their learning through the skills practice in a health care environment experience with actual patients under the supervision of approved preceptors or high-fidelity human patient simulator. CONDITION: 105311 Paramedic Tech or 315311 EMT Paramedic or 105312 Fire Medic Program Req's Met and COREQUISITE: 10531930 Paramedic Clinical 1

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 HPS LAB 3...provides instruction for continued growth for paramedic students towards mastery in patient assessment, treatment, team management, and ambulance operations during this capstone Human Patient Simulation experience.

PARAMEDIC HUMAN PATIENT SIMULATION LAB 1...reinforces student learning through practice of paramedicine in a controlled environment utilizing high-fidelity human patient simulators and realistic emergency response scenarios with support and guidance of instructors. Student will apply assessment knowledge and demonstrate paramedic level skills in a variety of emergency response scenarios and environments.

PARAMEDIC HUMAN PATIENT SIMULATION LAB 2...reinforces student learning through the practice of paramedicine in a controlled environment utilizing high-fidelity human patient simulators and realistic emergency response scenarios with support and guidance of instructors. The student will evaluate patient presentations, formulate treatment plans, reassess interventions, and implement corrective actions by integrating pathophysiological principles and assessment findings. CONDITION: 105311 Paramedic Technician or 105312 Fire Medic or 315311 EMT Paramedic program admission requirements met

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 Tech or 315311 EMT Param or 105312 Fire Medic program reqs met and COREQUISITE: 10531914 Adv 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 and COREQUISITE: 10531919 Paramedic Medical Emergencies

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 AND PROGRAM ENROLLMENT STEPS

- 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 advisor to discuss program details.

APPROXIMATE COSTS

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

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 29 credits at the LTC Cleveland campus. This includes 17 credits in Terms 1 and 2, and 12 credits in Terms 3 and 4. The remainder of the courses are held at NWTC's Green Bay campus.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

NWTC transfer programs are offered through collaborative agreements with four-year college and university partners. Visit nwtc.edu/academics/transfer-opportunities.

CONTACT

NWTC:
Cindy Kothbauer, Program Advisor
920.498.6311 • cynthia.kothbauer@nwtc.edu

LTC:
Don Geiger, Program Advisor
920.693.1378 • donald.geiger@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10620105	DC Fundamentals	2
10804113	College Technical Math 1A	3
10809172	Introduction to Diversity Studies	3
10480101	Energy Intro-Renew & Sustain (Held at NWTC)	4
10481114	Intro to Energy Management (Held at NWTC)	3
		15
Term 2		
10103121	Excel - Level 1	1
10620110	AC Fundamentals	2
10620138	Programmable Controllers - Allen Bradley	3
10801195	Written Communication	3
10804114	College Technical Math 1B (Held at NWTC)	2
10196187	Project Management (Held at NWTC)	1
10481116	Building Automation Systems (BAS) Networking (Held at NWTC)	3
10605157	Power Electronics 1: Drives (Held at NWTC)	1
		16
Term 3		
10620164	Electromechanical Systems	2
10806154	General Physics 1	4
10403100	Blueprint Reading Intro (Held at NWTC)	1
10481109	Commercial HVACR Analysis (Held at NWTC)	3
10481111	Energy Control Strategies (Held at NWTC)	3
10481115	Lighting Fundamentals (Held at NWTC)	3
10620220	Pumps: Intro to Fluid Moving Devices (Held at NWTC)	1
		17
Term 4		
10801196	Oral/Interpersonal Communication	3
10809198	Introduction to Psychology	3
10481107	Building Energy Simulation (Held at NWTC)	3
10481108	Commercial Energy Analysis (Held at NWTC)	3
10481110	Energy Accounting (Held at NWTC)	2
10481113	Energy Investment Analysis (Held at NWTC)	3
		17
		TOTAL 65

Classes meet at LTC, unless noted to be held at NWTC.

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



AC FUNDAMENTALS...prepares student to analyze electrical circuits using AC math, analyze AC waveforms, measure & analyze AC power, analyze capacitors & inductors in DC & AC circuits, analyze AC circuits containing reactance and calculate resonance, apply the elements and properties of basic measuring circuits, and describe transformer characteristics.

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 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

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 with 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. (PREREQUISITES: 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.

ELECTROMECHANICAL SYSTEMS...prepares the student to communicate with, tune, run, and troubleshoot Allen-Bradley servos; utilize electrical control of hydraulic systems, explore PID control of motor speed; and investigate open and closed loop control systems. PREREQUISITES: 10620104 Fluid Power 2 and 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. (PREREQUISITES: 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. (PREREQUISITES: 10481114, Intro to Energy Mng) 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

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 an assessment for placement (Accuplacer or ACT).
- Meet with NWTC program advisor to discuss program details.
- Meet with LTC program advisor to discuss program details.

APPROXIMATE COSTS

- \$136.50 per credit tuition (WI resident) plus \$8.10 per credit student activity fee. \$10 per credit online or hybrid fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

SPECIAL NOTE

This program is shared with Northeast Wisconsin Technical College (NWTC) in Green Bay. LTC students follow NWTC's admission process; however, they are able to attend 20 credits at the LTC Cleveland campus and the remainder of the credits (45) at NWTC Green Bay.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

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

CONTACT

NWTC:
Stephanie Willson-Wellhouse, Academic Advisor
920.498.6386
LTC:
Don Geiger, Academic Advisor
920.693.1378 • donald.geiger@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10890101	College 101 (Held at NWTC)	1
10506146	Intro to Environmental Science (Held at NWTC)	3
10506147	Environmental Biology (Held at NWTC)	4
10103121	Excel - Level 1	1
10804113	College Technical Math 1A	3
10806134	General Chemistry	4
		16
Term 2		
10506168	Intro to GIS (Held at NWTC)	2
10506148	Environmental Chemical Analysis (Held at NWTC)	4
10607236	AutoCAD & Civil 3D (Held at NWTC)	3
10506161	Hydraulics and Hydrology (Held at NWTC)	3
10804114	College Tech Math 1B (Held at NWTC)	2
10801195	Written Communications	3
		17
Term 3		
10620220	Pumps: Fluid Moving Devices (Held at NWTC)	1
10506175	Wastewater Treatment-Liquid (Held at NWTC)	3
10506176	Wastewater Treatment-Solids & Adv. (Held at NWTC)	3
10506169	Environmental Engineering Internship (Held at NWTC) OR 10481114 Intro to Energy Mgmt (3 cr) OR 10093350 Nutrient Mgmt Planning/Compliance (3 cr)	3
10801196	Oral/Interpersonal Communications	3
10809198	Introduction to Psychology	3
		16
Term 4		
10506152	Industrial Safety & Emergency Response (Held at NWTC)	3
10506163	Solid & Hazardous Waste (Held at NWTC)	2
10506164	Air Pollution Control Systems (Held at NWTC)	2
10506166	Ground Water & Distribution (Held at NWTC)	3
10506167	Surface Water & Distribution (Held at NWTC)	3
10809172	Intro to Diversity Studies	3
		16
		TOTAL 65

Term 1 & 2: NWTC classes are held on Tuesdays & Thursdays
Term 3 & 4: NWTC classes are held on Mondays & Wednesdays

Curriculum Modifications Pending State Approval

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 2019-2020 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 the 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. (PREREQ: acceptance to the Civil Engineering Tech program or Env Engineering-Waste & Water Tech 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. (Prereq: 10806134, Gen Chemistry "C" or better; 10804118, Interm Algebra w/Apps "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, & salts; and gas laws. PREREQ: 10804113 Col Tech Math 1A, 10804109 Alg-Gen Chem, 10804195 or 10804115 Col Tech Math 1, 10804107 Col Math, 10804118 Intrm Alg w/Apps, or 10834110 Elem Alg or Math plcmnt asmt equiv & COREQ: 10838105 Intro Rdg & Stdy Sk or Read plcmnt asmt equiv

GROUND WATER & DISTRIBUTION...introduces the learner to the physical, chemical, and biological principles of operation of groundwater and distribution systems. The basic unit processes, control parameters, and mathematical problem-solving related to groundwater facilities and distribution systems are introduced. Laboratory procedures and practices involved with operation of water analysis and treatment. (Prerequisites: 10-506-148, Environmental Chem Analysis; 10-804-118, Interm 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 & agricultural runoff. (PREREQUISITE: 10804113 College Tech Math 1A "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 the 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...provides the learner with the 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, Interm Algebra w/Apps) Course Typically Offered: Spring

WASTEWATER TREATMENT-LIQUID...provides the learner with the physical, chemical, and biological principles associated with treating liquid flow streams in municipal and industrial wastewater treatment facilities. The basic unit processes, control parameters, hydraulics and mathematical problem-solving related to collection systems and treatment facilities are introduced. Laboratory procedures and practices involved with operation of liquid treatment processes. (Prerequisite: 10506148, Environmental Chem Analysis)

WASTEWATER TREATMENT-SOLIDS AND ADVANCED...provides the learner with the physical, chemical, and biological principles associated with advanced treatment of liquid flow streams and treatment of residual solids in municipal and industrial wastewater treatment facilities. The basic unit processes, control parameters, hydraulics and mathematical problem-solving related to advanced liquid and solids treatment facilities are introduced. Laboratory procedures and practices involved with operation of advanced liquid and solids treatment processes. (Prerequisite: 10506175, Wastewater Treatment-Liquid)

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

Program Number 10-531-2 Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

A Firefighter Paramedic (Fire Medic) protects life and property through fire suppression, rescue, prevention, and emergency medical treatment capabilities. Graduates are highly trained in the modern firefighting techniques and Paramedic skills necessary to make them successful in the dynamic emergency services environment.

PROGRAM OUTCOMES

- Perform essential firefighting and paramedic skills for life safety, incident stabilization, and property conservation.
- Create and execute the objectives of an incident action plan for the diverse emergency incident to be encountered.
- Use effective interpersonal communication skills in emergency and nonemergency environments.
- Apply the critical skills of fire prevention, fire investigation, fire inspection, and public education to minimize the loss of life and property.
- Operate fire service equipment and apparatus effectively and efficiently.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Discuss EMT license requirements.
- Complete Technical Standards form.
- Complete DMI (District Mutual Insurance) form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

- The Lakeshore Technical College Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). 25400 US Highway 19 N., Suite 158, Clearwater, FL 33756. Phone: 727-210-2350. Web: www.caahep.org.
- Students will be required to acquire a Wisconsin Commercial Driver's Instructional Permit during the Fire Apparatus Engineer course.
- Lakeshore Technical College's Paramedic Technician program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examination, or licensure for other states.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Spring Start)		
10503145	Firefighting Principles 1	2
10503146	Firefighting Principles 2	2
10503911	Company Level Inspections	2
10801195	Written Communication	3
10809198	Introduction to Psychology	3
		12
Term 2		
10503107	Fire Apparatus Engineer	3
10503144	Advanced Firefighting Concepts	2
10801196	Oral/Interpersonal Communication	3
10806189	Basic Anatomy	3
10809166	Introduction to Ethics	3
		14
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 HPS Lab 1	1
10531930	Paramedic Clinical 1	1
		17
Summer		
10531918	Advanced Emergency Resuscitation	1
10531922	EMS Operations	1
10531920	Paramedic Trauma	3
10531928	Paramedic Clinical 2	2
10531927	Paramedic HPS Lab 2	1
10531932	Paramedic Cardiology 2	3
		11
Term 4		
10531919	Medical Emergencies	4
10531921	Special Patient Populations	3
10531923	Paramedic Capstone	1
10531929	Paramedic Field Clinical	2
10531931	Paramedic Internship	1
10531933	Paramedic HPS Lab 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 advisor for details. The tuition and fees are approximate based on 2020-2021 rates and are subject to change prior to the start of the academic year.



ADVANCED EMERGENCY RESUSCITATION...provides ACLS and PALS knowledge and skills preparing the student in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri-arrest with intervention to prevent respiratory and/or cardiac arrest if possible. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531916 Paramedic Cardiology

ADVANCED FIREFIGHTING CONCEPTS...advances previously learned concepts to build a stronger foundation while exposing the learner to new concepts such as vehicle extrication, technical rescue, flammable liquids fire suppression, and team leadership/management. This course meets the requirements of NFPA 1001 for the Firefighter II level. PREREQUISITE: 10503142 Firefighting Principles

ADVANCED PATIENT ASSESSMENT PRINCIPLES...provides knowledge of scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. CONDITION: 105311 Paramedic Tech or 315311 EMT Paramedic or 105312 Fire Medic program reqs met and COREQUISITE: 10531912 Paramedic Medical Principles

ADVANCED PREHOSPITAL PHARMACOLOGY...provides student with comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the health of the patient. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531913 Advanced 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 Reading and Study Skills or Reading placement assessment equivalent

COMPANY LEVEL INSPECTIONS...familiarizes the students with state and local regulations and national codes relating to fire prevention. The course requires the completion of actual inspections and fire safety presentations. 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 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

FIRE APPARATUS ENGINEER...prepares firefighters to drive and operate fire department emergency apparatus. The course presents theories of hydraulics applied to the fire service, with emphasis on mathematics, and formulas used in operating fire apparatus pumps. Students receive lecture and practical training on maintenance, driving, operating on-board pumps and equipment, and apparatus testing. The 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. PREREQUISITE: 10503142 Firefighting Principles

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

FIREFIGHTER PRINCIPLES PART 2...advances on the foundations presented in Part 1. Students will acquire the remaining job performance requirements to meet National Firefighter level I qualifications. Topics will include: history of the fire service, ropes and knots, advanced forcible entry, size up and response priorities, fireground communications, hazardous materials operations, and preparation for the Firefighter Level I examination process.

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

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 reqs met and COREQUISITE: 10531922 EMS Operations

PARAMEDIC CARDIOLOGY 1...provides the principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and a plan for a patient with a cardiovascular complaint. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531915 Paramedic Respiratory Management

PARAMEDIC CARDIOLOGY 2...continues the paramedic's knowledge of cardiology. Incorporates basic and advanced electrocardiogram rhythm interpretation as well as introduces students to Advanced Cardiovascular Life Support (ACLS).

PARAMEDIC CLINICAL 1...allows paramedics their first experiences providing advanced level skills and assessments on patients in a healthcare setting. Students will be assigned to an area hospital to begin their clinical training and meeting their assigned clinical competencies. Activities may include rotations within hospital emergency departments, operating rooms, intensive care units, and/or rotations with lab or respiratory staff. COREQUISITE: 10531911 EMS Fundamentals and CONDITION: 15311 Paramedic Technician or 105312 Fire Medic or 315311 EMT Paramedic program admission requirements met

PARAMEDIC CLINICAL 2...provides student with the opportunity to enhance their learning through the skills practice in a health care environment experience with actual patients under the supervision of approved preceptors or high-fidelity human patient simulator. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic Program Requirements Met and COREQUISITE: 10531930 Paramedic Clinical 1

PARAMEDIC 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 Advd Emergency Resuscitation

PARAMEDIC HPS LAB 3...provides instruction for continued growth for paramedic students towards mastery in patient assessment, treatment, team management, and ambulance operations during this capstone Human Patient Simulation experience.

PARAMEDIC HUMAN PATIENT SIMULATION LAB 1...reinforces student learning through the practice of paramedicine in a controlled environment utilizing high-fidelity human patient simulators and realistic emergency response scenarios with support and guidance of instructors. The student will apply assessment knowledge and demonstrate paramedic level skills in a variety of emergency response scenarios and environments.

PARAMEDIC HUMAN PATIENT SIMULATION LAB 2...reinforces student learning through the practice of paramedicine in a controlled environment utilizing high-fidelity human patient simulators and realistic emergency response scenarios with support and guidance of instructors. The student will evaluate patient presentations, formulate treatment plans, reassess interventions, and implement corrective actions by integrating pathophysiological principles and assessment findings. CONDITION: 105311 Paramedic Technician or 105312 Fire Medic or 315311 EMT Paramedic program admission requirements met

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 and COREQUISITE: 10531919 Paramedic Medical Emergencies

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 Rdg and Study Skills or Reading placement assessment equivalent

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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL 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 Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10201120	Intro to Graphic and Web Design	1
10201101	Design Fundamentals	3
10201108	Photoshop	3
10201109	Illustration	3
10801195	Written Communication	3
10809198	Introduction to Psychology	3
		16
Term 2		
10103191	Word - Level 1	1
10103121	Excel - Level 1	1
10201114	Typography	2
10201115	Digital Photography	2
10201110	InDesign	3
10152196	Web Development 1	3
10804123	Math with Business Applications OR 10806112 Principles of Sustainability	3
		15
Term 3		
10152122	Multimedia Concepts	3
10201117	Career Essentials	2
10201118	Advancements in Web and Development	2
10201119	Website Development Advanced	2
10801196	Oral/Interpersonal Communication	3
10809196	Introduction to Sociology	3
		15
Term 4		
10152106	Integrated Web Concepts	4
10201103	Advanced Computer Graphics	3
10201105	Internship for Graphics and Web Design	1
10201113	Publication Design	3
10809195	Economics	3
		14
		TOTAL 60

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



ADVANCED COMPUTER GRAPHICS...provides the learner with enhanced knowledge and skill in the use of design, illustration, and page layout software through the creation of a variety of design projects. Emphasis is on original, strong images and type integration, as well as preparing files for press. Students must participate in the spring portfolio show. PREREQ: 10201101 Design Fundamentals, 10152106 Integrated Web Concepts, 10201110 InDesign, 10152118 or 10201119 Website Dev Advanced and COREQ: 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 Dev 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: 10152106 Integrated Web Concepts

DESIGN FUNDAMENTALS...introduces the learner to the elements of art (line, texture, color, shape and value.) Students will investigate how these elements can be manipulated using various principles of design to achieve different effects. Basic color theory, historic eras, and emerging trends will be covered.

DIGITAL PHOTOGRAPHY...will help the individual understand photographic principles and file manipulation. Through in-class discussions, audio visuals, camera demonstrations, and in-the-field shooting sessions, the individual will learn shooting and lighting techniques designed to capture a better image. Printing, cropping, retouching and file management will also be covered.

ECONOMICS...provides the participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQUISITE: 10838105 Intro Reading 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 the students to the three major components of the web: design, development, and marketing, and how the three areas work together. A common course among Graphic and Web Design, Web and Software Developer, and Marketing, students from each program will work in cross-functional groups to build a marketing plan, design materials, and websites for real-world community businesses. PREREQUISITES: 10104122 Marketing Strategies and Planning and 101043 Mktg req met or 10152187 Web Development 3 and 101527 IT Web and Sof Dev req met or 10201110 InDesign and 102012 Graphic and Web Design req met.

INTERNSHIP FOR GRAPHIC AND WEB DESIGN...requires students to complete 72 hours of performing work in a business/industrial service setting related to their program objectives. Students are responsible for seeking and obtaining the internship workstation position. Course requirements include maintaining a log of work activities, identifying and receiving approval from the job supervisor and instructor, and completing a work-related project. The field study may be substituted based on instruction decision. Students meet periodically at LTC. COREQUISITE: 10201113 Publication Design and CONDITION: Verification of eligibility by the Internship Coordinator

INTRODUCTION TO GRAPHIC AND WEB DESIGN...teaches skills essential to the Graphic & Web Design program. Wacom tablets, scanning, printing options, offsite storage, and Adobe Create Cloud will be covered using different platforms.

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

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

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

MULTIMEDIA CONCEPTS...will teach students how to create various multimedia elements including video, audio, and basic animation and learn how to incorporate these elements into web pages. PREREQUISITE: 10152196 Web Development 1

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

PHOTOSHOP...introduces the learner to using Adobe Photoshop to edit, enhance, and combine digital images which are prepared for print and web media. Topics will include photo correction, masks, channels, page backgrounds, brushes and optimizes images for web use.

PUBLICATION DESIGN...will focus on creating and designing print material using desktop publishing software. A variety of documents, including brochures, annual reports, flyers, magazine articles, and multipage documents are created. Integrating Microsoft Office products with Adobe products are explored. The emphasis is on design and preparing files for print. PREREQUISITE: 10201110 InDesign, 10201108 Photoshop, 10201109 Illustration

TYPOGRAPHY...introduces the learner to the fundamentals of Typography. Emphasis is on the structure and form of type and how it is used in contemporary graphic design. Projects explore the history of type, and the creation of design using type elements. COREQUISITE: 10201110 InDesign and CONDITION: 102012 Graphic and Web Design admission requirements met

WEB DEVELOPMENT 1...introduces the students to web page design principles and proceeds to teach students how to create their own visually appealing designs for the web. Students will have hands-on experience using current versions of Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) to code and format accessible, valid, and optimized websites. Websites will be published live on the web using FTP. Students also explore recent trends in web design and development.

WEBSITE DEVELOPMENT ADVANCED...builds on student knowledge of XHTML and web design software. Student knowledge is extended beyond basic page design to include web page interaction and dynamic page building. Students will have hands-on experience developing complex web pages. PREREQUISITE: 10152196 Web Development 1

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

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

ABOUT THE PROGRAM

This field is where healthcare meets the cutting edge of technology! Health Information Technicians are specialists in great demand! The HIM professionals can expect to be in high demand as the health sector expands into the century. In fact, the Bureau of Labor Statistics cites health information technology as one of the fastest growing occupations in the U.S. Health Information Technicians contribute to the quality of care by collecting, analyzing, and reporting health care data. This requires knowledge of disease, treatments, computer systems, and organizational skills.

PROGRAM OUTCOMES

- Manage health data.
- Apply coding and reimbursement systems.
- Model professional behaviors and ethics.
- Maintain electronic applications to manage health information.
- Apply organizational management techniques.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

Lakeshore Technical College's Health Information Management Associate degree program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIM).

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10501101	Medical Terminology	3
10103191	Word - Level 1	1
10501107	Digital Literacy for Healthcare	2
10801195	Written Communication	3
10530162	Foundations of Healthcare	3
10806189	Basic Anatomy OR 108061889OL Basic Anatomy (3 cr) OR 10806177 General Anatomy & Physiology (4 cr)	3
		15
Term 2		
10530182	Human Diseases for Health Professions	3
10530165	Intro to Health Informatics	3
10809172	Introduction to Diversity Studies	3
10103121	Excel - Level 1	1
10530178	Healthcare Law & Ethics	2
10530197	ICD Diagnosis Coding	3
10103101	Access - Level 1	1
		16
Term 3		
10530184	CPT Coding	3
10809198	Introduction to Psychology	3
10530199	ICD Procedure Coding	2
10530191	HIM/Coding Practicum 1	2
10801196	Oral/Interpersonal Communication	3
10809196	Introduction to Sociology	3
		16
Term 4		
10530159	Healthcare Revenue Management	3
10530193	Healthcare Quality Management	2
10530177	Healthcare Stats & Research	2
10530194	HIM Organizational Resources	2
10530165	Intermediate Coding	3
10530192	HIM Practicum 2	2
		14
		TOTAL 61

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



ACCESS - LEVEL 1...introduces students to the process of creating a database, building and populating a table, establishing table relationships, and creating queries, forms, and reports. This course is offered in a self-paced format.

BASIC ANATOMY...examines concepts of anatomy and physiology as they relate to health careers. Learners correlate anatomical and physiological terminology to all body systems. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

CPT CODING...prepares learners to assign CPT codes, supported by medical documentation, with entry-level proficiency. Learners apply CPT instructional notations, conventions, rules, and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation. COREQ: 10530182 Human Dis for Hlth Prof and 10530159 Healthcare Revenue Mgmt and PREREQUISITE: 10501101 Med Term and CONDITION: 315302 Medical Coding Spec or 105304 Health Information Mgmt program requirements met

DIGITAL LITERACY FOR HEALTHCARE...focuses on the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined.

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

FOUNDATIONS OF HIM...introduces learners to the healthcare delivery system, and the external forces that influence healthcare delivery. Sets an understanding for the expectations and standards related to professional ethics, confidentiality and security of health information. Differentiates the use and structure of healthcare data elements, data standards, and the relationships between them. Prepares learners to collect and maintain health data to ensure a complete and accurate health record. COREQUISITE: 10501107 Digital Literacy for Healthcare

HEALTHCARE LAW & ETHICS...examines regulations for the content, use, confidentiality, disclosure, and retention of health information. An overview of the legal system and ethical issues are addressed.

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.

HEALTHCARE REVENUE MANAGEMENT...prepares learners to compare and contrast health care payers, illustrate the reimbursement cycle, and to comply with regulations related to fraud and abuse. Learners assign payment classifications with entry level proficiency using computerized encoding and grouping software.

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

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.

HIM PRACTICUM 2...applies previously acquired skills and knowledge and discussion of clinical situations. Prepares for the certification examination and pre-graduation activities. This is the second of a two-semester sequence of supervised technical and managerial/clinical experiences in health care facilities. PREREQUISITE: 10530191 HIM/Coding Practicum 1 and CONDITION: 105304 Health Information Management program requirements met

HIM/CODING PRACTICUM 1...applies previously acquired skills and knowledge by means of clinical experiences in the technical procedures of health record systems and discussion of clinical situations. COREQUISITES: 10530165 Intermediate Coding, 10530197 ICD Diagnosis Coding, 10530199 ICD Procedure Coding, 10530184 CPT Coding, CONDITION: 315302 Medical Coding Specialist or 105304 Health Information Management program requirements met

HUMAN DISEASE FOR HEALTH PROFESSIONS...prepares learners to interpret clinical documentation that they will encounter in a variety of healthcare settings. Emphasis is placed on understanding the common disorders and diseases of each body system to include the etiology (cause), signs and symptoms, diagnostic tests and results, and medical treatments and surgical procedures. COREQUISITES: 10501101 Med Term

ICD DIAGNOSIS CODING...prepares students to assign ICD diagnosis codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation. PREREQUISITE: 10501101 Medical Terminology and COREQUISITES: 10530182 Human Diseases for the Health Professions and 10530159 Healthcare Revenue Management or 10501102 Health Ins and Reimbursement

ICD PROCEDURE CODING...prepares students to assign ICD procedure codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation. PREREQUISITE: 10501101 Medical Terminology and COREQUISITES: 10530182 Human Diseases for the Health Professions and 10530159 Healthcare Revenue Management or 10501102 Health Ins and Reimbursement

INTERMEDIATE CODING...prepares students to assign ICD and CPT/HCPCS codes supported by medical documentation and official coding guidance to support appropriate reimbursement. Students will participate in CDI activities, including preparation of appropriate physician queries in accordance with compliance guidelines. PREREQUISITE: 10501101 Medical Terminology and COREQUISITES: 10530197 ICD Diagnosis Coding and 10530199 ICD Procedure Coding and 10530184 CPT Coding and 10530159 Healthcare Revenue Mgmt or 10501102 Health Ins and Reimbursement

INTRO TO HEALTH INFORMATICS...emphasizes the role of information technology in healthcare through an investigation of the electronic health record (EHR), business, and health information software applications. Learners will develop skills to assist in enterprise information management and database architecture design and implementation. PREREQUISITES: 10530162 Foundations of HIM and 10501107 Digital Literacy for Healthcare

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

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

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

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

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

WORD - LEVEL 1...introduces 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 31-001-1 Technical Diploma • Two Terms

ABOUT THE PROGRAM

Horticulture technicians can make a living in a wide variety of ways. You may work in the disciplines of plant propagation and production for a greenhouse or tree nursery - nurturing plants to be used in landscaping, food production, or sold in retail garden centers. You may also work on landscape maintenance or landscape construction crews for landscape contractors, lawn care service companies, botanical gardens, municipal park departments, golf courses, and natural resource management agencies. Work duties are typically out of doors and very hands-on. The work of a horticulture technician is truly a “green” career.

PROGRAM OUTCOMES

- Analyze growing media.
- Diagnose plant health.
- Communicate as a horticulture professional.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTES

Upon completion of the Horticulture Technician program, students are given the additional option of completing an associate degree to pursue their chosen area of specialization (below). Internships are included for each of these specialities.

- Horticulture & Small Farm Management Associate Degree (ITS)
- Horticulture Business Management Associate Degree (ITS)
- Landscape Design Associate Degree (ITS)

CONTACT

LTC Career Coach
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Catalog No.	Class Title	Credit(s)
Term 1		
10001110	Horticulture Introduction	3
10001112	Plants in Summer and Fall	3
10001115	Culinary Plants - Fall	1
10001148	Plant Communities of Wisconsin	3
10001172	Landscape Maintenance	3
10001113	Landscape Installation	3
		16
Term 2		
10001132	Plants in Winter and Spring	3
10001116	Culinary Plants - Spring	1
10001120	Greenhouse and Nursery Production	3
10001121	Landscape Design Studio	3
10001123	Site and Soil Analysis	3
10001149	Sustainable Landscape & Water Mgmt	3
		16

TOTAL 32

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

CULINARY PLANTS - FALL...introduces students to fall culinary plant production through the maintenance of summer vegetables in the field and raised beds, and through fall plantings. Garden cleanup, soil enhancing practices, and hoop house production will be explored; planting of winter crops will be conducted. Season-extension techniques, vegetable-storage techniques, and harvesting crops for winter forcing will be practiced with familiar and exotic crops.

CULINARY PLANTS - SPRING...introduces students to winter vegetable production, planning for the summer season, and spring work in the greenhouse, garden, and hoop house. Students will produce crops for harvest in the heated greenhouse, force winter vegetables, develop a planting plan, harvest vegetables from the unheated hoop house, and learn about different production methods (organic versus sustainable versus conventional).

GREENHOUSE AND NURSERY PRODUCTION...provides the student with the knowledge and skills for horticultural production. Students implement efficient, cost-effective, and sustainable methods of horticultural production in the greenhouse, in a variety of other horticulture-related structures, as well as in field scenarios. PREREQUISITES: 10001112 Plants in Summer & Fall and 10001110 Horticulture Intro

HORTICULTURE INTRODUCTION...engages the learner through instructor-led interactive research and presentation while exploring plant growth, development, and ecology; plant classification; plant health care; horticultural crops and production; the horticulture industry and related careers; and principles of design and design implementation.

LANDSCAPE DESIGN STUDIO...provides the learner with strategies to develop and apply a structured approach to designing landscape space. Fundamentals of the design process are applied including basic site analysis, plan development and detailing, proper plant selection, landscape graphic conventions, and client interactions. Both manual drafting and CAD software are used for design communications. Property lines, topography, site planning, hardscapes, planting plans, and section view graphics are covered.

LANDSCAPE INSTALLATION...investigates and implements landscape construction techniques including the proper and safe use of landscape tools, plan reading and interpretation, site management, proper planting, and the installation of landscape features. Potential projects include landscape plantings, mixed material patios, retaining walls, water features, sustainable landscape elements, rain gardens, roof gardens, wooden structures, etc. The course will also introduce basic estimating and contracting standards.

LANDSCAPE MAINTENANCE...assists the learner in identification and implementation of appropriate cultural practices while dealing with challenges in the landscape, including pruning techniques, insect/disease/abiotic problems; pesticides; turf issues; and resolving situations in the field. Course includes production, installation, maintenance, and harvest of edible and ornamental plants. PREREQUISITES: 10001110 Horticulture Introduction

PLANT COMMUNITIES OF WISCONSIN...enables the student to experience the diversity of the native plant communities throughout the Lakeshore region of Wisconsin and beyond. This course will involve extensive plant and plant community identification and analysis in the field, as well as native plant community design, restoration and preservation best practices.

PLANTS IN SUMMER AND FALL...explores ornamental and weedy, woody, and herbaceous plant identification, biology and culture/management through outdoor and indoor applied activities. The course activities focus on plants encountered in interior and outdoor landscaping as well as ornamental and food production in eastern Wisconsin and the Midwest. This is the fall and summer focused course of a two-course series that complements Plants in Winter and Spring.

PLANTS IN WINTER AND SPRING...explores ornamental and weedy, woody, and herbaceous plant identification, biology and culture/management through outdoor and indoor applied activities. The course activities focus on plants encountered in interior and outdoor landscaping as well as ornamental and food production in eastern Wisconsin and the Midwest. This is the winter and spring focused course of a two-course series that complements Plants in Summer and Fall. PREREQUISITE: 10001112 Plants in Summer and Fall

SITE AND SOIL ANALYSIS...guides students through site analysis with evaluation of physical, biological, water, and cultural resources to determine landscape development potentials and sensitivities. Analyzes interactions of plants with soil dynamics and examines physical, chemical, biological and management characteristics of both healthy and resilient as well as degraded but renewable soils.

SUSTAINABLE LANDSCAPE AND WATER MANAGEMENT...approaches sustainable landscape management from a practical goal-based outlook and implements management and supervisory strategies for "triple bottom-line" sustainability (Environment, Economic, and Social). Special attention will be paid to green infrastructure and integrated management practices for Sustainable Landscapes and Stormwater Management. Project based management opportunities will enable students to practice and employ best management practices. PREREQUISITE: 10001172 Landscape Maintenance and COREQUISITE: 10001121 Landscape Design Studio

ABOUT THE PROGRAM

Horticulture technicians can make a living in a wide variety of ways. You may work in the disciplines of plant propagation and production for a greenhouse or tree nursery - nurturing plants to be used in landscaping, food production, or sold in retail garden centers. You may also work on landscape maintenance or landscape construction crews for landscape contractors, lawn care service companies, botanical gardens, municipal park departments, golf courses, and natural resource management agencies. Work duties are typically out of doors and very hands-on. The work of a horticulture technician is truly a “green” career.

PROGRAM OUTCOMES

- Analyze growing media.
- Diagnose plant health.
- Communicate as a horticulture professional.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTES

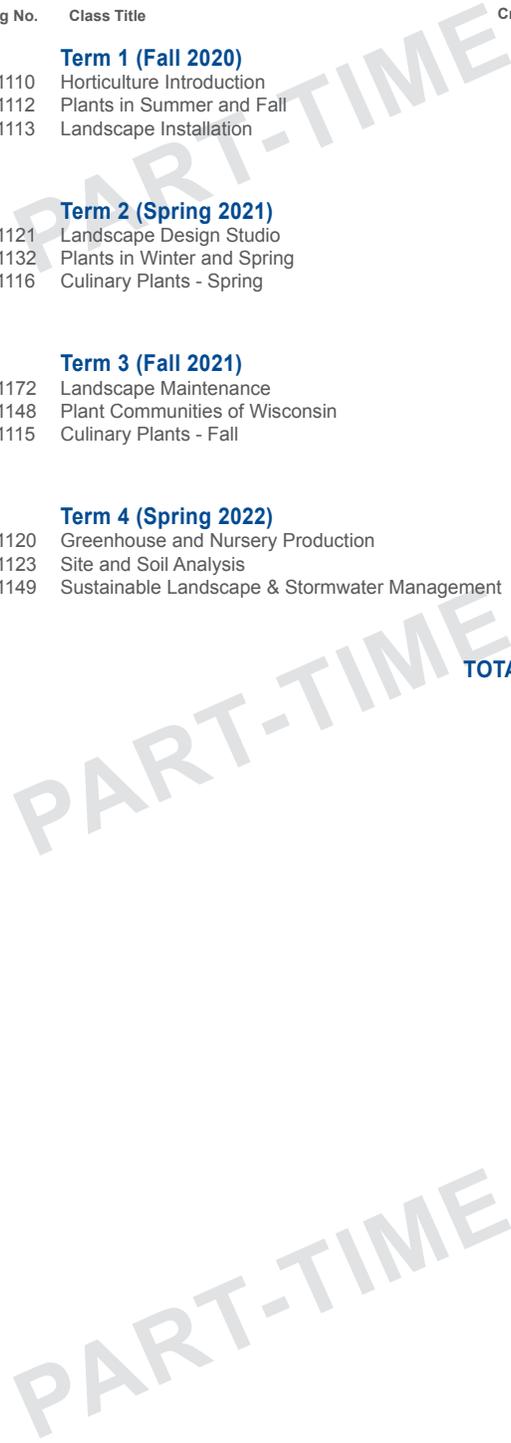
Upon completion of the Horticulture Technician program, students are given the additional option of completing an associate degree to pursue their chosen area of specialization (below). Internships are included for each of these specialities.

- Horticulture & Small Farm Management Associate Degree (ITS)
- Horticulture Business Management Associate Degree (ITS)
- Landscape Design Associate Degree (ITS)

CONTACT

LTC Career Coach
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Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2020)		
10001110	Horticulture Introduction	3
10001112	Plants in Summer and Fall	3
10001113	Landscape Installation	3
		9
Term 2 (Spring 2021)		
10001121	Landscape Design Studio	3
10001132	Plants in Winter and Spring	3
10001116	Culinary Plants - Spring	1
		7
Term 3 (Fall 2021)		
10001172	Landscape Maintenance	3
10001148	Plant Communities of Wisconsin	3
10001115	Culinary Plants - Fall	1
		7
Term 4 (Spring 2022)		
10001120	Greenhouse and Nursery Production	3
10001123	Site and Soil Analysis	3
10001149	Sustainable Landscape & Stormwater Management	3
		9
		TOTAL 32



CULINARY PLANTS - FALL...introduces students to fall culinary plant production through the maintenance of summer vegetables in the field and raised beds, and through fall plantings. Garden cleanup, soil enhancing practices, and hoop house production will be explored; planting of winter crops will be conducted. Season-extension techniques, vegetable-storage techniques, and harvesting crops for winter forcing will be practiced with familiar and exotic crops.

CULINARY PLANTS - SPRING...introduces students to winter vegetable production, planning for the summer season, and spring work in the greenhouse, garden, and hoop house. Students will produce crops for harvest in the heated greenhouse, force winter vegetables, develop a planting plan, harvest vegetables from the unheated hoop house, and learn about different production methods (organic versus sustainable versus conventional).

GREENHOUSE AND NURSERY PRODUCTION...provides the student with the knowledge and skills for horticultural production. Students implement efficient, cost-effective, and sustainable methods of horticultural production in the greenhouse, in a variety of other horticulture-related structures, as well as in field scenarios. PREREQUISITES: 10001112 Plants in Summer & Fall and 10001110 Horticulture Intro

HORTICULTURE INTRODUCTION...engages the learner through instructor-led interactive research and presentation while exploring plant growth, development, and ecology; plant classification; plant health care; horticultural crops and production; the horticulture industry and related careers; and principles of design and design implementation.

LANDSCAPE DESIGN STUDIO...provides the learner with strategies to develop and apply a structured approach to designing landscape space. Fundamentals of the design process are applied including basic site analysis, plan development and detailing, proper plant selection, landscape graphic conventions, and client interactions. Both manual drafting and CAD software are used for design communications. Property lines, topography, site planning, hardscapes, planting plans, and section view graphics are covered.

LANDSCAPE INSTALLATION...investigates and implements landscape construction techniques including the proper and safe use of landscape tools, plan reading and interpretation, site management, proper planting, and the installation of landscape features. Potential projects include landscape plantings, mixed material patios, retaining walls, water features, sustainable landscape elements, rain gardens, roof gardens, wooden structures, etc. The course will also introduce basic estimating and contracting standards.

LANDSCAPE MAINTENANCE...assists the learner in identification and implementation of appropriate cultural practices while dealing with challenges in the landscape, including pruning techniques, insect/disease/abiotic problems; pesticides; turf issues; and resolving situations in the field. Course includes production, installation, maintenance, and harvest of edible and ornamental plants. PREREQUISITES: 10001110 Horticulture Introduction

PLANT COMMUNITIES OF WISCONSIN...enables the student to experience the diversity of the native plant communities throughout the Lakeshore region of Wisconsin and beyond. This course will involve extensive plant and plant community identification and analysis in the field, as well as native plant community design, restoration and preservation best practices.

PLANTS IN SUMMER AND FALL...explores ornamental and weedy, woody, and herbaceous plant identification, biology and culture/management through outdoor and indoor applied activities. The course activities focus on plants encountered in interior and outdoor landscaping as well as ornamental and food production in eastern Wisconsin and the Midwest. This is the fall and summer focused course of a two-course series that complements Plants in Winter and Spring.

PLANTS IN WINTER AND SPRING...explores ornamental and weedy, woody, and herbaceous plant identification, biology and culture/management through outdoor and indoor applied activities. The course activities focus on plants encountered in interior and outdoor landscaping as well as ornamental and food production in eastern Wisconsin and the Midwest. This is the winter and spring focused course of a two-course series that complements Plants in Summer and Fall. PREREQUISITE: 10001112 Plants in Summer and Fall

SITE AND SOIL ANALYSIS...guides students through site analysis with evaluation of physical, biological, water, and cultural resources to determine landscape development potentials and sensitivities. Analyzes interactions of plants with soil dynamics and examines physical, chemical, biological and management characteristics of both healthy and resilient as well as degraded but renewable soils.

SUSTAINABLE LANDSCAPE AND WATER MANAGEMENT...approaches sustainable landscape management from a practical goal-based outlook and implements management and supervisory strategies for "triple bottom-line" sustainability (Environment, Economic, and Social). Special attention will be paid to green infrastructure and integrated management practices for Sustainable Landscapes and Stormwater Management. Project based management opportunities will enable students to practice and employ best management practices. PREREQUISITE: 10001172 Landscape Maintenance and COREQUISITE: 10001121 Landscape Design Studio

ABOUT THE PROGRAM

The associate degree in Hospitality Management prepares individuals for a management career in the hospitality industry. Coursework emphasizes theory and application of skills needed for mid-management and supervisory level of employment in food and lodging facilities. Hospitality management skills are also applicable to a variety of other hospitality operations which include conference centers, sports and entertainment facilities, front office managers, food and beverage operations, and other careers.

PROGRAM OUTCOMES

- Plan the operations within a hospitality organization.
- Organize hospitality resources to achieve the goals of the organization.
- Direct individuals and/or processes to meet organizational goals.
- Control hospitality processes/procedures.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
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APPROXIMATE COSTS

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

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your 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		
10103121	Excel - Level 1	1
10103191	Word - Level 1	1
10104109	Customer Service Techniques	2
10109112	Sanitation for Food Service	1
10109121	Introduction to Hotel/Hospitality Management	3
10801195	Written Communication OR 10801136 English Composition 1	3
10804123	Math with Business Applications	3
		14
Term 2		
10104128	Leadership and Professionalism	3
10104170	Marketing Tourism and Hospitality	3
10109108	Dining Room and Beverage Service	2
10196191	Supervision	3
10109122	Hospitality Field Study	2
10801198	Speech OR 10801196 Oral/Interpersonal Communication	3
		16
(Summer)		
10109144	Hospitality Internship*	3
		3
Term 3		
10104125	Promotion in the Social Media	3
10109111	Housekeeping Management	2
10109113	Food and Beverage Operations	2
10109151	Hospitality Event Planning	2
10109158	Hospitality Cost Controls	3
10809172	Introduction to Diversity Studies OR Introduction to Sociology	3
		15
Term 4		
10101102	Hospitality Accounting	3
10109110	Front Office Procedures and Management	2
10109115	Hospitality Law	3
10109150	Housekeeping Practicum	1
10809198	Introduction to Psychology	3
		12
		TOTAL 60

* Verification of current First Aide/CPR card or proof of having taken 42531416CA class

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



CUSTOMER SERVICE TECHNIQUES...assesses participants' skills in customer relations, judgment and business development and provides training in connecting with customers, healing customer relationships, and dealing with customer needs. Course includes opportunity to earn nationally recognized AHLEI certification through additional final exam.

DINING ROOM AND BEVERAGE SERVICE...introduces learners to dining room and beverage service including wine, spirits, beer, mixology, and non-alcoholic drinks. Helps learners refine their customer service and meal delivery skills through the study and application of proper, customer-oriented dining room service environments including etiquette, dining room safety, set-up, American and French table service, and menu knowledge skills. Concepts include histories of table service, psychology of the customer, and service sequence.

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

FOOD AND BEVERAGE OPERATIONS...introduces and applies principles of menu planning, food preparation, laws and sale of alcoholic beverages. Emphasis is on operation of a professional food and beverage facility. Course includes opportunity to earn nationally recognized AHLEI certification through additional final exam.

FRONT OFFICE PROCEDURES AND MANAGEMENT...emphasizes front office techniques and management principles for the organization and operation of the lodging facility. The human and public relations responsibilities of the front office as well as routine procedures are an integral part of the course. Course includes opportunity to earn nationally recognized AHLEI certification through additional final exam.

HOSPITALITY ACCOUNTING...provides students with an understanding of the basic structure of accounting in the hospitality area and how to interpret and understand financial statements to learn some internal controls. Students will learn some bottom-up cost control and some budgeting. The student will recognize the differences in hotel/hospitality accounting and emphasis is placed on analysis and interpretation as well as recording, classifying, and summarizing processes. PREREQUISITE: 10101158 Hospitality Cost Controls

HOSPITALITY COST CONTROLS...applies concepts of controlling costs with emphasis on cost-to-sales relationship. Students calculate the costs of goods, selling price and relative percentages, forecast sales, conduct yield analysis and calculate break-even periods.

HOSPITALITY EVENT PLANNING...prepares the learner to manage preplanning activities and execution of events in the hospitality industry, coordinate equipment and facility setup, communicate with outside vendors/suppliers, and conduct follow-up activities. Each student will be required to participate in planning a real-life event and/or assisting an organization through a service learning experience.

HOSPITALITY FIELD STUDY...requires students to complete 144 hours (2 credits) of performing work in a front of house restaurant setting. Incorporates fundamental theories and techniques learned during the first semester. Safety, sanitation, cost control and customer service concepts are applied. Activities may include day, evening, and weekend requirements. CONDITION: Verification of site approval by the instructor.

HOSPITALITY INTERNSHIP...affords students on-the-job experience while providing instructor and workplace supervision. Students are responsible for seeking and obtaining the internship position with instructor approval. 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. CONDITION: Verification of eligibility by the Instructor

HOSPITALITY LAW...will apply legal practices in hospitality environments including analysis of the impact of U.S. employment laws, the global economy, vendor/supplier contract negotiations, reacting to legal charges, documenting the hiring/firing process, dealing with harassment issues, privacy issues, and summarizing legal issues facing hospitality/culinary employees. Students will demonstrate TSA through submission of student portfolio. COREQUISITE: 10109121 Introduction to Hotel/Hospitality Mng

HOUSEKEEPING MANAGEMENT...this course investigates the functions of the housekeeping department and the role of managers in operating the department. Students are introduced to requirements for guest satisfaction including room and facility appeal, order, and cleanliness. Course includes opportunity to earn nationally recognized AHLEI certification through additional final exam.

HOUSEKEEPING PRACTICUM...prepares the learner for relevant experience working in the housekeeping department, and incorporating classroom theory. Students work in the housekeeping department of the participating organization through which they can acquire a log of real-life experiences related to techniques in housekeeping. Activities may include day and evening requirements. COREQUISITE: 10109111 Housekeeping Management

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

INTRODUCTION TO HOTEL/HOSPITALITY MANAGEMENT...will trace the development of the hotel/motel industry from early inns to modern high-rise and commercial hotels and highway motels. The organization of the hotel, including food and beverage operations, is discussed.

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

LEADERSHIP AND PROFESSIONALISM...prepares the student to accept a leadership role in their chosen occupation and provides opportunities to demonstrate business etiquette and professionalism in a variety of settings.

MARKETING TOURISM AND HOSPITALITY...introduces the student to various aspects of tourism, the development and classification of hotel businesses, the hotel and rooms division operation, the duties and responsibilities of the key food and beverage executives, the history and development of the restaurant business, noncommercial food service segments, beverage management and liquor liability, recreation and leisure, the history of gaming entertainment, and the different types of meetings, conventions, and expositions.

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

PROMOTION IN THE SOCIAL MEDIA CAMPAIGN...provides the student with the understanding of the promotional mix in integrated marketing communications. Students will also explore the role of social media in branding and positioning products. PREREQUISITE: 10104124 Research and Web Analytics or 10104170 Marketing Tourism and Hospitality

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.

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

SUPERVISION...allows the learner to apply the skills and tools necessary to perform the functions of a frontline leader. Students learn the application of strategies and transition to a contemporary supervisory role including day-to-day operations, controlling, staffing, leadership, problem-solving, team skills, motivation, and training.

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

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

Program Number 10-109-2
Associate Degree in Applied Science • Five Terms

ABOUT THE PROGRAM

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CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2020)		
10104109	Customer Service Techniques	2
10109112	Sanitation for Food Service	1
10109121	Introduction to Hotel/Hospitality Management	3
10801195	Written Communication OR 10801136 English Composition 1	3
		9
Term 2 (Spring 2021)		
10104170	Marketing Tourism and Hospitality	3
10109108	Dining Room and Beverage Service	2
10109122	Hospitality Field Study	2
		7
Term 3 (Summer 2021)		
10801198	Speech OR 10801196 Oral/Interpersonal Communication	3
10103191	Word - Level 1	1
10804123	Math with Business Applications	3
		7
Term 4 (Fall 2021)		
10109111	Housekeeping Management	2
10109113	Food and Beverage Operations	2
10109151	Hospitality Event Planning	2
10809172	Introduction to Diversity Studies OR 10809196 Introduction to Sociology	3
		9
Term 5 (Spring 2022)		
10104128	Leadership and Professionalism	3
10109110	Front Office Procedures and Management	2
10109150	Housekeeping Practicum	1
10196191	Supervision	3
10103121	Excel - Level 1	1
		10
Term 6 (Summer 2022)		
10809198	Introduction to Psychology	3
10109144	Hospitality Internship*	3
		6
Term 7 (Fall 2022)		
10109158	Hospitality Cost Controls	3
10104125	Promotion in the Social Media	3
		6
Term 8 (Spring 2023)		
10101102	Hospitality Accounting	3
10109115	Hospitality Law	3
		6
		TOTAL 60

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ABOUT THE PROGRAM

If you enjoy structuring and administering programs and policies designed to help employees be productive and safe in the workplace, then human resource administration is a good career for you. Knowing the laws, regulations, and internal policies of an organization and administering them humanely and fairly is the human resource administrator's responsibility. This growing and dynamic field has excellent future career growth potential.

PROGRAM OUTCOMES

- Create an organizational workforce plan.
- Develop training programs.
- Examine organizational total rewards programs.
- Incorporate employment law into business practices.
- Facilitate effective employee relations.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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FINANCIAL AID

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

SPECIAL NOTE

This program is also offered in an online delivery format. Contact an advisor for details.

CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1		
10103191	Word - Level 1	1
10103121	Excel - Level 1	1
10196193	Human Resource Management	3
10116105	Recruitment and Retention of Employees	3
10116127	HR Technology	2
10449114	Safety in the Workplace	3
10801195	Written Communication	3
		16
Term 2		
10101106	Payroll Applications	2
10196191	Supervision	3
10116125	Human Resource Employment Law	3
10116103	Training for Organizations	3
10809198	Introduction to Psychology	3
10103161	PowerPoint - Level 1	1
		15
Term 3		
10804123	Math with Business Applications	3
10116129	Professional Career Search Techniques	1
10116102	Compensation & Benefits Administration	3
10116107	Labor Relations and Negotiations	2
10809195	Economics	3
10801196	Oral/Interpersonal Communication OR	3
	10801198 Speech (3 cr)	
		15
Term 4		
10116124	Strategic Performance Management	3
10101155	Accounting for Professionals	3
10809172	Introduction to Diversity Studies	3
10116168	Organizational Development	2
10116106	Internship--Human Resources OR	3
	10138101 Intro to Global Business OR	
	10116128 HR Studies	
		14
		TOTAL 60

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



ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQUISITE: 10804123 Math w Business Apps or CONDITION: 101101 Paralegal program reqs met

COMPENSATION AND BENEFITS ADMINISTRATION...applies 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 Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610062 Agribusiness/Financial Basic program admissions met

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

HR TECHNOLOGY...introduces the learner to the ever-increasing use of technology in the human resource function with special attention paid to mobile computing, social media, human resource information and management systems, cloud computing, and surveying mechanisms.

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

HUMAN RESOURCES EMPLOYMENT LAW...applies the skills/tools necessary to effectively value and apply employees' abilities and needs to organization goals. Learners will demonstrate the legal application of the HR role as it impacts EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies/procedures, training, performance management, employee counseling/development, and effective use of compensation and benefit strategies.

INTERNSHIP-HUMAN RESOURCES...requires students to complete 72 to 216 hours (1 to 3 credits) of performing work in a business/industrial service setting related to their Human Resource program objectives. Students are responsible for seeking and obtaining the internship workstation position. Course requirements include maintaining a log of work activities, identifying and receiving approval from the job supervisor and instructor, and completing a work-related project. Students meet periodically at LTC. PREREQUISITE: 10105124 Port Intro & 10105126 Career Assess or 10105128 Pers Branding & CONDITION: Verification of eligibility by instructor coord of Hum Res prog (student must have at least 45 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 Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

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

ORGANIZATIONAL DEVELOPMENT...describes what organizations do and how managers contribute to the success of organizational activities and structures. This course will walk through the role of a HR Business Partner in a changing organization. Students will learn models, the process, research and application of change management and organization development principles. This course will also teach how organizational development ties with employee development and retention by introducing strategies to provide employees with the opportunity to learn and grow in their careers.

PAYROLL APPLICATIONS...introduces students to federal and state payroll laws; calculations for gross and net income; prepare payroll deductions; and maintain payroll records.

POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects. This course is offered in a self-paced format.

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

RECRUITMENT & RETENTION OF EMPLOYEES...applies and skills and tools necessary to hire and retain qualified employees. Legal issues, testing, screening, interviewing, selecting and negotiating techniques will be demonstrated and assessed for each learner.

SAFETY IN THE WORKPLACE...applies 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: 10196193 Human Resource Mng

SUPERVISION...allows the learner to apply the skills and tools necessary to perform the functions of a frontline leader. Students learn the application of strategies and transition to a contemporary supervisory role including day-to-day operations, controlling, staffing, leadership, problem-solving, team skills, motivation, and training.

TRAINING FOR ORGANIZATIONS...applies the skills and tools necessary to implement the training cycle of assessment, design, implementation and evaluation. Each learner will develop and present a complete training project based upon adult learning theory and instructional design techniques.

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

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

Program Number 10-116-1
Associate Degree in Applied Science

ABOUT THE PROGRAM

If you enjoy structuring and administering programs and policies designed to help employees be productive and safe in the workplace, then human resource administration is a good career for you. Knowing the laws, regulations, and internal policies of an organization and administering them humanely and fairly is the human resource administrator's responsibility. This growing and dynamic field has excellent future career growth potential.

PROGRAM OUTCOMES

- Create an organizational workforce plan.
- Develop training programs.
- Examine organizational total rewards programs.
- Incorporate employment law into business practices.
- Facilitate effective employee relations.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

This program is also offered in an online delivery format. Contact an advisor for details.

CONTACT

LTC Career Coach
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2020)		
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 2021)		
10101106	Payroll Applications	2
10196191	Supervision	3
10809198	Introduction to Psychology	3
		8
Term 3 (Summer 2021)		
10801195	Written Communication	3
10116103	Training for Organizations	3
		6
Term 4 (Fall 2021)		
10116105	Recruitment and Retention of Employees	3
10116127	HR Technology	2
10116129	Professional Career Search Techniques	1
		6
Term 5 (Spring 2022)		
10804123	Math with Business Applications	3
10116125	Human Resource Employment Law	3
10809172	Introduction to Diversity Studies	3
		9
Term 6 (Summer 2022)		
10801196	Oral Interpersonal Communication OR 10801198 Speech (3 cr)	3
10103161	PowerPoint - Level 1	1
		4
Term 7 (Fall 2022)		
10116107	Labor Relations and Negotiations	2
10116102	Compensation & Benefits Administration	3
10101155	Accounting for Professionals	3
		8
Term 8 (Spring 2023)		
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 2023)		
10809195	Economics	3
		3
		TOTAL 60

ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQUISITE: 10804123 Math w Business Apps or CONDITION: 101101 Paralegal program reqs met

COMPENSATION AND BENEFITS ADMINISTRATION...applies 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 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.

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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.

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PAYROLL APPLICATIONS...introduces students to federal and state payroll laws; calculations for gross and net income; prepare payroll deductions; and maintain payroll records.

POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects. This course is offered in a self-paced format.

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

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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.

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TRAINING FOR ORGANIZATIONS...applies the skills and tools necessary to implement the training cycle of assessment, design, implementation and evaluation. Each learner will develop and present a complete training project based upon adult learning theory and instructional design techniques.

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

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

Program Number 31-116-1 Technical Diploma • Two Terms

ABOUT THE PROGRAM

This technical diploma, Human Resources Assistant, provides you with a range of entry level and intermediate skills that are needed to perform basic human resources job functions. The credential 'ladders' up to the full two-year Associate Degree, Human Resource Administration. If you enjoy assisting in structuring and administering programs and policies designed to help employees be productive and safe in the workplace, then human resources assistant is a good career for you. The technical degree holder will assist in recruitment, apply basic workplace safety and legal principles to a variety of employment situations, conduct basic payroll functions, assist in and facilitate employee training and development programs, and serve as a customer service representative for a human resources department. This growing and dynamic field has excellent future career growth potential.

PROGRAM OUTCOMES

- Create an organizational workforce plan.
- Develop training programs.
- Examine organizational total rewards programs.
- Incorporate employment law into business practices.
- Facilitate effective employee relations.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

This program is also offered in an online delivery format. Contact your program advisor for details.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10103191	Word - Level 1	1
10103121	Excel - Level 1	1
10196193	Human Resource Management	3
10116105	Recruitment and Retention of Employees	3
10116127	HR Technology	2
10449114	Safety in the Workplace	3
10801195	Written Communication	3
		16
Term 2		
10101106	Payroll Applications	2
10196191	Supervision	3
10116125	Human Resource Employment Law	3
10116103	Training for Organizations	3
10809198	Introduction to Psychology	3
10103161	PowerPoint - Level 1	1
		15
		TOTAL 31

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



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

HR TECHNOLOGY...introduces the learner to the ever-increasing use of technology in the human resource function with special attention paid to mobile computing, social media, human resource information and management systems, cloud computing, and surveying mechanisms.

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

HUMAN RESOURCES EMPLOYMENT LAW...applies the skills/tools necessary to effectively value and apply employees' abilities and needs to organization goals. Learners will demonstrate the legal application of the HR role as it impacts EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies/procedures, training, performance management, employee counseling/development, and effective use of compensation and benefit strategies.

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

PAYROLL APPLICATIONS...introduces students to federal and state payroll laws; calculations for gross and net income; prepare payroll deductions; and maintain payroll records.

POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects. This course is offered in a self-paced format.

RECRUITMENT & RETENTION OF EMPLOYEES...applies and skills and tools necessary to hire and retain qualified employees. Legal issues, testing, screening, interviewing, selecting and negotiating techniques will be demonstrated and assessed for each learner.

SAFETY IN THE WORKPLACE...applies the skills and tools necessary to provide a safe and secure work environment. Each learner will demonstrate the application of safety awareness, federal/state/local compliance, incident investigation and documentation, human relations techniques, safety orientation, inspections, and risk analysis, issues of workplace violence, substance abuse, and health hazards, first aid and CPR, fire and electrical safety, emergency preparedness, and liaison with external agencies.

SUPERVISION...allows the learner to apply the skills and tools necessary to perform the functions of a frontline leader. Students learn the application of strategies and transition to a contemporary supervisory role including day-to-day operations, controlling, staffing, leadership, problem-solving, team skills, motivation, and training.

TRAINING FOR ORGANIZATIONS...applies the skills and tools necessary to implement the training cycle of assessment, design, implementation and evaluation. Each learner will develop and present a complete training project based upon adult learning theory and instructional design techniques.

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

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

Program Number 31-601-2 Technical Diploma • Two Terms

ABOUT THE PROGRAM

The HVACR Installation Technician Embedded Technical Diploma is a great first step for an entry-level position in the Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR) fields. This training prepares individuals to install residential and light commercial HVACR systems used for the environmental control of buildings and product processes.

PROGRAM OUTCOMES

- Install HVACR systems.
- Troubleshoot HVACR systems.
- Perform HVACR performance tests.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

Approval for financial aid eligibility is pending for this program. 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		
10410101	Intro To Construction	2
10413105	Basic Electricity for Construction Trades	2
10410102	Blueprint Reading for Building Construction	2
10804113	College Tech Math 1A	3
10442100	Welding Introduction	1
10410103	OSHA 30 for Construction	2
10601110	Mechanical Service Applications	3
		15
Term 2		
10620105	DC Fundamentals	2
10601121	HVACR Heating Systems	2
10601122	HVACR Air Conditioning Fundamentals	3
10601123	HVACR Intro to Installations	2
10601124	HVACR Principles of Airflow	2
10601125	HVACR Hydronic Heating Systems	2
		13
		TOTAL 28

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



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

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

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

HVACR AIR CONDITIONING FUNDAMENTALS...instructs the learner in air conditioning principles and terms, physical principles of air movement, air filtering and humidity, and methods of conditioning air for comfort and health. The proper use of psychrometers, dry bulb thermometers, hygrometers, and reading and interpretation of psychrometric charts and scales are covered, in addition to ASHRAE and BPI ventilation standards for residential units. PREREQUISITE: 10413105 Basic Electricity for Construction Trades

HVACR HEATING SYSTEMS...focuses on the different forms of heat transfer, the types of heat, and how they relate to various HVAC systems. The basic operation of gas, oil, electric and hydronic heating systems are explored and major components and controls are identified. The main objective is understanding the basic functions of heating appliances. PREREQUISITE: 10410101 Intro to Construction

HVACR HYDRONIC HEATING SYSTEMS...explains how heat is transferred from water to air. The course covers system components, boilers, pressure reducing valves, relief valves, expansion and compression tanks, flow checks, integral flow checks, pumps, and circulators. Basic system installation, repair, and troubleshooting will be discussed. COREQUISITE: 10601121 HVACR Heating Systems

HVACR INTRODUCTION TO INSTALLATIONS...instructs the learner in residential and light commercial heating and cooling systems. Emphasizes the diversity of heating and cooling systems and how they operate. Students participate in the installation of a variety of HVACR systems as well as in troubleshooting and servicing systems. PREREQUISITES: 10413105 Basic Electricity for Construction Trades and 10410103 OSHA 30 for Construction and COREQUISITES: 10601122 HVACR Air Cond Fundamentals and 10601121 HVACR Heating Systems

HVACR PRINCIPLES OF AIRFLOW...instructs the learner in evaluating and testing natural gas and propane heating appliances. Major components and controls are identified and the proper methods of troubleshooting and diagnosing are learned and practiced. Evaluating proper airflow patterns, combustion safety, and system performance for systems are emphasized. The main objective is to assist the technician to work on a variety of gas-fired appliances when the course is completed.

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

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

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

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

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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.
- Program specific requirements as applicable (i.e. background check, health form, etc.)

APPROXIMATE COSTS

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

FINANCIAL AID

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

Don Geiger, Advisor
 920.693.1378 • donald.geiger@gotoltc.edu

Catalog No.	Class Title	Credit(s)
General Education 15-21 credits		
	Communication - 6 credits	
	Math or Science - 3 credits	
	Intro to Psych - 3 credits	
	Social Science - 3 credits	
	Diversity Recommended	
ITS Occupational/Technical 45 credits		
	One program specific area - 20 credits	
	Other program areas - 25 credits	

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

**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
50413772	Green Awareness Part 1	0.5
3		
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
50413776	Green Awareness Part 2	0.5
3		
Term 7		
50413768	IE Solid State Electronics	2
50413756	Codes for IE 5: Article 300 Cords/Cables	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
50413767	Fluid Power systems for IE - Hydraulics	0.5
3		
		TOTAL 22.5

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 2019-2020 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. In addition, 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

GREEN AWARENESS PART 1...examines new and emerging technologies influenced by green trends which are impacting work processes today and in the future. Topics covered include energy efficiency; energy conservation; changes in state, national and local codes; lighting alternatives; alternative energy generation; energy efficient motors, drives, controllers and equipment; eliminating toxic materials and reducing wastes; and specific "green" applications for the various trades under E&I. CONDITION: 504131 Ind Electrician Apprentice or 504641 Maint Tech Apprentice requirements met

GREEN AWARENESS PART 2...examines new and emerging technologies influenced by green trends which are impacting work processes today and in the future. Topics covered include energy efficiency; energy conservation; changes in state, national and local codes; lighting alternatives; alternative energy generation; energy efficient motors, drives, controllers and equipment; eliminating toxic materials and reducing wastes; and specific "green" applications for the various trades under E&I. CONDITION: 504131 Ind Electrician Apprentice or 504641 Maintenance Tech Apprentice reqs met

IE MOTORS AND GENERATORS...introduces the industrial electrician apprentices to explore motor controls. This course introduces concepts, terminology, and safety. In addition, this is designed to give the Industrial Electrician Apprentice the knowledge required by industry to maintain electric motors and generators. This course material will cover DC motors and generators, single-phase and three-phase motors, as well as alternators. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

IE PROGRAMMABLE LOGIC CONTROLLERS 1...designed to teach the fundamentals of programmable logic controller and its programming software. The first course of 3 will introduce terminology, concepts, print reading and safety. CONDITION: 504131 Ind Electrician Apprentice or 504641 Maint Tech Apprentice requirements met

IE PROGRAMMABLE LOGIC CONTROLLERS 2...examines second of three courses for industrial electrician apprentices. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Technician Apprentice requirements met

IE PROGRAMMABLE LOGIC CONTROLLERS 3...examines third course of three for industrial electrician apprentices. PLC applications and assessment projects are planned. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Tech Apprentice requirements met

IE SOLID STATE ELECTRONICS...provides apprentice with the skills and knowledge for troubleshooting basic solid-state devices and circuits. The construction, identification, and operating characteristics of solid-state devices are investigated. The apprentice builds test circuits, gathers and analyzes data, and follows safety procedures. Methods for locating defective component are applied. Replacement of printed circuit board components is performed. Also examined is the effect of temperature on devices. CONDITION: 504131 Industrial Electrician Apprentice or 504641 Maintenance Tech Apprentice requirements met

INDUSTRIAL ELECTRICIAN MOTOR CONTROLS 1...introduces learner through the fundamentals of electric motor control. Will learn to recognize and draw the basic symbols, the language of motor controls, and how to apply these symbols into current industrial format. Will also learn to draw ladder 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

**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 2019-2020 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 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

Students are required to have one USB 80 gig hard drive or greater.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@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
10154130	MS Windows 1	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 2	3
10154106	IT-Career and Professional Development	1
10154160	IT Computer Capstone	3
10150164	Mobile Devices	3
10809198	Introduction to Psychology	3
		16
		TOTAL 60

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



APPLE SUPPORT...prepares the student to support the Apple Mac OS operating system. The course covers installation and configuration, user account management, file and data management, application support, network configuration and services as well as other system management functions.

BUSINESS APPS FUNDAMENTALS...prepares the learner to evaluate, use, and support common information system applications that an end-user would use in a typical business environment. Both individual productivity tools as well as enterprise tools are examined. The competencies in the course will articulate to other courses in the information technology programs. Opportunity to earn TestOut Desktop Pro Certification.

INFORMATION SECURITY PRINCIPLES...introduces the learner to Information Systems Security. Students will review and analyze the control and security concerns in the information systems environment; the security challenges created from the emergence of new technology and the changing internal and external environments; and the effect of legal, regulatory, and current security technology on policy development. Opportunity to earn TestOut Security Pro Certification. PREREQUISITE: 10154104 Intro to IT

INTRO TO IT...introduces student to IT field to basic concepts and terminology of a computer system hardware and software, Operating Systems (including Mac OS), and Networks; applied skills include: managing computer data files; protecting against computer viruses; creating simple web pages; producing electronic word documents, spreadsheets and presentations; examining techniques of systems analysis and design, programming languages and database systems.

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

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

IT COMPUTER CAPSTONE...will allow the student to demonstrate the skills learned while in the Computer Support Specialist program. The student will demonstrate the ability to manage information technology hardware and software, support computer networks, provide end 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 1...covers how to configure hardware and manage applications, configure network connectivity, perform upgrades, manage remote access and security for mobile devices. The course will also cover how to monitor and maintain Windows clients, create virtualized Windows clients, and configure system and data recovery options.

MS WINDOWS 2...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. PREREQUISITE: 10154130 MS Windows 1

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

SERVICE DESK 1...provides the learner with the knowledge required to become a Help Desk Support technician. Students will learn fundamental Help Desk concepts such as: Help Desk operations, roles and responsibilities, processes and procedures, tools and technologies, individual and team performance measures, and how to provide support as a Help Desk professional.

SERVICE DESK 2...expands the learners' ability to troubleshoot all information technology issues utilizing Service Desk and Asset Management applications. Learners will expand their knowledge of ITIL practices and procedures used to manage an IT operation and its associated infrastructure. Communication, documentation, and teamwork skills are enforced. PREREQUISITE: 10154128 Service Desk 1

TRAINING AND DOCUMENTATION...provides the learner with the skills to develop various types of user documentation in hard copy and on-line formats. In addition, the learner will develop oral and written training skills necessary to provide individual and group end-user training.

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

Program Number 10-150-2 Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

Computers networked together sharing data and resources are powerfully amazing! Today, businesses of all sizes are networking their computers to maximize efficiency and productivity. If creating an overall computer network strategy, having the ability to analyze ideas/processes, installing hardware/software, and troubleshooting problems are skills you would like to put to use in a career, becoming a network specialist is your ticket to success.

PROGRAM OUTCOMES

- Implement computer networks.
- Implement client systems.
- Implement server operating systems.
- Implement network security components.
- Develop technical documentation.
- Troubleshoot network systems.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

Students are required to have one USB 80 gig hard drive or greater.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10154104	Intro to IT	3
10150114	Networking I	3
10154122	PC Support	3
10801195	Written Communication	3
10804133	Math & Logic	3
		15
Term 2		
10150173	Server Administration 1	3
10150176	Networking 2	3
10154124	Information Security Principles	3
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
10809196	Introduction to Sociology OR 10809122 Introduction to American Government OR 10809166 Introduction to Ethics	3
		15
Term 3		
10150169	Network Design & Documentation	2
10150163	Networking 3	3
10150174	Server Administration 2	3
10150129	Virtualization	2
10809198	Introduction to Psychology	3
10150125	Linux	2
		15
Term 4		
10150165	Networking 4	3
10150164	Mobile Devices	3
10150175	Server Administration 3	3
10150179	Network Security	3
10150181	IT Networking Capstone	3
		15
		TOTAL 60

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



INFORMATION SECURITY PRINCIPLES...introduces the learner to Information Systems Security. Students will review and analyze the control and security concerns in the information systems environment; the security challenges created from the emergence of new technology and the changing internal and external environments; and the effect of legal, regulatory, and current security technology on policy development. Opportunity to earn TestOut Security Pro Certification. PREREQUISITE: 10154104 Intro to IT

INTRO TO IT...introduces student to IT field to basic concepts and terminology of a computer system hardware and software, Operating Systems (including Mac OS), and Networks; applied skills include: managing computer data files; protecting against computer viruses; creating simple web pages; producing electronic word documents, spreadsheets and presentations; examining techniques of systems analysis and design, programming languages and database systems.

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

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

IT NETWORKING CAPSTONE...will integrate many of the technologies and concepts that the students have learned throughout the Network Specialist program. The integration projects will include such areas as network client and server administration, general networking concepts, IP addressing, network security, and switch and router configuration. COREQUISITES: 10150165 Networking 4 and 10150175 Server Administration 3 and PREREQUISITE: 10150129 Virtualization

LINUX...is a hands-on course designed to provide the learner with the skills to install the Linux operating system, use its command-line and graphical user interfaces, manage system resources, and create scripts. The course will also introduce the learner to Linux system administration including the installation and administration of users, files, software, networking, and Internet and Intranet services.

MATH & LOGIC...will apply mathematical problem solving techniques. Topics will include symbolic logic, sets, algebra, Boolean algebra, and number bases. PREREQUISITE: 10834109 Pre-Algebra or Math placement assessment equivalent and COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

MOBILE DEVICES...are quickly becoming indispensable tools in the production environment. This course will introduce the learner to various industry mobile technologies used to promote better decision-making, reporting, and improve manufacturing performance. Some of the devices covered are tablets, smartphones, barcode printers and readers, and radio frequency identification (RFID) readers/writers.

NETWORK DESIGN AND DOCUMENTATION...is a lecture/hands-on course designed to introduce students to network design and documentation fundamentals. Topics include: needs analysis, hardware needs and analysis, network layout and design, and documenting a network. PREREQUISITE: 10150176 Networking 2

NETWORK SECURITY...introduces the student to the various methodologies for defending a network. Learners will develop an in-depth theoretical understanding of network security principles as well as the tools and configurations available. The learner will emphasize on the practical application of skills needed to design, implement, and support a secure Cisco network. PREREQUISITE: 10150163 Networking 3

NETWORKING 1...is a lecture/hands-on course designed to introduce students to network fundamentals. Topics covered include: OSI Reference Model; LAN and WAN topologies; cabling systems; access methods; protocols; Internet working devices (e.g. hubs, bridges, routers, switches, etc.); and basic network design.

NETWORKING 2...provides the students with networking terminology, protocols, network standards, LAN's, WAN's, TCP/IP addressing, and routing. PREREQUISITE: 10150114 Networking 1

NETWORKING 3...introduces the student to switching technology, hardware and software firewalls, and virtual private networks (VPN). PREREQUISITE: 10150176 Networking 2

NETWORKING 4...is a hands-on course designed to introduce IT students to enterprise-level IT technologies. The student will learn how to configure and manage Cisco wireless controllers, explore cloud computing technologies such as Google Apps and Microsoft Azure, learn about data center storage and backup solutions, advanced security technologies, and data center power and cooling. PREREQUISITE: 10150176 Networking 2

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

PC SUPPORT...prepares you to be able to install, manage, repair, and troubleshoot PC hardware and Windows, Linux, and Mac operating systems. You will learn how to set up a new computer, identify system requirements, install or upgrade operating systems, manage external devices, troubleshoot common computer problems, and connect to a small home network. Opportunity to earn TestOut PC Pro Certification.

SERVER ADMINISTRATION 1...is a hands-on course designed to introduce the learner to the installation and configuration of Windows Server servers. The student will learn how to install and configure servers, configure server roles and features, configure Hyper-V, deploy and configure core network services, install and administer Active Directory (AD), and create and manage Group Policy. PREREQUISITE: 10154104 Intro to IT

SERVER ADMINISTRATION 2...is a hands-on course designed to introduce the learner to administration of Windows Server servers. The student will learn how to deploy, manage, and maintain servers; configure file and print services; configure network services and access; configure a network policy server infrastructure; configure and manage Active Directory; and configure and manage Group Policy. Opportunity to earn TestOut Server Pro Certification. PREREQUISITE: 10150173 Server Administration 1

SERVER ADMINISTRATION 3...will introduce you to PowerShell and help you be effective with it in a production environment. PowerShell is both a scripting language and an administrative shell that lets you control and automate nearly every aspect of Windows. PREREQUISITE: 10150176 Networking 2

VIRTUALIZATION...is a hands-on course designed to introduce the learner to the skills needed to install, configure, and manage a highly available and scalable virtual infrastructure. Objectives include: create, configure, migrate, manage, and monitor virtual machines and virtual appliances; manage user access to the virtual infrastructure; and configure and manage virtual network and storage systems. PREREQUISITE: 10154104 Introduction to IT

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

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 software systems.
- Integrate database technologies.
- Develop software applications.
- Develop technical documentation.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

- Students are required to have access to a computer with internet connectivity. Computers are available at LTC's campuses for those students who do not have a computer and/or internet access at home.
- Students are required to purchase a domain name and web hosting in Terms 2 and 4. The approximate cost is \$60 per term.
- Students are strongly encouraged to take Written Communications during the summer before enrolling in Term 1 classes. General Education courses during summer term allow concentrated time during the fall and spring term for core program courses, and enrolling in Math with Business Applications in the first term.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10152100	Programming Introduction	4
10152124	Intro to Database Design and Development	2
10152196	Web Development 1	3
10804123	Math with Business Applications	3
		12
Term 2		
10152199	Web Development 2	4
10152187	Web Development 3	4
10201118	Advancements in Web and Development	2
10801195	Written Communication	3
		13
Term 3 (Summer)		
10809195	Economics OR 10809166 Introduction to Ethics	3
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
		6
Term 4		
10152109	Object-Oriented Programming 1	4
10152112	Object-Oriented Programming 2 OR 10152190 Web and 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
10152113	Mobile Device Development 2	4
10152119	Portfolio Assessment-Web and Software Developer	1
10152192	Web and Software Developer-Capstone Project	3
10809198	Introduction to Psychology OR 10809188 Developmental Psychology	3
		15
		TOTAL 60

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

ADVANCEMENTS IN WEB AND DEVELOPMENT...building on the competencies from Web Development 1, this course introduces students to additional web-related topics such as usability, web analytics, and search engine optimization. PREREQUISITE: 10152196 Web Development 1

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

INTEGRATED WEB CONCEPTS...introduces students in the Web and Software Developer, Graphic and Web Design, and Marketing programs to working within interdisciplinary teams. Through the building of all aspects of an application, each team will select and utilize design thinking processes and US/UI tools, prototype potential design solutions, ask for, give, and receive directive feedback, and effectively communicate and persuasively present ideas to an interdisciplinary audience. PREREQUISITES: 10104122 Marketing Strategies and Planning and 101043 Mktg req met or 10152187 Web Development 3 and 101527 IT Web and Sof Dev req met or 10201110 InDesign and 102012 Graphic and Web Design 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 placement assessment equivalent and COREQUISITE: 10838105 Intro to Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

MOBILE DEVICE DEVELOPMENT 1...introduces students to popular mobile development frameworks in addition to using tools to convert web-based mobile applications to their native format. PREREQUISITES: 10152187 Web Development 3 and 10152199 Web Development 2 and 10201118 Advancements in Web and Development

MOBILE DEVICE DEVELOPMENT 2...students will build upon the skills learned in Mobile Device Development 1 by researching new mobile development frameworks and tools. 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 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 the 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 to Reading and Study Skills or Reading placement assessment equivalent

PORTFOLIO ASSESSMENT-WEB AND SOFTWARE DEVELOPER...assesses what the student has learned through the Web and Software Developer degree. The course will focus on the continued development of their electronic career portfolio, the freelance/contract software development market, the analysis of the achievement of their core abilities and program outcomes, and job search topics such as resumes, cover letters, and interview skills. PREREQUISITES: 10152123 Mobile Device Dev 1 and 10152106 Integrated Web Concepts and 10152109 Object-Oriented Programming 1 and CONDITION: 101527 Web and Software Developer admissions requirements met

PROGRAMMING INTRODUCTION...introduces the students to the programming process. Students will start with designing programs using flowcharts and progress to using programming code to create programs that use variables, data types, decisions, loops, arrays, and functions.

WEB AND SOFTWARE DEVELOPER-CAPSTONE PROJECT...reinforces all program content by requiring students to plan, design, analyze, and develop a piece of software of their choice. Students will learn about concepts related to systems analysis and design and investigate and apply emerging development trends. PREREQUISITE: 10152199 Web Dev 2, 10152187 Web Dev 3, 10152123 Mobile Device Dev 1, and 10152109 Object Oriented Programming 1 and COREQUISITE: 10152106 Integrated Web Concepts

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 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

- Integrate database technologies.
- Develop software applications.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

- 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 Career Coach
920.693.1162 • CareerCoach@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 2020-2021 rates and are subject to change prior to the start of the academic year.



ADVANCEMENTS IN WEB AND DEVELOPMENT...building on the competencies from Web Development 1, this course introduces students to additional web-related topics such as usability, web analytics, and search engine optimization. PREREQUISITE: 10152196 Web Development 1

INTRO TO DATABASE DESIGN AND DEVELOPMENT...introduces the student to DBMS components, the design and development of databases, table relationships, SQL, database best practices and database integration with web applications.

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

PROGRAMMING INTRODUCTION...introduces the students to the programming process. Students will start with designing programs using flowcharts and progress to using programming code to create programs that use variables, data types, decisions, loops, arrays, and functions.

WEB DEVELOPMENT 1...introduces the students to web page design principles and proceeds to teach students how to create their own visually appealing designs for the web. Students will have hands-on experience using current versions of Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) to code and format accessible, valid, and optimized websites. Websites will be published live on the web using FTP. Students also explore recent trends in web design and development.

WEB DEVELOPMENT 2...introduces the students to using JavaScript developing dynamic client-side web pages. Students will learn JQuery, TypeScript, and client-side data storage. PREREQUISITES: 10152196 Web Development 1 and 10152121 Programming 2 or 10152100 Programming Introduction

WEB DEVELOPMENT 3...introduces the learner to PHP, MySQL, PHP frameworks, content-managed Web sites, and Web server architecture. Topics covered include an introduction to the Apache Web server, server-side scripting, PHP control logic and functions, controlling state using sessions and cookies, querying database content and population to an HTML Web page, MySQL relational database administration, and processing form information and populating it to a MySQL database. PREREQUISITES: 10152121 Programming 2 or 10152100 Programming Introduction and 10152196 Web Development 1 and 10152124 Intro to Database Design and Development

Program Number 31-420-1 Technical Diploma • Two Terms

ABOUT THE PROGRAM

Learn CNC and Machining at your own pace, through hands-on learning, and with your instructor and success coach to guide you. Just about every product that you use in your daily activities is the result of a machine tool manufacturing process. If you like hands-on work, are detail-oriented, have good math skills, and are able to develop and follow through on work instructions, a career in machine tool operation offers you lifelong opportunities.

PROGRAM OUTCOMES

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

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your Program Success Coach/Advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

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

RELATED PROGRAMS

- CNC Technician Technical Diploma
- Machinist Apprenticeship
- Tool & Die Apprenticeship

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
31420310	Shop Tools and Fasteners	1
31420330	Precision Measuring	1
31420385	Orthographic Projection Print	1
31420325	Machining Math Basic	1
31420338	Drills and Saws	1
31420340	Lathe Facing and Turning	1
31420350	Mill-Squaring	1
31420386	GD&T Intro	1
31420326	Machining Geometry and Basic Trigonometry	1
31420342	Lathe-Hole Producing and Threading	1
31420351	Mill-Slots and Holes	1
31444301	Mill-G&M Code	1
31444303	CNC Machining Operation	1
31444309	CNC Turning Operation	1
31420359	Safe Heat Treating Operations	1

15

Term 2

31801361	Interpersonal Skills	1
31801360	Workplace Fundamentals	1
31444305	Turning-G&M Code	1
31444307	Mill-2D Using CAM	1
31420353	ProtoTrak Mill-Squaring Programming	1
31420354	ProtoTrak Mill-Slot & Hole Programming	1
31420356	Surface Grinder Operations	1
31444311	CNC Turning-Turning and Cut Off Setup	1
31444313	CNC Turning-Hole Producing Setup/Threading	1
31444315	CNC Machining-Facing & End Milling Setup	1
31444317	CNC Machining-Hole/Slot/Engraving Setup	1
31444321	CNC Turning-Toolpaths Using CAM	1
31420361	Complex Print Drawings	1
31420362	Advanced Precision Measuring	1
31420363	GD&T Inspection	1

15

TOTAL 30

Curriculum Modifications Pending State Approval

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



ADVANCED PRECISION MEASURING...prepares the learner to demonstrate the use of advanced precision measuring instruments. COREQUISITE: 31420330 Precision Measuring

CNC MACHINING OPERATION...prepares the learner to set up and operate CNC Machining Center safely. COREQUISITE: 31420351 Mill-Slots and Holes

CNC MACHINING-FACING AND END MILLING SETUP...prepares the learner to perform setup of CNC machining center for facing and end milling operations. COREQUISITE: 31444303 CNC Machining Operation or PREREQUISITE: 31420307 Intro to CNC Machining Center

CNC MACHINING-HOLE/SLOT/ENGRAVING SETUP...prepares the learner to perform setup of CNC machining center for hole producing, milling slots and engraving operations. COREQUISITE: 31444315 CNC Machining-Facing and End Milling Setup

CNC TURNING OPERATION...prepares the learner to set up and operate CNC turning center safely. COREQUISITE: 31420342 Lathe-Hole Producing and Threading or PREREQUISITES: 31420340 Lathe Facing and Turning or 10420103 Lathes 1 or 31420395 IM MT Lathes and Mills

CNC TURNING-HOLE PRODUCING SETUP/THREADING...prepares the learner to perform setup of CNC turning center for hole producing and threading operations. COREQUISITE: 31444311 CNC Turning-Turning and Cut Off Setup

CNC TURNING-TOOLPATHS USING CAM...prepares the learner to create lathe toolpaths using CAM software. COREQUISITE: 31420342 Lathe-Hole Producing and Threading

CNC TURNING-TURNING AND CUT OFF SETUP...prepares the learner to perform setup of CNC turning center for turning and cutoff operations. COREQUISITE: 31444309 CNC Turning Operation or 31420308 Intro to CNC Turning Center

COMPLEX PRINT DRAWINGS...prepares the learner to interpret complex part drawings. COREQUISITE: 31420386 GD&T Intro

DRILLS AND SAWS...learner will demonstrate use of sawing and drilling machines safely. COREQUISITE: 31420310 Shop Tools and Fasteners or PREREQUISITES: 31420394 IM Machine Tool Intro or 10420194 Machine Tool Intro or CONDITION: 324571 Welding Fab Tech enrollment requirement

GD&T INSPECTION...prepares the learner to inspect GD&T part features as well as programming and operation of coordinate measuring machine (CMM). COREQUISITE: 31420362 Advanced Precision Measuring

GD&T INTRO...prepares the learner to interpret manufacturing drawings for geometric dimension and tolerances (GD&T). COREQUISITE: 31420385 Orthographic Projection Print

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

LATHE FACING AND TURNING...prepares the learner to perform lathe facing and turning operations safely. COREQUISITE: 31420310 Shop Tools and Fasteners or 31420394 Ind Mtn Machine Tool Introduction or 10420194 Machine Tool Introduction or CONDITION: 324571 Welding Fabrication Technician 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 GEOMETRY AND BASIC TRIGONOMETRY...prepares the learner to apply geometry and basic trig to solve technical problems. COREQUISITE: 31420325 Machining Math Basic

MACHINING MATH BASIC...prepares the learner to apply basic technical math skills to solve problems.

MILL-2D USING CAM...prepares the learner to create 2D milling toolpaths using computer aided machining (CAM) software. COREQUISITE: 31420351 Mill-Slots and Holes

MILL-G&M CODE...prepares the learner to create milling G&M code programs.

MILL-SLOTS AND HOLES...prepares the learner to perform slot milling and hole producing operations on a vertical milling machine. COREQUISITE: 31420350 Mill-Squaring or 10420105 Machine Tool Mills 1A or 31420395 IM MT Lathes and Mills or 31420348 Machine Tool Mills 1 for 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

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 2019-2020 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 Program Reqs 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 Requirements Met

METALLURGY FOR MACHINE TRADES APPRENTICES... prepares the learner to interpret the properties of ferrous and non-ferrous materials as well as how to heat treat and test the hardness of ferrous materials. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice Program Requirements Met

MILLING MACHINES FOR MACHINE TRADES APPRENTICE... will instruct apprentices on the basic principles of vertical and horizontal milling machines for the machine tool trade. Instruction includes safety, basic parts and functions of the machines, work holding devices, tooling requirements, and feeds and speeds. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice Program Requirements Met

PRECISION MEASUREMENT FOR MACHINE TOOL TRADES... is designed to acquaint the apprentice with the measurement systems and tools most frequently used in layout and machining processes. Learning outcomes relate to semi-precision through super-precision measuring tools and equipment combined with opportunities to investigate new technologies. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice Program Requirements Met

TURNING MACHINES FOR MACHINE TRADES APPRENTICE... will acquaint the apprentice with the terminology, methods, and operations for turning machines used in the metal-working industry. Apprentices will learn to perform calculations needed to operate turning machines including speed and feed calculations. Apprentices will make calculations necessary to setup a turning machine for screw threads and taper operations. CONDITION: 504393 Tool and Die Apprentice or 504202 Machinist Apprentice Program Requirements Met

Program Number 31-462-2 Technical Diploma • Two Terms

ABOUT THE PROGRAM

Machines are important in our lives—directly or indirectly. Broken or inefficient machines slow the pace of manufacturing and, ultimately, profits. To remain competitive in today's fast-paced industrial/manufacturing environment, equipment needs to be maintained to run at peak performance. If you like to troubleshoot problems, put theory to work hands-on, and have interests in math and mechanical processes, a career in industrial maintenance may be your key to success.

PROGRAM OUTCOMES

- Demonstrate safe work procedures.
- Install industrial equipment and systems.
- Maintain industrial equipment and systems.
- Troubleshoot industrial equipment and systems.
- Repair industrial equipment and systems.
- Communicate technical information.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

Students need to supply their own safety glasses and welding gloves.

RELATED PROGRAMS

- Millwright Apprenticeship
- Electro-Mechanical Maintenance Technology
- Electro-Mechanical Automation Technology

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10804113	College Technical Math 1A	3
10462109	Maintenance Introduction	1
10462111	Maintenance Print Reading	2
10462107	Tools and Measurement	1
10620122	Industrial Wiring	2
10420194	Machine Tool Introduction	2
10442100	Welding Introduction	1
10457103	Fabrication Introduction	1
10462115	Layout and Rigging	1
		14
Term 2		
10462123	Pumps, Fluid/Air Handling	2
10620155	Hydraulics and Pneumatics	3
10420103	Lathes 1	1
10420105	Mills 1	1
10462125	Bearings and Lubrication	3
10462119	Power Transmission	2
10462121	Troubleshooting and Machine Repair	3
10801196	Oral/Interpersonal Communication	3
		18
		TOTAL 32

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



BEARINGS AND LUBRICATION...prepares the learner to properly identify, remove, install, and maintain both plain and rolling element bearings used with either a radial or axial load, including ball, cylindrical roller, tapered roller, linear, and thrust bearings; use manufacturers' resources for proper usage and life of bearings; and look at proper types, properties, and application methods of lubrication. PREREQUISITES: 10804113 College Tech Math 1A and 10462109 Maintenance Introduction or 31462309 Industrial Maintenance Introduction

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

FABRICATION INTRODUCTION...introduces the learner to various types of structural steel, sheet metal, and pipe, and prepares the learner to perform fabrication from assembly prints, including cutting, welding, bending, straightening, and repair. COREQUISITE: 10442100 Welding Introduction or PREREQUISITES: 31442346 IM Intro to Welding or 31442300 Welding Intro and COREQUISITE: 10462109 Maintenance Intro or PREREQUISITE: Industrial Maintenance Intro

HYDRAULICS AND PNEUMATICS...prepares the learner to identify hydraulic and pneumatic component symbols and terms, adjust a pressure relief valve, analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits; analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. PREREQUISITES: 10462109 Maintenance Intro or 31462309 Industrial Maintenance Intro and 10804113 College Tech Math 1A

INDUSTRIAL WIRING...prepares the learner to follow safety procedures; maintain a safe and healthy work environment; construct electrical circuits; measure electrical quantities using a VOM and/or DVM; analyze measured values using electrical circuit laws; construct typical industrial control circuits; and analyze typical industrial control circuits.

LATHES 1...introduces the student to the characteristics and attributes of turning tools: follow engine lathe safety rules, identify engine lathe components, perform facing and center drilling operations, perform turning operations. COREQUISITE: 10462107 Tools and Measurement or PREREQUISITE: 31462325 Maintenance Tools and Measurement and PREREQUISITE: 10420194 Machine Tool Intro or 31420394 IM Machine Tool Intro

LAYOUT AND RIGGING...prepares the learner to perform layout skills for industrial maintenance to include machine layout, proper rigging, installation, and leveling with emphasis on baseline layout, machine rigging and installation, machine leveling, and alignment procedures. Participants will obtain lift truck operation certification upon completion. COREQUISITE: 10462109 Maintenance Intro or PREREQUISITE: 31462309 Ind Mtnc Intro and COREQUISITE: 10804113 College Tech Math 1A and COREQUISITE: 10462111 Maintenance Print Reading or PREREQUISITE: 31462388 IM Print Reading

MACHINE TOOL INTRODUCTION...prepares the learner with the skills to identify basic types of machining processes, follow standard shop safety rules, use semi-precision and precision measuring tools, perform workpiece layout procedures, identify metal composition and classification, follow cutoff machine safety rules, operate vertical and horizontal cutoff machines, follow sensitive drill press safety rules, identify drill press components, interpret attributes of hole-producing tools, and operate a sensitive drill press.

MAINTENANCE INTRODUCTION...prepares the learner to apply basic safety, mechanics, force, friction, work, and energy; learn terminology related to maintenance; introduction to threaded and non-threaded fasteners and concrete anchoring; learn to use precision measuring tools; introduction to single-phase and three-phase motor wiring. PREREQUISITE: 31462325 Maintenance Tools and Measurement or COREQUISITE: 10462107 Tools and Measurement

MAINTENANCE PRINT READING...prepares the learner to read prints; make isometric sketches; interpret orthographic projection drawings, to include sections, surface finishes, and tolerancing. The course when delivered in the evening is self-paced, open-entry/exit, and designed for individualized student needs.

MILLS 1...prepares the learner to identify vertical milling machine components, select cutting tools and workholding device(s), apply safety rules, set up the vertical milling machine, and mill square surfaces. COREQUISITE: 10420103 Lathes 1 or PREREQUISITE: 31420395 IM Machine Tool Lathes and Mills

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

POWER TRANSMISSION...introduces the learner to belt, chain, and gear drives used in industrial maintenance applications, including v-belts, flat belts, timing belts, conveyor chains, roller chains, bevel gears, worm gears, helical gears, spur gears, couplings, and alignment with emphasis on identification, installation, repair, and maintenance. COREQUISITE: 10462119 Bearings and Lubrication

PUMPS, FLUID/AIR HANDLING...prepares the learner to identify, install, repair, and maintain common pumps and plumbing applications, including centrifugal pumps, diaphragm pumps, packing and seals, tubing, and installing hose and piping used with fluid and air handling. PREREQUISITES: 10462115 Layout and Rigging or 31462302 IM Layout and Rigging and COREQUISITE: 10620155 Hydraulics and Pneumatics Tools and Measurement...prepares the learner to use hand tools, precision measuring instruments, and torque tools.

TROUBLESHOOTING AND MACHINE REPAIR...prepares the learner to perform essential troubleshooting, repair, and preventive maintenance of various machine tools and installations used in industrial maintenance and to integrate the skills learned in the other maintenance courses to perform complete repair of machine tools. COREQUISITES: 10462119 Power Transmission and 10462123 Pumps, Fluid/Air Handling and PREREQUISITE: 10620122 Industrial Wiring

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

**Program Number 50-423-1
4-Year Contract**

**Work Hours (including related instruction): 8320
Related Instruction Hours: 576 • Night School Hours: 8**

ABOUT APPRENTICESHIP

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

ABOUT THE CAREER

Maintenance mechanics and millwrights install, dismantle, or move machinery and heavy equipment according to layout plans, blueprints, or other drawings. They keep machines, mechanical equipment, or the structure of an establishment in repair. Duties may involve pipe fitting; boiler making; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs. This program provides the related instruction portion for this trade's apprenticeship.

CAREERS

Graduates of LTC's Maintenance Mechanic/Millwright Apprenticeship program work as journey-level maintenance mechanics/millwrights in a variety of industrial and organizational settings.

INDUSTRIAL APPRENTICE APPLICATION REQUIREMENTS

- Determined by employer
- Wisconsin Apprentice Contract

PROGRAM OUTCOMES

- Demonstrate proper rigging techniques.
- Select an appropriate power transmission system for a given application.
- Identify suitable pumps for given applications.
- Recommend bearings for given applications.
- Plan for fabricating parts and assemblies according to specifications.
- Apply operational and troubleshooting principles to fluid power systems.
- Lay out an equipment installation plan.
- Plan maintenance schedules for a given system.

APPROXIMATE COSTS

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

SPECIAL NOTE

You must have a sponsoring employer and contract before attending school.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

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

Catalog No.	Class Title	Credit(s)
Term 1		
50423710	Math for the MMMP Trades	1
50423713	Precision Measurements for the MMMP Trades	0.5
50423717	Electricity for the MMMP Trades	0.5
2		
Term 2		
50423711	Print Reading for the MMMP Trades	1
50423726	Safety/Tools/Torque for the MMMP Trades	0.25
50423712	Fasteners for the MMMP Trades	0.5
50423723	Adhesives and Sealants for the MMMP Trades	0.25
2		
Term 3		
50423737	Equipment Installation for the MMMP Trades	0.75
50423727	Concrete for the MMMP Trades	0.25
50423714	Rigging for the MMMP Trades	1
2		
Term 4		
50423738	Sheet Metal and Structural Steel for the MMMP Trades	0.75
50423716	Metallurgy for the MMMP Trades	0.50
50423715	Welding for the MMMP Trades	0.75
2		
Term 5		
50423735	Mechanical Power Transmission for the MMMP Trades	0.75
50423733	Belts, Sheaves, Pulleys, and Drives for the MMMP Trades	0.5
50423736	Conveyors for the MMMP Trades	0.25
50423734	Gears, Gearboxes, and Gear Assemblies for the MMMP Trades	0.5
2		
Term 6		
50423731	Couplings and Alignment for the MMMP Trades	0.5
50423730	Bearings for the MMMP Trades	0.75
50423725	Machine Lubrication for the MMMP Trades	0.25
50423724	Preventative and Predictive Maintenance for the MMMP Trades	0.5
2		
Term 7		
50423720	Pipefitting and Valves for the MMMP Trades	0.75
50423722	Packings, Seals, and Gaskets for the MMMP Trades	0.5
50423732	Pumps for the MMMP Trades	0.75
2		
Term 8		
50423721	Hydraulics for the MMMP trades	1
50423718	Pneumatics and Compressed Air for the MMMP Trades	0.75
50423719	Vacuum Systems for the MMMP Trades	0.25
2		
TOTAL		16

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with the Apprenticeship Office for details. The tuition and fees are approximate based on 2019-2020 rates and are subject to change prior to the start of the academic year.

ADHESIVES AND SEALANTS FOR MMMP TRADES...compares adhesives and sealant types and applications. The apprentice skills will be developed related to applying adhesives and sealants to repair applications, interpreting SDS information, and handling hazardous materials. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

BEARINGS FOR THE MMMP TRADES...will examine bearing types and applications, and compare equipment bearings. Then learners will develop skills related to bearing inspection, selection, removal, mounting, lubrication and diagnosing bearing failures. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

BELTS, SHEAVES, PULLEYS AND DRIVES FOR MMMP...compares different belt types and drive components. Apprentices will develop skills related to inspecting, troubleshooting, removing, selecting, and installing belt drive systems. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

CONCRETE FOR THE MMMP TRADES...examines the principles of concrete as well as anchoring. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

CONVEYORS FOR THE MMMP TRADES...examines chain, belt, and other types of conveyors and related components. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

COUPLINGS AND ALIGNMENT FOR MMMP TRADES...compares different coupling types and examines common misalignment problems. Apprentices will develop skills related to inspecting, troubleshooting, lubricating, and preparing couplings for removal and installation by using dial indicators and laser aligners. This course will also discuss types and principles of clutches and brakes. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

ELECTRICITY FOR THE MMMP TRADES...examines basic electrical terms and theory. Apprentices will learn motor wiring, multimeter use as well as lockout tagout as it applies to electricity. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

EQUIPMENT INSTALLATION FOR THE MMMP TRADES...will layout equipment installations, plan for moving equipment, and set and level equipment. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

FASTENERS FOR MMMP TRADES...provides apprentices with a chance to compare fasteners and their uses, analyze fastener failures, and install mechanical fasteners. This course also covers drilling and tapping application. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

GEARS, GEARBOXES, GEAR ASSEMBLIES FOR MMMP...compares gear types and applications. Apprentices will develop skills inspecting gear assemblies, troubleshooting gear problems, removing gears and components, and reassembling gear drive systems. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

HYDRAULICS FOR MMMP TRADES...provides instruction to apprentices concerning many aspects of inspecting, servicing, and troubleshooting hydraulic systems and components. Apprentices will learn safety related issues and be taught proper safety procedures for working with hydraulic systems and components. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

MACHINE LUBRICATION FOR THE MMMP TRADES...examines the types, principles and applications of machine lubricants and lubricating systems. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

MATH FOR MMMP TRADES...examines math concepts as they relate to millwrights and machine maintenance. Apprentices will develop skills related to converting fractions to decimals; using both standard and metric systems; applying basic algebra to solving problems; computing area, volume, mass, and torque; using trigonometry; and using math charts, tables and references in support of common work processes. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

MECHANICAL POWER TRANSMISSION FOR MMMP TRADES...examines drive transmission systems and their applications, including roller chains. Apprentices will develop skills inspecting power transmission systems and troubleshooting mechanical drive systems. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

METALLURGY FOR MMMP TRADES...develops apprentice skills regarding metallurgical concepts. Apprentices will compare various metals and their applications, apply metallurgical techniques to work processes, test metals for hardness, and examine heat treating applications. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PACKING, SEALS, GASKETS FOR MMMP TRADES...will examine packing, seals, and gaskets and compare materials and applications. The skills in layout, cutting, inspecting, removing, and installing these components will be developed. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PIPEFITTING AND VALVES FOR MMMP TRADES...introduces apprentices to principles, application and types of pipe, materials, fittings, tubing, and valves, and develops skills related to layout, installation, and maintenance. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PNEUMATICS AND COMPRESSED AIR FOR MMMP TRADES...provides instruction to apprentices concerning many aspects of inspecting, servicing, and troubleshooting pneumatic systems and components. Apprentices will learn safety related issues and be taught proper safety procedures for working with pneumatic systems and components. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PRECISION MEASUREMENTS FOR MMMP TRADES...develops apprentice skills in precision measurement. Types of measuring instruments will be compared and then measuring skills using tapes, steel rules, micrometers, calipers, indicators, and gauges will be developed. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PREVENTIVE AND PREDICTIVE MAINTENANCE FOR MMMP TRADES...examines both preventive and predictive maintenance concepts as they apply to millwright work processes and machine maintenance including vibration and lubrication analysis. Apprentices will develop skills related to assessing machine conditions and faults based on both preventative and predictive maintenance. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PRINT READING FOR MMMP TRADES...explores reading prints commonly used by millwrights and machine maintenance workers. Course competencies include comparing types of prints, interpreting structural drawings, identifying parts from prints, and developing apprentice sketching drawing skills. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

PUMPS FOR THE MMMP TRADES...compares different pump types including centrifugal, diaphragm, gear, vane and their applications. Apprentices will complete a field inspection of pumps and learn how to troubleshoot, remove, overhaul, and install and perform preventative maintenance on pumps. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

RIGGING FOR MMMP TRADES...will compare types of rigging equipment and their uses; determine safe loads, rig and crib loads, and move a load with cranes and hoists, including signaling. Course will also cover usage and the safety of ladders and scaffolding. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

SAFETY, TOOLS AND TORQUE FOR MMMP TRADES...examines safety as it relates to hand and power tools as well as theory and application of torque in the Maintenance/Millwright trade. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

SHEET METAL AND STRUCTURAL STEEL FOR MMMP TRADES...compares types of sheet metal and tools used by the trade. Apprentices will develop skills related to fabricating sheet metal and structural steel, including layout, bending and forming, as well as erecting structural steel. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

VACUUM SYSTEMS FOR MMMP TRADES...introduces principles of vacuum systems and interpreting vacuum system schematics. Apprentices will then develop skills related to installing, repairing, replacing and applying troubleshooting principles to vacuum systems and components. Course examines preventive maintenance techniques commonly used on the job. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

WELDING FOR MMMP TRADES...compares common welding processes and develops apprentice skills related to welding, cutting, heating and using oxy-gas. Welding with arc, MIG and TIG is included, along with common cutting and joining techniques. CONDITION: 504231 Millwright Apprentice or 504641 Maintenance Technician Apprentice requirements met

Program Number 50-464-1
5-Year Contract

Work Hours (including related instruction): 10,000
Related Instruction: 1,296 hours • Night School: 8 hours

ABOUT APPRENTICESHIP

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

ABOUT THE CAREER

Maintenance Technicians work in industrial manufacturing and safely perform mechanical and electrical duties to keep machines, equipment, or the structure of a facility in repair. The Maintenance Technician Apprenticeship program is employer sponsored. This program combines the on-the-job hands-on training with related training at the technical college. Some hands-on training is used to reinforce the related training. Thus, skills are developed to help the technician keep machines and equipment operating and productive. If you like to maintain, repair, and troubleshoot problems and put theory to work, a career as a maintenance technician may be your ticket to success.

CAREERS

Graduates of LTC's Maintenance Technician Apprenticeship program work as journey-level maintenance technicians in a variety of industrial and organizational settings.

INDUSTRIAL APPRENTICE APPLICATION REQUIREMENTS

- Determined by employer
- Wisconsin Apprentice Contract

PROGRAM OUTCOMES

- Demonstrate proper rigging techniques.
- Select an appropriate power transmission system for a given application.
- Identify suitable pumps for given applications.
- Recommend bearings for given applications.
- Plan for fabricating parts and assemblies according to specifications.
- Apply operational and troubleshooting principles to fluid power systems.
- Lay out an equipment installation plan.
- Plan maintenance schedules for a given system.
- Apply AC and DC theory to an industrial setting.
- Apply the National Electric Code requirements to industrial equipment and facilities.
- Apply operational and troubleshooting principles to a transformer installation.
- Maintain electric motors and motor controls.
- Test solid-state electronic system components.
- Apply operational and troubleshooting principles to power systems & variable speed drives.
- Apply operational and troubleshooting principles to programmable logic controllers and automation equipment.
- Apply operational and troubleshooting principles to fluid power systems.
- Interpret industrial equipment drawings and electrical prints.
- Communicate trade and occupational-related information effectively.

APPROXIMATE COSTS

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

SPECIAL NOTE

You must have a sponsoring employer and contract before attending school.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

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

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 2019-2020 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 the MMMP Trades	1
50423713	Precision Measurements for the MMMP Trades	0.5
50423717	Electricity for the MMMP Trades	0.5
50413750	DC Electricity for IE Part 1	1
50413773	Safety and Print Reading for IE	0.5
50413762	Industrial Electrician Motor Controls 1	1
50413752	Codes for IE 1: Intro to the NEC	0.5
		5
Term 2		
50423711	Print Reading for the MMMP Trades	1
50423726	Safety/Tools/Torque for the MMMP Trades	0.25
50423712	Fasteners for the MMMP Trades	0.5
50423723	Adhesives and Sealants for the MMMP Trades	0.25
50413774	DC Electricity for IE Part 2	1
50413763	Industrial Electrician Motor Controls 2	1
50413753	Codes for IE 2: OCPD and Electrical Device	0.5
		4.5
Term 3		
50423737	Equipment Installation for the MMMP Trades	0.75
50423727	Concrete for the MMMP Trades	0.25
50423714	Rigging for the MMMP Trades	1
50413751	AC Electricity for IE Part 1	1
50413764	Industrial Electrician Motor Controls 3	1
50413754	Codes for IE 3: Article 250 Part A	0.5
		4.5
Term 4		
50423738	Sheet Metal and Structural Steel for the MMMP Trades	0.75
50423716	Metallurgy for the MMMP Trades	0.5
50423715	Welding for the MMMP Trades	0.75
50413775	AC Electricity for IE Part 2	1
50413769	IE Programmable Logic Controllers 1	1
50413755	Codes for IE 4: Article 250 Part B	0.5
		4.5
Term 5		
50423735	Mechanical Power Transmission for the MMMP Trades	0.75
50423733	Belts, Sheaves, Pulleys, and Drives for the MMMP Trades	0.5
50423736	Conveyors for the MMMP Trades	0.25
50423734	Gears, Gearboxes, and Gear Assemblies for the MMMP Trades	0.5
50413760	Industrial Electrician Transformers	1
50413770	IE Programmable Logic Controllers 2	1
50413759	Codes for IE 8: Transformers	0.5
50413772	Green Awareness Part 1	0.5
		5
Term 6		
50423731	Couplings and Alignment for the MMMP Trades	0.5
50423730	Bearings for the MMMP Trades	0.75
50423725	Machine Lubrication for the MMMP Trades	0.25
50423724	Preventative and Predictive Maintenance for the MMMP Trades	0.5
50413761	IE Motors and Generators	1
50413771	IE Programmable Logic Controllers 3	1
50413758	Codes for IE 7: Motors and Generators	0.5
50413776	Green Awareness - Part 2	0.5
		5
Term 7		
50423720	Pipefitting and Valves for the MMMP Trades	0.75
50423722	Packings, Seals, and Gaskets for the MMMP Trades	0.5
50423732	Pumps for the MMMP Trades	0.75
50413768	IE Solid State Electronics	2
50413756	Codes for IE 5: Article 300, Cords/Cables	0.5
50413766	Fluid Power Systems for IE- Pneumatics	0.5
		5
Term 8		
50423721	Hydraulics for the MMMP Trades	1
50423718	Pneumatics & Compressed Air for the MMMP Trades	0.75
50423719	Vacuum Systems for the MMMP Trades	0.25
50413765	Power Systems & Variable Speed Drives for IE	2
50413757	Codes for IE 6: Conductors, Raceways, Data Cables	0.5
50413767	Fluid Power Systems for IE- Hydraulics	0.5
		5
		TOTAL 38.5

AC ELECTRICITY FOR MECHATRONICS...is designed to introduce the mechatronic technician apprentice to the basic concepts of alternating current. Emphasis is placed on circuit analysis and the problem-solving skills necessary for the maintenance of mechatronic systems and manufacturing equipment. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

DC ELECTRICITY FOR MECHATRONICS...introduces the fundamental concepts and computations related to DC electricity. Emphasis is placed on circuit analysis and the problem-solving skills necessary for the maintenance of mechatronic systems and manufacturing equipment. Competencies related to metering and safe use of measuring devices are included. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

ELECTRICAL CODES FOR MECHATRONICS...examines the National Electric Code and applies information to work practices involving mechatronic systems. Terminology needed to communicate and coordinate electrical work with other trades will be explored. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

FLUID POWER SYSTEMS FOR MECHATRONICS...include inspecting, testing, servicing, and troubleshooting hydraulic, pneumatic, compressed air, and vacuum systems. Apprentices will review safety procedures for various common maintenance tasks. CONDITION: 506201 Mechatronics Technician Apprentice program reqs met

HMI TECHNOLOGIES AND PLC APPS FOR MECHATRONICS...examines human machine interface devices, software and technologies for mechatronic systems. Apprentices will work in a lab/shop/training center setting to create touchscreens, set-up networks, and configure systems. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

INTRO TO PROGRAMMABLE LOGIC CONTROLLERS...is designed to teach the fundamentals of programmable logic controller and its programming software. The course will introduce terminology, concepts, schematic reading and basic programming. Technologies and PLC use in manufacturing and mechatronic systems will be emphasized. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

INTRO TO ROBOTIC SYSTEMS FOR MECHATRONICS...introduces the apprentice to the robot teach pendant and methods of robot jogging. Learners will be taught to replace servo motors, re-master the robot, and back up robot software and programs. Maintenance, servicing and safety will be emphasized. Cable management systems will be examined. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

INTRODUCTION TO ROBOTIC INTEGRATION...explores offsets, vision systems and system integration using robotic simulation and capstone project. The project will tie everything learned during their apprenticeship together – safety, machine integration, vision systems, CNC, machine applications for robotics, troubleshooting, and work documentation. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

MACHINING CONCEPTS FOR MECHATRONICS...introduces cutting, drilling, lathes, and milling operations to apprentices in mechatronics. Course topics also include work holding devices, measuring tools and measurement, safety, machine guards, tooling, print reading, and speeds & feeds. Math skills will be applied to machining related work practices. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

MECHATRONIC PRINCIPLES...will examine both introductory mechanical & electrical concepts as a foundation for future coursework and on-the-job learning. Troubleshooting principles associated with mechatronics will also be introduced. Apprentices will explore safety, rigging, measurement, mechanical principles, electrical principles, mechanisms, metallurgy, and troubleshooting. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

MOTOR AND MOTOR CONTROL FOR MECHATRONICS...examines the fundamentals of electric motors and motor control. Apprentices will learn to recognize and draw basic symbols, use the language of motor control, and apply these in industry formats. Apprentices will also learn to draw and read ladder and wiring diagrams, and be introduced to the logic used in motor control. Learners will apply this logic to correctly interpret, install, service, and wire control circuits. Wiring of panels, machines, and systems will also be examined. CONDITION: 506201 Mechatronics Technician Apprentice program requirements met

POWER TRANSMISSION SYSTEMS FOR MECHATRONICS...includes examining mechanical power transmission systems and components. Belts, chain drives, gears & gear drives, couplings, and clutches & 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 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@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	
		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
10150167	Intro to Industrial IOT and ERP	2
10801196	Oral/Interpersonal Communication	3
10809198	Introduction to Psychology	3
		15
		TOTAL 60

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



AC FUNDAMENTALS...prepares the student to analyze electrical circuits using AC math, analyze AC waveforms, measure and analyze AC power, analyze capacitors and inductors in DC and AC circuits, analyze AC circuits containing reactance and calculate resonance, apply the elements and properties of basic measuring circuits, and describe transformer characteristics. PREREQUISITE: 10620105 DC Fundamentals or 10660105 DC Fundamentals

DC FUNDAMENTALS...prepares the student to convert values to scientific and engineering notations; calculate math quantities; describe basic atomic theory; identify basic electrical terms; use established symbols standards; describe DC voltage characteristics and current sources and electrical resistance; measure and analyze electrical quantities in series and parallel circuits; and desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1

ELECTRICAL MATH APPLICATIONS...prepares learners to solve percent and proportion problems, use the laws of exponents, convert values between measurement systems, apply geometric concepts, and apply trigonometric concepts to solve right triangles. Emphasis will be on the application of skills to technical problems.

INDUSTRIAL NETWORKS...prepares the learner to configure, install and troubleshoot industrial communication networks. This course is highly computer based. COREQUISITES: 10620140 Programmable Controls AB Advanced. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

INDUSTRIAL WIRING...prepares the learner to follow safety procedures; maintain a safe and healthy work environment; construct electrical circuits; measure electrical quantities using a VOM and/or DVM; analyze measured values using electrical circuit laws; construct typical industrial control circuits; and analyze typical industrial control circuits.

INFORMATION SECURITY PRINCIPLES...introduces the learner to Information Systems Security. Students will review and analyze the control and security concerns in the information systems environment; the security challenges created from the emergence of new technology and the changing internal and external environments; and the effect of legal, regulatory, and current security technology on policy development. Opportunity to earn TestOut Security Pro Certification. PREREQUISITE: 10154104 Intro to IT

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 INDUSTRIAL IOT AND ERP...introduces students to Industrial IOT (Internet of things) and ERP (Enterprise Resource Planning) and prepares students to maintain security in the IOT and ERP component in the manufacturing industry. Learners will gain an understanding of the basic ERP within a manufacturing environment.

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. This class qualifies for 64 hours of Continuing Education Units (CEUs) for Electricians. This class qualifies for 64 hours of Continuing Education Units (CEUs) for Electricians.

PROGRAMMABLE CONTROLLERS - ALLEN BRADLEY ADVANCED...prepares the student to develop applications utilizing subroutine instructions, analog modules; gain a basic understanding of creating and troubleshooting programs using the ControlLogix, RSLOGIX5000 software. This course is highly computer based. PREREQUISITE: 10620138 Prog Cntrls/AB. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

SERVER ADMINISTRATION 1...is a hands-on course designed to introduce the learner to the installation and configuration of Windows Server servers. The student will learn how to install and configure servers, configure server roles and features, configure Hyper-V, deploy and configure core network services, install and administer Active Directory (AD), and create and manage Group Policy. PREREQUISITE: 10154104 Intro to IT

TOUCH SCREEN APPLICATIONS...prepares the student to create, edit, and troubleshoot screens, objects and I/O related to the FactoryTalkME application. Students will create, edit and communicate with Allen-Bradley PLC programs for real-time control utilizing the touchscreen applications. This course is highly computer based. This class qualifies for 48 hours of Continuing Education Units (CEUs) for Electricians.

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

ABOUT THE PROGRAM

Manufacturing Management is a unique associate degree program designed by local industry to meet the needs of the workplace through a combination of supply chain, quality, lean, leadership, and supervisory skills. Graduates of this program are prepared to provide leadership in manufacturing and service industries.

PROGRAM OUTCOMES

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

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

CONTACT

LTC Career Coach
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Catalog No.	Class Title	Credit(s)
Term 1		
10103121	Excel - Level 1	1
10103191	Word - Level 1	1
10182131	Supply Chain Management	3
10196189	Teambuilding & Problem Solving	3
10623118	Lean Manufacturing Overview	3
10801195	Written Communication OR 10801136 English Composition 1	3
		14
Term 2		
10804123	Math with Business Applications	3
10196107	Principles of Management	3
10801196	Oral/Interpersonal Communications OR 10801198 Speech 3 (cr)	3
10196134	Legal Issues for Supervisors	3
10809166	Introduction to Ethics OR 10806112 Principles of Sustainability	3
		15
Term 3		
10101155	Accounting for Professionals	3
10105128	Personal Branding	2
10449114	Safety in the Workplace	3
10196188	Project Management	3
10623101	Quality Concepts	3
10623110	Lean Six Sigma - Measure and Analyze	4
		18
Term 4		
10196129	Portfolio Assessment - Manufacturing Management	1
10809198	Introduction to Psychology OR 10809188 Developmental Psychology (3 cr)	3
10623123	Blueprint Reading and Metrology	3
10623193	ISO 9001 Internal Auditor OR 10623195 ISO 9001 Concepts (3 cr)	3
10809195	Economics	3
		13
		TOTAL 60

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



ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. **PREREQUISITE:** 10804123 Math w Business Applications or **CONDITION:** 101101 Paralegal program requirements met

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 Reading and Study Skills or Reading placement assessment equivalent or **CONDITION:** 610062 Agribusiness/Financial Basic program admissions met

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

INTRODUCTION TO ETHICS: THEORY AND APPLICATION...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. **COREQUISITE:** 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

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

ISO 9001 INTERNAL AUDITOR...is designed to introduce participants to the current 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. 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. MiniTab introduction is included.

LEGAL ISSUES FOR SUPERVISORS...applies the skills and tools necessary for a supervisor to effectively function in today's legal work environment. Learners will demonstrate the application of legal practices in both union and nonunion environments, analysis of the impact of U.S. employment laws, the impact of the global economy, the appeal process, reacting to legal charges, documenting the hiring/firing process, dealing with harassment issues, privacy issues, and summarizing legal issues facing contemporary supervisors.

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

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

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

PORTFOLIO ASSESSMENT-MANUFACTURING MANAGEMENT...prepares the student to identify what they have learned throughout the program, write career goals, re-examine their resume, research and collect project samples of their achievements, and analyze their achievements within the college core abilities. **PREREQUISITE:** 10105128 Personal Branding

PRINCIPLES OF MANAGEMENT...will enable students to develop short and long range plans to effectively accomplish organizational goals. Through the use of terminology, exercises, and case studies, students will be able to give a critical appraisal of real life situations involving organizing, staffing, and motivating others. The student will also learn tools to aid in problem solving, value in diversity, and coping with change.

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

QUALITY CONCEPTS...provides an overview of quality systems, methods and analysis 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 ISO 9000 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 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 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

CONTACT

LTC Career Coach
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2020)		
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 2021)		
10809198	Introduction to Psychology	3
10623195	ISO 9001 Concepts	3
10196107	Principles of Management	3
10196188	Project Management	3
		12
Term 3 (Summer 2021)		
10801195OL	Written Communication	3
		3
Term 4 (Fall 2021)		
10806112	Principles of Sustainability	3
10101155	Accounting for Professionals	3
10623118	Lean Manufacturing Overview	3
10105128	Personal Branding	2
		11
Term 5 (Spring 2022)		
10623110	Lean Six Sigma - Measure and Analyze	4
10623123	Blueprint Reading and Metrology	3
10623101	Quality Concepts	3
10196134	Legal Issues for Supervisors	3
		13
Term 6 (Summer 2022)		
10801196	Oral/Interpersonal Communication	3
		3
Term 7 (Fall 2022)		
10449114	Safety in the Workplace	3
10196129	Portfolio Assessment-Manufacturing Management	1
		4
		TOTAL 60

PART-TIME

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 Reading and Study Skills or Reading placement assessment equivalent or **CONDITION:** 610062 Agribusiness/Financial Basic program admissions met

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

INTRODUCTION TO ETHICS: THEORY AND APPLICATION...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. **COREQUISITE:** 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

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

ISO 9001 INTERNAL AUDITOR...is designed to introduce participants to the current 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. 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. MiniTab introduction is included.

LEGAL ISSUES FOR SUPERVISORS...applies the skills and tools necessary for a supervisor to effectively function in today's legal work environment. Learners will demonstrate the application of legal practices in both union and nonunion environments, analysis of the impact of U.S. employment laws, the impact of the global economy, the appeal process, reacting to legal charges, documenting the hiring/firing process, dealing with harassment issues, privacy issues, and summarizing legal issues facing contemporary supervisors.

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

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

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

PORTFOLIO ASSESSMENT-MANUFACTURING MANAGEMENT...prepares the student to identify what they have learned throughout the program, write career goals, re-examine their resume, research and collect project samples of their achievements, and analyze their achievements within the college core abilities. **PREREQUISITE:** 10105128 Personal Branding

PRINCIPLES OF MANAGEMENT...will enable students to develop short and long range plans to effectively accomplish organizational goals. Through the use of terminology, exercises, and case studies, students will be able to give a critical appraisal of real life situations involving organizing, staffing, and motivating others. The student will also learn tools to aid in problem solving, value in diversity, and coping with change.

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

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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 Rdg & Study Skills or Reading placement assessment equivalent

Program Number 10-104-3 Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

Whether you are online, at a store, or browsing Facebook, you've experienced marketing. Marketing is a program for students interested in sales, social media, retailing promotion, and customer service. If your personality is geared toward developing relationships with the super-informed consumer and keeping up with the latest trends in marketing, and you're curious about what drives consumers to purchase either digitally or traditionally - a career in marketing may be perfect for you.

PROGRAM OUTCOMES

- Develop strategies to anticipate and satisfy market needs.
- Prepare an integrated marketing communication plan.
- Evaluate business information through the market research process.
- Demonstrate selling strategies for products, services, and/or ideas to create and maintain relationships.
- Manage Customer Relationship Management (CRM) functions to anticipate market wants and needs.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

- This program is also offered in an online delivery format. Contact an advisor for details.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10102110	Introduction To Business	3
10103161	PowerPoint - Level 1	1
10103191	Word - Level 1	1
10104102	Marketing, Principles of	3
10104104	Selling Strategies	3
10801198	Speech OR 10801196 Oral/Interpersonal Communication	3
		14
Term 2		
10104122	Marketing Strategies and Planning	3
10104124	Research and Web Analytics	3
10104134	Direct Marketing, PR and Media	3
10104136	Retail Marketing	3
10106138	Web Technologies	2
10801195	Written Communication OR 10801136 English Composition 1	3
		17
Term 3		
10103121	Excel - Level 1	1
10104105	B2B Sales and CRM	3
10104174	Marketing Field Study	1
10104125	Promotion in the Social Media Campaign	3
10105128	Personal Branding	2
10106174	Desktop Publishing	2
10809198	Introduction to Psychology	3
		15
Term 4		
10104126	Internship-Marketing	1
10152106	Integrated Web Concepts	4
10104175	Advanced Marketing Concepts	3
10804123	Math with Business Applications	3
10809195	Economics	3
		14
		TOTAL 60

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

ADVANCED MARKETING CONCEPTS...provides the learner with the opportunity to apply marketing theory and concepts through development of a marketing campaign. Emphasis is on managing promotion of a product, company, service, or event from conception through planning, execution, and analysis. Integrates skills and knowledge gained in previous coursework. COREQUISITE: 10152106 Integrated Web Concepts

B2B SALES AND CRM...enhances the student's ability to create business to business selling strategies and understand the factors affecting the sales funnel. Students will develop an understanding of CRM, account management, sales leadership and motivation, and sustaining the brand in the new era of Sales 2.0. PREREQUISITE: 10104104 Selling Strategies

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

DIRECT MARKETING, PR AND MEDIA...provides the student with an overview of direct marketing, public relations, and social media as it relates to the consumer. Various channels of direct marketing will be investigated including social media, mobile marketing, email marketing, and traditional direct marketing strategies. PREREQUISITE: 10104102 Principles of Marketing

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 the students to the three major components of the web: design, development, and marketing, and how the three areas work together. A common course among Graphic and Web Design, Web and Software Developer, and Marketing, students from each program will work in cross-functional groups to build a marketing plan, design materials, and websites for real-world community businesses. PREREQUISITES: 10104122 Marketing Strategies and Planning and 101043 Mktg req met or 10152187 Web Development 3 and 101527 IT Web and Sof Dev req met or 10201110 InDesign and 102012 Graphic and Web Design req met

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, coreabilities, 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: 10104124 Research and Web Analytics

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

MARKETING FIELD STUDY...provides the student the opportunity to participate in business tours and listen to guest speaker presentations. Enforcement of program outcomes and competencies will assist the student to better understand current trends and strategies in marketing. PREREQUISITE: 10104136 Retail Marketing

MARKETING STRATEGIES AND PLANNING...introduces the student to marketing strategies that support the product/service mix. Students will use critical thinking and analytical skills to develop positioning, branding, differentiation, and relationship marketing strategies to reach the target audience. The student will also be responsible for the development of a marketing plan. PREREQUISITE: 10104102 Principles of Marketing

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

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

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

POWERPOINT - LEVEL 1...introduces the student to the program by planning and creating a presentation, adding media and special effects, and applying advanced formatting to objects. This course is offered in a self-paced format.

PROMOTION IN THE SOCIAL MEDIA CAMPAIGN...provides the student with the understanding of the promotional mix in integrated marketing communications. Students will also explore the role of social media in branding and positioning products. PREREQUISITE: 10104124 Research and Web Analytics or 10104170 Marketing Tourism and Hospitality

RESEARCH AND WEB ANALYTICS...provides the student with the ability to distinguish between quantitative and qualitative research techniques, primary and secondary data, and the marketing research process. In addition students will learn how web analytics and mobile technology have affected the marketing research process. PREREQUISITE: 10104102 Principles of Marketing

RETAIL MARKETING...provides the student with current developments in retail marketing. Students will learn about types of retailers, customer service, distribution and inventory control, and online and traditional retailing methods. PREREQUISITE: 10104102 Principles of Marketing

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. COREQUISITE: 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

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.

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

Program Number 31-606-1 Technical Diploma • Three Terms

ABOUT THE PROGRAM

Students work on acquiring high-level drafting skills and utilize computer-aided drafting (CAD) software. They learn to construct and revise engineering working drawings to ASME standards.

PROGRAM OUTCOMES

- Assist engineers in the design process.
- Prepare detail and assembly drawings for documentation of mechanical parts and machines using CAD (Computer-Aided Design) software using ASME Y14.5M Standard.
- Function effectively on both self-directed and team-oriented projects.
- Ability to grasp spatial relationships.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

Program can also be completed by attending evenings.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10606101	Basic Mechanical Drafting	2
10606103	Intermediate Mechanical Drafting (AutoCAD)	2
10606105	Introduction to Working Drawings (AutoCAD)	3
10606160	Manufacturing Processes & Applications	3
		10
Term 2		
10606106	Geometric Dimensioning and Tolerancing	3
10606140	Parametric Drafting Using Solidworks	3
10606196	Working Drawings Using SolidWorks	3
		9
Term 3		
10606191	Parametric Drafting Using Creo	2
10606193	Working Drawings Using Creo	2
10801196	Oral/Interpersonal Communication	3
		7
		TOTAL 26

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



BASIC MECHANICAL DRAFTING USING AUTOCAD...provides the learner with the skills to utilize AutoCAD's drawing editor, viewing commands; apply coordinate entry methods, AutoCAD file commands; utilize draw commands, modify commands; create and edit text, prints & plots; apply geometric construction to solve a drawing problem; utilize selection sets, duplicating modify commands, layers & objects properties, blocks; apply principles of orthographic and multi view projection.

GEOMETRIC DIMENSIONING AND TOLERANCING...provides the learner with the skills to apply and interpret geometric tolerancing (ASME 14.5M-2009) to part drawings, including form, profile, orientation, runout, and positional tolerances.

INTERMEDIATE MECHANICAL DRAFTING (AUTOCAD)...provides the learner with the skills to create two dimensional section views, create two-dimensional auxiliary views, create prints/plots from paper space, modify and set dimension attributes, apply dimensioning symbols, and apply ASME Y14.5M standards for dimensioning and tolerancing. COREQUISITE: 10606101 Basic Mechanical Drafting

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

INTRODUCTION TO WORKING DRAWINGS (AUTOCAD)...provides the learner with the skill to create solid primitives, create a solid model from a two-dimensional closed profile, use Boolean operations, use modify options to existing solid models, create a detail drawing from a solid model and create assembly drawings from solid models. COREQUISITE: 10606103 Intermediate Mechanical Drafting (AutoCAD)

MANUFACTURING PROCESSES AND APPLICATIONS...Introduces the learner to machining processes including, milling, turning, and drilling. The learner will also learn how to properly use and read dial and digital micrometers; dial, digital and vernier calipers; as well as height gages and angle measurement devices. In addition, the student will also explore metallurgy, computer-age machining and methods in advanced manufacturing technology.

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

PARAMETRIC DRAFTING USING CREO...provides the learner with the skills to use Creo user interface, sketching tools; create the following features: extrusions, revolves, holes, fillets and chamfers, ribs, sweeps, shells, blends; setup datum references, edit sketches and features and create detail drawings from Creo models. PREREQUISITES: 10606140 Drafting Parametrics-SolidWorks or 10606196 Working Drawings Using SolidWorks

PARAMETRIC DRAFTING USING SOLIDWORKS...provides the learner with the skills to use SolidWorks user interface, sketching tools; create the following features: extrusions, revolves, cuts, holes, fillets and chamfers, ribs, sweeps, shells, lofts; setup reference geometry, edit sketches and features and create detail drawings from SolidWorks models. COREQUISITE: 10606105 Introduction to Working Drawings (AutoCAD)

WORKING DRAWINGS USING CREO...provides the learner with the skills to create different types of assemblies using Creo, insert standard components from vendor websites, apply classes of fits to mating parts, determine interference and clearance between parts, specify annotation notes to drawings, insert a Bill-of-Material into an assembly drawing, and apply reverse engineering. COREQUISITE: 10606191 or 10606195 Parametric Drafting Using Creo

WORKING DRAWINGS USING SOLIDWORKS...will provide the learner with the skills to create different types of assemblies using SolidWorks, insert standard components from toolbox and vendor websites, apply classes of fits to mating parts, determine interference and clearance between parts, specify annotation notes to drawings, insert a Bill-of-Material into an assembly drawing, and apply reverse engineering. COREQUISITE: 10606140 Drafting Parametric Using Solidworks

ABOUT THE PROGRAM

Mechanical design technicians, under the direction of engineering staff members, help develop and test products, calculate strength and cost of materials, make drawings to scale, and work on prototypes and product improvement. Students work on acquiring high-level drafting skills and utilize a variety of Computer-Aided Drafting (CAD) software. They learn to construct and revise engineering working drawings and tooling drawings; research and apply information for parts and materials; and specify appropriate tolerances, materials, and other engineering data. Mechanical designers work on teams that focus on continuous improvement, Six Sigma initiatives, and lean manufacturing efforts.

PROGRAM OUTCOMES

- Prepare detail and assembly drawings for documentation of mechanical components and products.
- Create CAD geometry, parts and assemblies.
- Design mechanical components and products.
- Analyze mechanical engineering problems.
- Select purchased parts.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

This program can also be completed by attending evenings.

CONTACT

LTC Career Coach
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Catalog No.	Class Title	Credit(s)
Term 1		
10606101	Basic Mechanical Drafting	2
10606103	Intermediate Mechanical Drafting (AutoCAD)	2
10606105	Introduction to Working Drawings (AutoCAD)	3
10606160	Manufacturing Processes & Applications	3
10804113	College Technical Math 1A	3
10801196	Oral/Interpersonal Communication	3
		16
Term 2		
10606106	Geometric Dimensioning and Tolerancing	3
10606134	Statics	4
10606140	Drafting Parametric Using Solidworks	3
10606196	Working Drawings Using SolidWorks	3
10806154	General Physics 1	4
		17
Term 3		
10606117	Machine Elements	3
10606118	Kinematics	3
10606130	Strength of Materials	4
10606191	Parametric Drafting Using Creo	2
10606193	Working Drawings Using Creo	2
10620169	Robotic Maintenance	1
10444104	HSM for Solidworks	1
		16
Term 4		
10606112	Tool Design Basic	3
10606125	Design Problems	3
10606189	Intro to Current Manufacturing Trends	2
10801195	Written Communication	3
10809198	Introduction to Psychology	3
10809196	Introduction to Sociology OR 10809195 Economics	3
		17
		TOTAL 66

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



BASIC MECHANICAL DRAFTING USING AUTOCAD...provides the learner with the skills to utilize AutoCAD's drawing editor, viewing commands; apply coordinate entry methods, AutoCAD file commands; utilize draw commands, modify commands; create and edit text, prints & plots; apply geometric construction to solve a drawing problem; utilize selection sets, duplicating modify commands, layers & objects properties, blocks; apply principles of orthographic and multi view projection.

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

DESIGN PROBLEMS...prepares the learner to use knowledge of machine elements to design a mechanical system based on specifications given in class; prepare a project time line; create all documentation for manufacturing, including detail and assembly drawings; perform all design calculations. PREREQUISITE: 10606117 Machine Elements; 10606118 Kinematics; 10606196 Working Drawings Using SolidWorks or 10606160 Manufacturing Processes & Applications

GENERAL PHYSICS 1...presents the applications and theory of basic physics principles. This course emphasizes problem-solving, laboratory investigation, and applications. Topics include unit conversions and analysis, vectors, translational and rotational kinematics, translational and rotational dynamics, heat and temperature, and harmonic motion and waves. PREREQUISITE: 10804113 College Tech Math 1A, 10804115 College Tech Math 1, or 10804118 Intermediate Algebra, or Math placement assessment equivalent.

GEOMETRIC DIMENSIONING AND TOLERANCING...provides the learner with the skills to apply and interpret geometric tolerancing (ASME 14.5M-2009) to part drawings, including form, profile, orientation, runout, and positional tolerances.

HSM FOR SOLIDWORKS...is a CAD software that is often used for mechanical design. HSM for Solidworks is an add-on to Solidworks for CAM processes, creating G&M code programs from the solid model. In this course you will explore the Solidworks interface and create face milling, end milling, and hole-producing tool paths for CNC machining centers. You will also be creating turning, boring, threading, and hole-producing tool paths for CNC turning centers.

INTERMEDIATE MECHANICAL DRAFTING (AUTOCAD)...provides the learner with the skills to create two dimensional section views, create two-dimensional auxiliary views, create prints/plots from paper space, modify and set dimension attributes, apply dimensioning symbols, and apply ASME Y14.5M standards for dimensioning and tolerancing. COREQUISITE: 10606101 Basic Mechanical Drafting

INTRO TO CURRENT MANUFACTURING TRENDS...introduces the learner to the theories and concepts of Statistical Process Control, Six Sigma and Lean Manufacturing. PREREQUISITES: 10804115 College Tech Math or 10804113 College Tech Math 1A

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

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

INTRODUCTION TO WORKING DRAWINGS (AUTOCAD)...provides the learner with the skill to create solid primitives, create a solid model from a two-dimensional closed profile, use Boolean operations, use modify options to existing solid models, create a detail drawing from a solid model and create assembly drawings from solid models. COREQUISITE: 10606103 Intermediate Mechanical Drafting (AutoCAD)

KINEMATICS...provides the student with the skills necessary to determine the motions required to accomplish the objective of a machine, calculate velocities and design gears. PREREQUISITE: 10804115 College Technical Math 1 or 10804113 College Technical Math 1A

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

MANUFACTURING PROCESSES AND APPLICATIONS...Introduces the learner to machining processes including, milling, turning, and drilling. The learner will also learn how to properly use and read dial and digital micrometers; dial, digital and vernier calipers; as well as height gages and angle measurement devices. In addition, the student will also explore metallurgy, computer-age machining and methods in advanced manufacturing technology.

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

PARAMETRIC DRAFTING USING CREO...provides the learner with the skills to use Creo user interface, sketching tools; create the following features: extrusions, revolves, holes, fillets and chamfers, ribs, sweeps, shells, blends; setup datum references, edit sketches and features and create detail drawings from Creo models. PREREQUISITES: 10606140 Drafting Parametrics-SolidWorks or 10606196 Working Drawings Using SolidWorks

PARAMETRIC DRAFTING USING SOLIDWORKS...provides the learner with the skills to use SolidWorks user interface, sketching tools; create the following features: extrusions, revolves, cuts, holes, fillets and chamfers, ribs, sweeps, shells, lofts; setup reference geometry, edit sketches and features and create detail drawings from SolidWorks models. COREQUISITE: 10606105 Introduction to Working Drawings (AutoCAD)

ROBOTIC MECHANICAL MAINTENANCE...introduces the students to the robot teach pendant and robot jogging. Students will be taught to replace servo motors, recalibrate the robot and back up robot software and programs.

STATICS...covers the study of forces on and in structures that are at rest. Forces, vectors, resultants, moments, couples, equilibrium, free-body diagrams, friction, centroids, and centers of gravity, and moments of inertia are covered. PREREQUISITE: 10804115 College Technical Math 1 or 10804113 College Technical Math 1A

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

TOOL DESIGN BASIC...provides the basic principles needed to design the tools commonly used in manufacturing. Principal topics include drill jigs and milling fixtures. The classroom work is done on CAD, and students are encouraged to research and select standard components from tooling company catalogs. PREREQUISITE: 10606196 Working Drawings Using SolidWorks or 10606160 Manufacturing Processes & Applications

WORKING DRAWINGS USING CREO...provides the learner with the skills to create different types of assemblies using Creo, insert standard components from vendor websites, apply classes of fits to mating parts, determine interference and clearance between parts, specify annotation notes to drawings, insert a Bill-of-Material into an assembly drawing, and apply reverse engineering. COREQUISITE: 10606191 or 10606195 Parametric Drafting Using Creo

WORKING DRAWINGS USING SOLIDWORKS...will provide the learner with the skills to create different types of assemblies using SolidWorks, insert standard components from toolbox and vendor websites, apply classes of fits to mating parts, determine interference and clearance between parts, specify annotation notes to drawings, insert a Bill-of-Material into an assembly drawing, and apply reverse engineering. COREQUISITE: 10606140 Drafting Parametric Using Solidworks

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

**Program Number 50-620-1
5-Year Contract**

**Work Hours (including related instruction): 10,000
Related Instruction: 864 hours • Night School: 8 hours**

ABOUT APPRENTICESHIP

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

ABOUT THE CAREER

This occupation requires combined knowledge of electrical, electronic and mechanical systems used in industrial plants. Workers frequently support automation and robotic technologies. Work processes include installing, repairing, and maintaining equipment/devices. Troubleshooting systems involved in manufacturing and process control are critical requirements for workers in these occupations. Workers typically operate and debug industrial computer and communication systems including PLC's, PC's, and HMI technologies. Workers machine metal and other materials; fabricate parts and weld/join components. Documenting work performed, maintaining accurate records, and working in a collaborative environment are critical interpersonal skills. Employees in some, but not all plants, support facilities, utilities and grounds.

INDUSTRIAL APPRENTICE APPLICATION REQUIREMENTS

- Determined by employer
- Wisconsin Apprentice Contract

PROGRAM OUTCOMES

- Perform work safely.
- Install mechanical equipment.
- Install electrical equipment.
- Maintain mechanical equipment.
- Troubleshoot mechatronic systems.
- Operate machine shop tools and machines.
- Weld and fabricate parts.
- Maintain automation systems.
- Modify devices and systems.
- Maintain documents and records.
- Local options and work processes.

APPROXIMATE COSTS

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

SPECIAL NOTE

You must have a sponsoring employer and contract before attending school.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

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

Catalog No.	Class Title	Credit(s)
Term 1		
50620701	Trades Math Review for Mechatronics	1
50620703	DC Electricity for Mechatronics	1
50620704	AC Electricity for Mechatronics	1
50620706	Electrical Codes for Mechatronics	1
		4
Term 2		
50620707	Welding Basics for Mechatronics	1
50620702	Mechatronics Principles	2
50620710	Power Transmission Systems for Mechatronics	1
		4
Term 3		
50620708	Fluid Power Systems for Mechatronics	2
50620705	Motors & Motor Control for Mechatronics	2
		4
Term 4		
50620711	Machining Concepts for Mechatronics	2
50620712	Introduction to PLC's	2
		4
Term 5		
50620714	HMI Technologies & PLC Applications for Mechatronics	2
50620715	Introduction to Robotic Systems for Mechatronics	2
		4
Term 6		
50620716	Introduction to Robotic Integration	3
50620709	Servos and Drives for Mechatronics	1
		4
		TOTAL 24

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with the Apprenticeship Office for details. The tuition and fees are approximate based on 2019-2020 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 & gear drives, couplings, and clutches & 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

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.

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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Career Coach 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 Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10501101	Medical Terminology	3
10501104	Culture of Healthcare	2
10501107	Digital Literacy for Healthcare	2
31509301	Medical Assistant Administrative Procedures	2
31509302	Human Body in Health & Disease	3
31509303	Medical Assistant Laboratory Procedures 1	2
31509304	Medical Assistant Clinical Procedures 1	4
		18
Term 2		
10501102	Health Insurance and Reimbursement OR 31509307 Medical Office Insurance & Finance (2 cr)	3
31509305	Medical Assistant Laboratory Procedures 2	2
31509306	Medical Assistant Clinical Procedures 2	3
31501308	Pharmacology for Allied Health	2
31509309	Medical Law, Ethics & Profess	2
31509310	Medical Assistant Practicum	3
		15
		TOTAL 33

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



CULTURE OF HEALTHCARE...is an introduction to the culture of healthcare for students interested in working in various healthcare settings. Learners examine professionalism, interpersonal and written communication skills, problem-solving skills and 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: 10501101 Medical Terminology and Reading placement assessment equivalent

MEDICAL ASSISTANT ADMINISTRATIVE PROCEDURES...introduces medical assistant students to office management, business administration, and the electronic medical record (EMR) in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical office staff, and keep an inventory of supplies. CONDITION: Reading placement assessment and 315091 Medical Assistant program requirements met and COREQUISITE: 10501107 Digital Literacy for Healthcare

MEDICAL ASSISTANT CLINICAL PROCEDURES 1...introduces medical assistant students to the clinical procedures performed in the medical office setting. Students perform basic examining room skills including screening, vital signs, patient history, minor surgery and patient preparation for routine and specialty exams in the ambulatory care setting. Learner explores communication principles and psychology theories related to patient care. COREQUISITE: 31509302 Human Body in Hlth & Dis and 31509303 Med Assist Lab Proc 1 & CONDITION: Reading placement assessment and 315091 Med Assist program requirements met

MEDICAL ASSISTANT CLINICAL PROCEDURES 2...prepares medical assistant students to perform patient care skills in the medical office setting. Students perform clinical procedures including administering medications, performing an electrocardiogram, assisting with respiratory testing, coaching patients, and assisting with emergency situations in an ambulatory care setting. Students learn preventive care and principles of nutrition. PREREQUISITES: 31509304 Medical Assistant Clinical Procedures 1 and 31509303 Medical Assistant Lab Procedures 1 and COREQUISITE: 31509305 Medical Assistant Laboratory Procedures 2

MEDICAL ASSISTANT LAB PROCEDURES 1...introduces medical assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform Clinical Laboratory Improvement Amendment (CLIA) waived routine laboratory procedures commonly performed in the ambulatory care setting. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing, microbiology and urinalysis testing. COREQUISITE: 31509304 Med Asst Clinical Procedures 1 and CONDITION: Reading placement assessment and 315091 Medical Assistant program reqs met

MEDICAL ASSISTANT LAB PROCEDURES 2...prepares students to perform phlebotomy and Clinical Laboratory Improvement Amendment (CLIA) waived hematology, chemistry, immunology and laboratory procedures commonly performed by medical assistants in the ambulatory care setting. PREREQUISITE: 31509303 Medical Assistant Lab Procedures 1 and COREQUISITE: 31509306 Medical Assistant Clinical Procedures 2

MEDICAL ASSISTANT PRACTICUM...requires medical assistant students to integrate and apply knowledge and skills from all previous medical assistant courses in acute ambulatory health care settings. Learners perform medical assistant administrative, clinical, and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. This is a supervised, unpaid, clinical experience. This 216-hour clinical experience begins 3 days/week starting mid-semester and may extend beyond the date of graduation. Student's CPR and First Aid certification must be current throughout the entire Practicum. CONDITION: 315091 Medical Assistant and Health Form completed and PREREQUISITES: 31509301 MA-Adm Prc, 10501104 Cult of Hlthcare, 31509302 Human Body Hlth Diseas and COREQUISITES: 31509306 MA Cl Prc 2, 31509305 MA Lab Prc 2, 31501308 Phrm-Allied Hlth, 10501102 Hlth Ins/Reimb, 31509309 Med Law/Ethcs/Prof

MEDICAL LAW, ETHICS & PROFESSIONALISM...prepares students to display professionalism and perform within ethical and legal boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of ambulatory healthcare, perform quality improvement procedures, examine legal and bioethical issues, and demonstrate awareness of diversity. CONDITION: 315091 Medical Assistant or 315164 Ophthalmic Medical Assistant program requirements met

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

PHARMACOLOGY FOR ALLIED HEALTH...introduces students to medication classification, basic pharmacology principles, and supplements. Students apply basic pharmacodynamics to identify common medications and calculate dosages in preparation for medication administration. COREQUISITES: 31509302 Human Body in Hlth & Disease and 31509306 Medical Assist Clinical Proc 2

Program Number 31-509-1
Technical Diploma

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.

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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit official transcripts (high school and other colleges).
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

- \$136.50 per credit tuition (WI resident) plus \$8.10 per credit student activity fee. \$10 per credit online or hybrid fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Career Coach 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.
- Students will need to submit proof of Nursing Assistant competency prior to taking Medical Assistant Clinical Procedures 1.

CONTACT

LTC Career Coach
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Days	Credit(s)
Term 1 (Fall 2020)			
31509301	Medical Asst Administrative Procedures	(M)	2
10501101	Medical Terminology	(R)	3
10501104	Culture of Healthcare	(T)	2
10501107	Digital Literacy for Healthcare	(T)	2
9			
Term 2 (Spring 2021)			
31509303	Medical Assistant Laboratory Procedures 1	(W)	2
31509304	Medical Assistant Clinical Procedures 1	(M/T)	4
31509302	Human Body in Health & Disease	(online)	3
9			
Term 3 (Summer 2021)			
31509309	Medical Law, Ethics & Professionalism	(online)	2
10501102	Health Insurance & Reimbursement	(online)	3
5			
Term 4 (Fall 2021)			
31509305	Medical Assistant Laboratory Procedures 2	(F)	2
31509306	Medical Assistant Clinical Procedures 2	(M&W)	3
31509310	Medical Assistant Practicum	(T/R) & (MTWRF)	3
31501308	Pharmacology for Allied Health	(W)	2
10			
			TOTAL 33

*Keyboarding course or testout required

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 and 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: 10501101 Medical Terminology and Reading placement assessment equivalent

MEDICAL ASSISTANT ADMINISTRATIVE PROCEDURES...introduces medical assistant students to office management, business administration, and the electronic medical record (EMR) in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical office staff, and keep an inventory of supplies. CONDITION: Reading placement assessment and 315091 Medical Assistant program requirements met and COREQUISITE: 10501107 Digital Literacy for Healthcare and PREREQUISITE: 10106100 Keyboarding or CONDITION: Keyboarding testout score greater than or equal to 25

MEDICAL ASSISTANT CLINICAL PROCEDURES 1...introduces medical assistant students to the clinical procedures performed in the medical office setting. Students perform basic examining room skills including screening, vital signs, patient history, minor surgery and patient preparation for routine and specialty exams in the ambulatory care setting. Learner explores communication principles and psychology theories related to patient care. COREQUISITE: 31509302 Human Body in Hlth & Dis and 31509303 Med Assist Lab Proc 1 & CONDITION: Reading placement assessment and 315091 Med Assist program requirements and CNA Competency met

MEDICAL ASSISTANT CLINICAL PROCEDURES 2...prepares medical assistant students to perform patient care skills in the medical office setting. Students perform clinical procedures including administering medications, performing an electrocardiogram, assisting with respiratory testing, coaching patients, and assisting with emergency situations in an ambulatory care setting. Students learn preventive care and principles of nutrition. PREREQUISITES: 31509304 Medical Assistant Clinical Procedures 1 and 31509303 Medical Assistant Lab Procedures 1 and COREQUISITE: 31509305 Medical Assistant Laboratory Procedures 2

MEDICAL ASSISTANT LAB PROCEDURES 1...introduces medical assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform Clinical Laboratory Improvement Amendment (CLIA) waived routine laboratory procedures commonly performed in the ambulatory care setting. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing, microbiology and urinalysis testing. COREQUISITE: 31509304 Med Asst Clinical Procedures 1 and CONDITION: Reading placement assessment and 315091 Medical Assistant program reqs 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 COREQUISITE: 31509306 Medical Assistant Clinical Procedures 2

MEDICAL ASSISTANT PRACTICUM...requires medical assistant students to integrate and apply knowledge and skills from all previous medical assistant courses in acute ambulatory health care settings. Learners perform medical assistant administrative, clinical, and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. This is a supervised, unpaid, clinical experience. This 216-hour clinical experience begins 2 days/week mid-semester and extends for 2-1/2 to 3 weeks after graduation. Student's CPR and First Aid certification must be current throughout the entire Practicum. CONDITION: 315091 Medical Assistant and Health Form completed and PREREQUISITES: 31509301 MA-Adm Prc & 10501104 Culture of Healthcare; COREQUISITES: 31509306 MA Cln Prc 2, 31509305 MA Lab Prc 2, 31501308 Phrm-Allied Hlth, 10501102 Hlth Ins/Reimb, 31509309 Med Law/Ethcs/Prof

MEDICAL LAW, ETHICS & PROFESSIONALISM...prepares students to display professionalism and perform within ethical and legal boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of ambulatory healthcare, perform quality improvement procedures, examine legal and bioethical issues, and demonstrate awareness of diversity. CONDITION: 315091 Medical Assistant or 315164 Ophthalmic Medical Assistant program requirements met

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

PHARMACOLOGY FOR ALLIED HEALTH...introduces students to medication classification, basic pharmacology principles, and supplements. Students apply basic pharmacodynamics to identify common medications and calculate dosages in preparation for medication administration. COREQUISITES: 31509302 Human Body in Hlth & Disease and 31509306 Medical Assist Clinical Proc 2

**Program Number 31-509-1
 Technical Diploma**

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.

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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit official transcripts (high school and other colleges).
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

- \$136.50 per credit tuition (WI resident) plus \$8.10 per credit student activity fee. \$10 per credit online or hybrid fee. Material fee varies depending on course. Other fees vary by program. Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Career Coach 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.
- Students will need to submit proof of Nursing Assistant competency prior to taking Medical Assistant Clinical Procedures 1.

CONTACT

LTC Career Coach
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Days	Credit(s)
Term 1 (Spring 2021)			
31509301	Medical Asst Administrative Procedures	(M)	2
10501101	Medical Terminology	(R)	3
10501104	Culture of Healthcare	(online)	2
10501107	Digital Literacy for Healthcare	(T)	2
9			
Term 2 (Summer 2021)			
31509309	Medical Law, Ethics & Professionalism	(online)	2
10501102	Health Insurance & Reimbursement	(online)	3
5			
Term 3 (Fall 2021)			
31509303	Medical Assistant Laboratory Procedures 1	(W)	2
31509304	Medical Assistant Clinical Procedures 1	(M/T)	4
31509302	Human Body in Health & Disease	(online)	3
9			
Term 4 (Spring 2022)			
31509305	Medical Assistant Laboratory Procedures 2	(F)	2
31509306	Medical Assistant Clinical Procedures 2	(M/W)	3
31509310	Medical Assistant Practicum	(T/R) & (MTWRF)	3
31501308	Pharmacology for Allied Health	(W)	2
10			
			TOTAL 33

*Keyboarding course or testout required

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 and 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: 10501101 Medical Terminology and Reading placement assessment equivalent

MEDICAL ASSISTANT ADMINISTRATIVE PROCEDURES...introduces medical assistant students to office management, business administration, and the electronic medical record (EMR) in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical office staff, and keep an inventory of supplies. CONDITION: Reading placement assessment and 315091 Medical Assistant program requirements met and COREQUISITE: 10501107 Digital Literacy for Healthcare and PREREQUISITE: 10106100 Keyboarding or CONDITION: Keyboarding testout score greater than or equal to 25

MEDICAL ASSISTANT CLINICAL PROCEDURES 1...introduces medical assistant students to the clinical procedures performed in the medical office setting. Students perform basic examining room skills including screening, vital signs, patient history, minor surgery and patient preparation for routine and specialty exams in the ambulatory care setting. Learner explores communication principles and psychology theories related to patient care. COREQUISITE: 31509302 Human Body in Hlth & Dis and 31509303 Med Assist Lab Proc 1 & CONDITION: Reading placement assessment and 315091 Med Assist program requirements and CNA Competency met

MEDICAL ASSISTANT CLINICAL PROCEDURES 2...prepares medical assistant students to perform patient care skills in the medical office setting. Students perform clinical procedures including administering medications, performing an electrocardiogram, assisting with respiratory testing, coaching patients, and assisting with emergency situations in an ambulatory care setting. Students learn preventive care and principles of nutrition. PREREQUISITES: 31509304 Medical Assistant Clinical Procedures 1 and 31509303 Medical Assistant Lab Procedures 1 and COREQUISITE: 31509305 Medical Assistant Laboratory Procedures 2

MEDICAL ASSISTANT LAB PROCEDURES 1...introduces medical assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform Clinical Laboratory Improvement Amendment (CLIA) waived routine laboratory procedures commonly performed in the ambulatory care setting. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing, microbiology and urinalysis testing. COREQUISITE: 31509304 Med Asst Clinical Procedures 1 and CONDITION: Reading placement assessment and 315091 Medical Assistant program reqs 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 COREQUISITE: 31509306 Medical Assistant Clinical Procedures 2

MEDICAL ASSISTANT PRACTICUM...requires medical assistant students to integrate and apply knowledge and skills from all previous medical assistant courses in acute ambulatory health care settings. Learners perform medical assistant administrative, clinical, and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. This is a supervised, unpaid, clinical experience. This 216-hour clinical experience begins 2 days/week mid-semester and extends for 2-1/2 to 3 weeks after graduation. Student's CPR and First Aid certification must be current throughout the entire Practicum. CONDITION: 315091 Medical Assistant and Health Form completed and PREREQUISITES: 31509301 MA-Adm Prc & 10501104 Culture of Healthcare; COREQUISITES: 31509306 MA Cln Prc 2, 31509305 MA Lab Prc 2, 31501308 Phrm-Allied Hlth, 10501102 Hlth Ins/Reimb, 31509309 Med Law/Ethcs/Prof

MEDICAL LAW, ETHICS & PROFESSIONALISM...prepares students to display professionalism and perform within ethical and legal boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of ambulatory healthcare, perform quality improvement procedures, examine legal and bioethical issues, and demonstrate awareness of diversity. CONDITION: 315091 Medical Assistant or 315164 Ophthalmic Medical Assistant program requirements met

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

PHARMACOLOGY FOR ALLIED HEALTH...introduces students to medication classification, basic pharmacology principles, and supplements. Students apply basic pharmacodynamics to identify common medications and calculate dosages in preparation for medication administration. COREQUISITES: 31509302 Human Body in Hlth & Disease and 31509306 Medical Assist Clinical Proc 2

Program Number 31-530-2 Technical Diploma • Two Terms

ABOUT THE PROGRAM

The Medical Coding Specialist program prepares individuals for employment as entry-level coding specialists in health care facilities such as hospitals, clinics, physician practice groups, surgery centers, long-term care facilities, and home healthcare agencies. Coding specialists are also employed in consulting firms, coding and billing services, insurance companies, governmental agencies, and computer software companies. The medical coding specialist reviews medical documentation provided by physicians and other health care providers and translates this into numerical codes. The coding specialist assigns and sequences diagnostic and procedural codes using universally recognized coding systems. Several uses of coded data are for payment of health care claims, statistics, and medical research.

PROGRAM OUTCOMES

- Assign diagnostic and procedure codes using the ICD coding system.
- Assign procedure codes using the HCPCS/CPT coding system.
- Adhere to security/privacy/confidentiality policies.
- Use computers to process information.
- Support data collection and reimbursement system.
- Communicate in a professional manner.
- Model professional behaviors, ethics, and appearance.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your 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		
10501101	Medical Terminology	3
10501107	Digital Literacy for Healthcare	2
10530162	Foundations of HIM	3
10530159	Healthcare Revenue Management	3
10806189	Basic Anatomy OR 10806177 General Anatomy & Physiology (4 cr)	3
		14
Term 2		
10530182	Human Diseases for Health Professions	3
10530184	CPT Coding	3
10530197	ICD Diagnosis Coding	3
10530199	ICD Procedure Coding	2
10530165	Intermediate Coding	3
10530191	HIM/Coding Practicum 1	2
		16
		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 2020-2021 rates and are subject to change prior to the start of the academic year.



BASIC ANATOMY...examines concepts of anatomy and physiology as they relate to health careers. Learners correlate anatomical and physiological terminology to all body systems. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

CPT CODING...prepares learners to assign CPT codes, supported by medical documentation, with entry-level proficiency. Learners apply CPT instructional notations, conventions, rules, and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation. COREQ: 10530182 Human Dis for Hlth Prof and 10530159 Healthcare Revenue Mgmt and PREREQUISITE: 10501101 Med Term and CONDITION: 315302 Medical Coding Spec or 105304 Health Information Mgmt program requirements met

DIGITAL LITERACY FOR HEALTHCARE...focuses on the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined.

FOUNDATIONS OF HIM...introduces learners to the healthcare delivery system, and the external forces that influence healthcare delivery. Sets an understanding for the expectations and standards related to professional ethics, confidentiality and security of health information. Differentiates the use and structure of healthcare data elements, data standards, and the relationships between them. Prepares learners to collect and maintain health data to ensure a complete and accurate health record. COREQUISITE: 10501107 Digital Literacy for Healthcare

HEALTHCARE REVENUE MANAGEMENT...prepares learners to compare and contrast health care payers, illustrate the reimbursement cycle, and to comply with regulations related to fraud and abuse. Learners assign payment classifications with entry level proficiency using computerized encoding and grouping software.

HIM/CODING PRACTICUM 1...applies previously acquired skills and knowledge by means of clinical experiences in the technical procedures of health record systems and discussion of clinical situations. COREQUISITES: 10530165 Intermediate Coding, 10530197 ICD Diagnosis Coding, 10530199 ICD Procedure Coding, 10530184 CPT Coding, CONDITION: 315302 Medical Coding Specialist or 105304 Health Information Management program requirements met

HUMAN DISEASE FOR HEALTH PROFESSIONS...prepares learners to interpret clinical documentation that they will encounter in a variety of healthcare settings. Emphasis is placed on understanding the common disorders and diseases of each body system to include the etiology (cause), signs and symptoms, diagnostic tests and results, and medical treatments and surgical procedures. COREQUISITES: 10501101 Med Term

ICD DIAGNOSIS CODING...prepares students to assign ICD diagnosis codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation. PREREQUISITE: 10501101 Medical Terminology and COREQUISITES: 10530182 Human Diseases for the Health Professions and 10530159 Healthcare Revenue Management or 10501102 Health Ins and Reimbursement

ICD PROCEDURE CODING...prepares students to assign ICD procedure codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation. PREREQUISITE: 10501101 Medical Terminology and COREQUISITES: 10530182 Human Diseases for the Health Professions and 10530159 Healthcare Revenue Management or 10501102 Health Ins and Reimbursement

INTERMEDIATE CODING...prepares students to assign ICD and CPT/HCPCS codes supported by medical documentation and official coding guidance to support appropriate reimbursement. Students will participate in CDI activities, including preparation of appropriate physician queries in accordance with compliance guidelines. PREREQUISITE: 10501101 Medical Terminology and COREQUISITES: 10530197 ICD Diagnosis Coding and 10530199 ICD Procedure Coding and 10530184 CPT Coding and 10530159 Healthcare Revenue Mgmt or 10501102 Health Ins and Reimbursement

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

**Program Number 31-530-2
 Technical Diploma**

ABOUT THE PROGRAM

The Medical Coding Specialist program prepares individuals for employment as entry-level coding specialists in health care facilities such as hospitals, clinics, physician practice groups, surgery centers, long-term care facilities, and home healthcare agencies. Coding specialists are also employed in consulting firms, coding and billing services, insurance companies, governmental agencies, and computer software companies. The medical coding specialist reviews medical documentation provided by physicians and other health care providers and translates this into numerical codes. The coding specialist assigns and sequences diagnostic and procedural codes using universally recognized coding systems. Several uses of coded data are for payment of health care claims, statistics, and medical research.

PROGRAM OUTCOMES

- Assign diagnostic and procedure codes using the ICD coding system.
- Assign procedure codes using the HCPCS/CPT coding system.
- Adhere to security/privacy/confidentiality policies.
- Use computers to process information.
- Support data collection and reimbursement system.
- Communicate in a professional manner.
- Model professional behaviors, ethics, and appearance.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your 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 (Fall 2020)		
10501101	Medical Terminology	3
10501107	Digital Literacy for Healthcare	2
10806189	Basic Anatomy OR 10801689OL Basic Anatomy Online (3 cr) OR 10806177 General Anatomy & Physiology (4 cr)	3
		8
Term 2 (Spring 2021)		
10530162	Foundations of HIM	3
10530159	Healthcare Revenue Management	3
10530182	Human Diseases for Health Professions	3
10530197	ICD Diagnosis Coding	3
		12
Term 3 (Fall 2021)		
10530165	Intermediate Coding	3
10530184	CPT Coding	3
10530199	ICD Procedure Coding	2
10530191	HIM/Coding Practicum 1 OR	2
		10
		TOTAL 30





BASIC ANATOMY...examines concepts of anatomy and physiology as they relate to health careers. Learners correlate anatomical and physiological terminology to all body systems. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

CPT CODING...prepares learners to assign CPT codes, supported by medical documentation, with entry-level proficiency. Learners apply CPT instructional notations, conventions, rules, and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation. COREQ: 10530182 Human Dis for Hlth Prof and 10530159 Healthcare Revenue Mgmt and PREREQUISITE: 10501101 Med Term and CONDITION: 315302 Medical Coding Spec or 105304 Health Information Mgmt program requirements met

DIGITAL LITERACY FOR HEALTHCARE...focuses on the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined.

FOUNDATIONS OF HIM...introduces learners to the healthcare delivery system, and the external forces that influence healthcare delivery. Sets an understanding for the expectations and standards related to professional ethics, confidentiality and security of health information. Differentiates the use and structure of healthcare data elements, data standards, and the relationships between them. Prepares learners to collect and maintain health data to ensure a complete and accurate health record. COREQUISITE: 10501107 Digital Literacy for Healthcare

HEALTHCARE REVENUE MANAGEMENT...prepares learners to compare and contrast health care payers, illustrate the reimbursement cycle, and to comply with regulations related to fraud and abuse. Learners assign payment classifications with entry level proficiency using computerized encoding and grouping software.

HIM/CODING PRACTICUM 1...applies previously acquired skills and knowledge by means of clinical experiences in the technical procedures of health record systems and discussion of clinical situations. COREQUISITES: 10530165 Intermediate Coding, 10530197 ICD Diagnosis Coding, 10530199 ICD Procedure Coding, 10530184 CPT Coding, CONDITION: 315302 Medical Coding Specialist or 105304 Health Information Management program requirements met

HUMAN DISEASE FOR HEALTH PROFESSIONS...prepares learners to interpret clinical documentation that they will encounter in a variety of healthcare settings. Emphasis is placed on understanding the common disorders and diseases of each body system to include the etiology (cause), signs and symptoms, diagnostic tests and results, and medical treatments and surgical procedures. COREQUISITES: 10501101 Med Term

ICD DIAGNOSIS CODING...prepares students to assign ICD diagnosis codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation. PREREQUISITE: 10501101 Medical Terminology and COREQUISITES: 10530182 Human Diseases for the Health Professions and 10530159 Healthcare Revenue Management or 10501102 Health Ins and Reimbursement

ICD PROCEDURE CODING...prepares students to assign ICD procedure codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation. PREREQUISITE: 10501101 Medical Terminology and COREQUISITES: 10530182 Human Diseases for the Health Professions and 10530159 Healthcare Revenue Management or 10501102 Health Ins and Reimbursement

INTERMEDIATE CODING...prepares students to assign ICD and CPT/HCPCS codes supported by medical documentation and official coding guidance to support appropriate reimbursement. Students will participate in CDI activities, including preparation of appropriate physician queries in accordance with compliance guidelines. PREREQUISITE: 10501101 Medical Terminology and COREQUISITES: 10530197 ICD Diagnosis Coding and 10530199 ICD Procedure Coding and 10530184 CPT Coding and 10530159 Healthcare Revenue Mgmt or 10501102 Health Ins and Reimbursement

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

ABOUT THE PROGRAM

The Medical Coding Specialist program prepares individuals for employment as entry-level coding specialists in health care facilities such as hospitals, clinics, physician practice groups, surgery centers, long-term care facilities, and home healthcare agencies. Coding specialists are also employed in consulting firms, coding and billing services, insurance companies, governmental agencies, and computer software companies. The medical coding specialist reviews medical documentation provided by physicians and other health care providers and translates this into numerical codes. The coding specialist assigns and sequences diagnostic and procedural codes using universally recognized coding systems. Several uses of coded data are for payment of health care claims, statistics, and medical research.

PROGRAM OUTCOMES

- Assign diagnostic and procedure codes using the ICD coding system.
- Assign procedure codes using the HCPCS/CPT coding system.
- Adhere to security/privacy/confidentiality policies.
- Use computers to process information.
- Support data collection and reimbursement system.
- Communicate in a professional manner.
- Model professional behaviors, ethics, and appearance.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

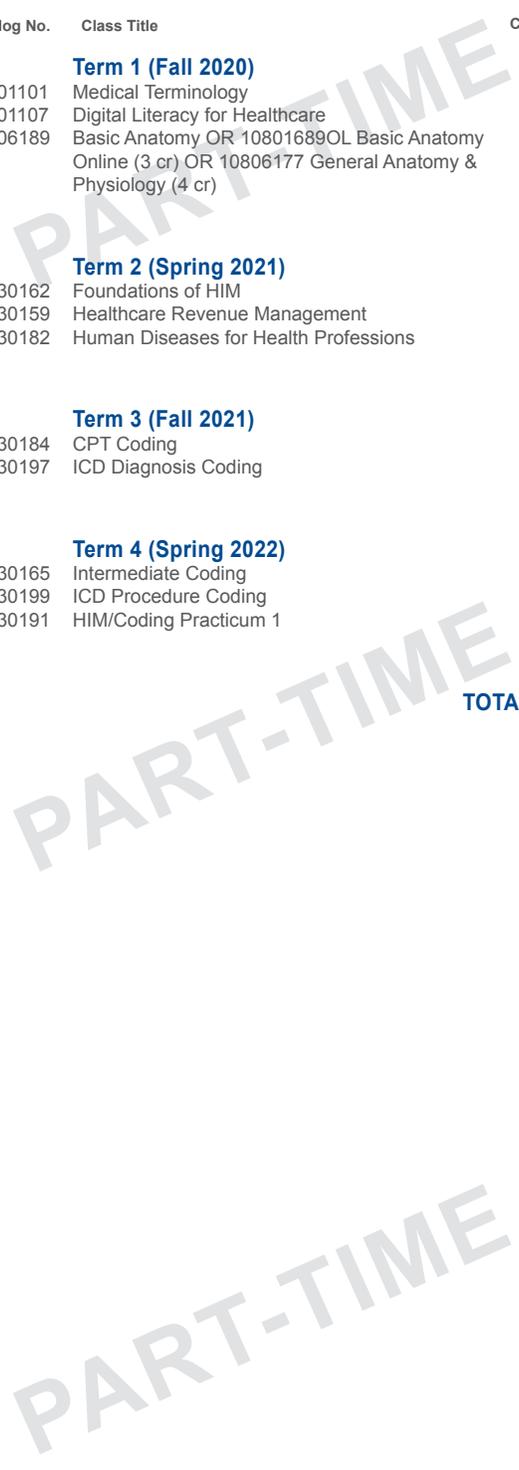
FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your 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 (Fall 2020)		
10501101	Medical Terminology	3
10501107	Digital Literacy for Healthcare	2
10806189	Basic Anatomy OR 10801689OL Basic Anatomy Online (3 cr) OR 10806177 General Anatomy & Physiology (4 cr)	3
		8
Term 2 (Spring 2021)		
10530162	Foundations of HIM	3
10530159	Healthcare Revenue Management	3
10530182	Human Diseases for Health Professions	3
		9
Term 3 (Fall 2021)		
10530184	CPT Coding	3
10530197	ICD Diagnosis Coding	3
		6
Term 4 (Spring 2022)		
10530165	Intermediate Coding	3
10530199	ICD Procedure Coding	2
10530191	HIM/Coding Practicum 1	2
		7
		TOTAL 30





BASIC ANATOMY...examines concepts of anatomy and physiology as they relate to health careers. Learners correlate anatomical and physiological terminology to all body systems. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

CPT CODING...prepares learners to assign CPT codes, supported by medical documentation, with entry-level proficiency. Learners apply CPT instructional notations, conventions, rules, and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation. COREQ: 10530182 Human Dis for Hlth Prof and 10530159 Healthcare Revenue Mgmt and PREREQUISITE: 10501101 Med Term and CONDITION: 315302 Medical Coding Spec or 105304 Health Information Mgmt program requirements met

DIGITAL LITERACY FOR HEALTHCARE...focuses on the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined.

FOUNDATIONS OF HIM...introduces learners to the healthcare delivery system, and the external forces that influence healthcare delivery. Sets an understanding for the expectations and standards related to professional ethics, confidentiality and security of health information. Differentiates the use and structure of healthcare data elements, data standards, and the relationships between them. Prepares learners to collect and maintain health data to ensure a complete and accurate health record. COREQUISITE: 10501107 Digital Literacy for Healthcare

HEALTHCARE REVENUE MANAGEMENT...prepares learners to compare and contrast health care payers, illustrate the reimbursement cycle, and to comply with regulations related to fraud and abuse. Learners assign payment classifications with entry level proficiency using computerized encoding and grouping software.

HIM/CODING PRACTICUM 1...applies previously acquired skills and knowledge by means of clinical experiences in the technical procedures of health record systems and discussion of clinical situations. COREQUISITES: 10530165 Intermediate Coding, 10530197 ICD Diagnosis Coding, 10530199 ICD Procedure Coding, 10530184 CPT Coding, CONDITION: 315302 Medical Coding Specialist or 105304 Health Information Management program requirements met

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ICD DIAGNOSIS CODING...prepares students to assign ICD diagnosis codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation. PREREQUISITE: 10501101 Medical Terminology and COREQUISITES: 10530182 Human Diseases for the Health Professions and 10530159 Healthcare Revenue Management or 10501102 Health Ins and Reimbursement

ICD PROCEDURE CODING...prepares students to assign ICD procedure codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation. PREREQUISITE: 10501101 Medical Terminology and COREQUISITES: 10530182 Human Diseases for the Health Professions and 10530159 Healthcare Revenue Management or 10501102 Health Ins and Reimbursement

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Program Number 10-624-1 Associate Degree in Applied Science • Four Terms

ABOUT THE PROGRAM

The increasing use of radiation and radioactive materials in today's world has created a demand for radiation protection technicians. The Nuclear Technology program offers the student a unique opportunity to obtain the specialized training in demand by businesses and organizations licensed to utilize radioactive materials. 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

- Classes are offered at LTC's main campus with videoconferencing to NWTC's Green Bay Campus 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 Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10624105	Health Physics Calculations and Statistics	3
10624110	Radioactivity and Regulations	3
10804113	College Technical Mathematics 1A	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
10809198	Introduction to Psychology	3
		17
Term 4		
10624140	Radiochemistry	3
10624148	Reactor Theory and Operation	3
10624133	Radiological Emergencies	3
10624134	Radiation Shielding	2
10624135	Radiation Shielding Lab	1
		12
		TOTAL 62

Most classes in this program have prerequisites.

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



APPLIED HEALTH PHYSICS...prepares the learner to wear dosimeter, monitor personal exposure, calculate/estimate radioactive airborne activity concentration, issue respirators, determine contamination levels, don and remove protective clothing, reduce the spread of contamination, conduct an ALARA audit, reduce the total radiation exposure, maintain records and estimate skin dose, etc. PREREQUISITE: 10624122 Radiation Physics.

APPLIED HEALTH PHYSICS-LAB...expands the learner's ability to perform applied health physics tasks as covered in Applied Health Physics, 624-145 and should be completed within the same semester. COREQUISITE: 10624145 Appld Hlth Physics

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

ENERGY POWER AND FORCE...studies the laws and theories of electric power generation that govern motion and how to apply them to a range of concepts including rotational inertia, acceleration, velocity, lift, force, torque, etc. Studies the law of Conservation of Energy and basic atomic theory and how these concepts apply to electric power generation. The use and function of simple machines, and how they relate to electric power generator function, is also explored.

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

HEALTH PHYSICS CALCULATIONS AND STATISTICS...prepares the learner to solve linear and exponential equations, logarithms, plot graphs, determine counting statistics and instrument reliability, and work with geometry and trigonometry problems. COREQUISITE: 10624110 Radioactivity and Regulations.

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

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

NUCLEAR DC AND AC APPLICATIONS...prepares nuclear, radiation safety, and health physics learners to apply direct current (DC) and alternating current (AC) concepts and laws; perform calculations to identify basic electrical terms, symbols, units, etc; to apply the electrical laws (such as, Ohm's law, Kirchoff'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 10-624-1
Associate Degree in Applied Science

ABOUT THE PROGRAM

The increasing use of radiation and radioactive materials in today's world has created a demand for radiation protection technicians. The Nuclear Technology program offers the student a unique opportunity to obtain the specialized training in demand by businesses and organizations licensed to utilize radioactive materials. 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.

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CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2020)		
10801195	Written Communication	3
10804113	College Technical Mathematics 1A	3
6		
Term 2 (Spring 2021)		
10801196	Oral/Interpersonal Communications	3
10809198	Introduction to Psychology	3
6		
Term 3 (Fall 2021)		
10624105	Health Physics Calculations and Statistics	3
10624110	Radioactivity and Regulations	3
6		
Term 4 (Spring 2022)		
10624114	Nuclear Systems and Sources	3
10624122	Radiation Physics	3
10624123	Radiation Physics-Lab	2
8		
Term 5 (Fall 2022)		
10103121	Excel – Level 1	1
10482135	Energy Power and Force	3
10624138	Radioactive Materials Management	2
6		
Term 6 (Spring 2023)		
10624103	Nuclear DC and AC Applications	3
10624140	Radiochemistry	3
6		
Term 7 (Summer 2023) (Nights)		
10624118	Radiation Biology	3
10809122	Introduction to American Government	3
6		
Term 8 (Fall 2023)		
10624149	Reactor Plant Components	4
10624145	Applied Health Physics	3
10624146	Applied Health Physics Lab or Internship	2
9		
Term 9 (Spring 2024)		
10624148	Reactor Theory and Operation	3
10624133	Radiological Emergencies	3
10624134	Radiation Shielding	2
10624135	Radiation Shielding Lab	1
9		

TOTAL 62

Most classes in this program have prerequisites.

APPLIED HEALTH PHYSICS...prepares the learner to wear dosimeter, monitor personal exposure, calculate/estimate radioactive airborne activity concentration, issue respirators, determine contamination levels, don and remove protective clothing, reduce the spread of contamination, conduct an ALARA audit, reduce the total radiation exposure, maintain records and estimate skin dose, etc. PREREQUISITE: 10624122 Radiation Physics.

APPLIED HEALTH PHYSICS-LAB...expands the learner's ability to perform applied health physics tasks as covered in Applied Health Physics, 624-145 and should be completed within the same semester. COREQUISITE: 10624145 Appld Hlth Physics

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

ENERGY POWER AND FORCE...studies the laws and theories of electric power generation that govern motion and how to apply them to a range of concepts including rotational inertia, acceleration, velocity, lift, force, torque, etc. Studies the law of Conservation of Energy and basic atomic theory and how these concepts apply to electric power generation. The use and function of simple machines, and how they relate to electric power generator function, is also explored.

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

HEALTH PHYSICS CALCULATIONS AND STATISTICS...prepares the learner to solve linear and exponential equations, logarithms, plot graphs, determine counting statistics and instrument reliability, and work with geometry and trigonometry problems. COREQUISITE: 10624110 Radioactivity and Regulations.

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

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

NUCLEAR DC AND AC APPLICATIONS...prepares nuclear, radiation safety, and health physics learners to apply direct current (DC) and alternating current (AC) concepts and laws; perform calculations to identify basic electrical terms, symbols, units, etc; to apply the electrical laws (such as, Ohm's law, Kirchhoff's voltage and current laws); to analyze DC/AC electronic circuit, power, etc.; to analyze AC waveform (including single-phase versus three-phase), batteries, chargers, etc. PREREQUISITE: 10624105 HealthPhysics Calcs & Stats.

NUCLEAR SYSTEMS AND SOURCES...introduces the learner to the major components of natural/man-made background sources, x-ray tubes and applications, medical-use radioactive materials, accelerators, nuclear gauging devices, non-ionization radiations, and power/research nuclear reactors and associated health physics topics. PREREQUISITE: 10624110 Radioactivity and Regulations.

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

RADIATION BIOLOGY...prepares the learner to convert measuring units and activity to dose rates, predict the effect of radiation on living cells and human organs, evaluate radiation risk, and calculate internal doses. PREREQUISITES: 10624110 Radioactivity and Regulations, 10624105 Health Phys Calc/Stats, 10624114 Nuclear Systems & Sources, 10624122 Rad Physics, 10624123 Rad Phys-Lab, and 10804113 College Tech Math 1A

RADIATION PHYSICS...introduces learner to health physics-related physics, including properties of radiation; interactions of radiation with matters; basic principles of radiation detection and measurement; and different kinds of radiation detectors; i.e., gas-filled and solid-state detectors. PREREQUISITE: 10624110 Radioactivity and Regulations. 10624105 Hlth Physics Calc & Stats. & 10804113 College Tech Math 1A

RADIATION PHYSICS-LAB...expands the learners ability to perform calculations, select instruments, and analyze radioactive samples. This course is associated with 624-122, Radiation Physics. COREQUISITE: 10624122 Radiation Physics and PREREQUISITE: 10801195 Written Communications and COREQUISITE: Radioactivity and Regulations.

RADIATION SHIELDING...provides the learner with the skills to calculate radiation attenuation from various geometric radioactive sources, determine the effect of neutron radiation on materials, and estimate the exposure rate from various sources with or without shielding materials. PREREQUISITE: 10624122 Radiation Physics

RADIATION SHIELD-LAB...expands the learner's ability to perform shielding of ionizing radiation sources and to measure the penetration of beta and gamma radiation. COREQUISITE: 10624134 Radiation Shielding

RADIOACTIVE MATERIAL AND MANAGEMENT...introduces the learner to the proper methods used to dispose of radioactive waste in liquid, solid, gaseous forms; determine waste classification, evaluate methods used to process low-level and high-level waste, determine the package/label requirements, proper type of transport container, shipment quantity classification, storage distance from people and film during shipments by rail/vessel/public roads, proper shipping name and UN number; completion of proper shipping papers; document materials inventory/shipments. PREREQUISITES: 10624105 Health Physics Calc & Statistics, 10624110 Radioactivity and Regulations, 10624114 Nuclear Systems & Sources

RADIOACTIVITY AND REGULATIONS...introduces the learner to atomic and nuclear structure; radioactivity and basic dosimetry; regulation standards, including 10CFR 19, 20, etc. COREQUISITE: 10624105 Health Physics Calcs & Stats

RADIOCHEMISTRY...provides the student with the fundamentals of chemistry and the application of chemistry control to a nuclear facility. The course will cover basic water treatment principles, corrosion, reactor water chemistry control and chemical hazards. Prepares the learner to separate dissolved, suspended, liquid, and ionic radioactive components; perform qualitative and quantitative analysis of samples; and prevent the production of radioactive material by using proper chemical control. PREREQUISITE: 10624122 Radiation Physics or 10624122OL Radiation Physics

RADIOLOGICAL EMERGENCIES...teaches the learner to understand a radiological emergency, which is displaced radioactive substances in solid, liquid, or gaseous forms in amounts resulting in doses to workers, the public, or the environment, that exceeds company, state, and federal limits or regulations; how it is prevented and mitigated, the proper preparation and post-accident actions, as well as the regulations on radioactive releases, estimation of doses in an emergency, and the first response to an emergency. PREREQUISITES: 10624110 Nuclear Technology and Regulations, 10624105 Health Physics Calculations and Statistics and 10624114 Nuclear Systems and Sources

REACTOR PLANT COMPONENTS...provides the learner with the fundamentals of heat transfer and fluid flow, and properties of reactor plant materials. The course introduces basic mechanical and electrical components used in nuclear power plants such as different types of piping, valves, pumps, ejectors, filters, turbines, heat exchangers, compressors, lubrication systems, valve actuators, breakers, transformers, relays and other equipment. PREREQUISITES: 10624110 Radioactivity and Regulations, 10624105 Health Physics Calculations & Statistics, 10804113 College Technical Math 1A and COREQUISITE: 10624114 Nuclear Systems and Sources

REACTOR THEORY AND OPERATION...introduces the learner to the basic reactor types, the fission process, reactivity/criticality, reactor kinetics, heat removal, residual/decay heat, basic reactor types, nuclear plant water chemistry, and reactor thermodynamics. PREREQUISITE: 10624122 Radiation Physics and 10624133 Radiological Emergencies

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

**Program Number 30-543-1
Technical Diploma • One Term**

ABOUT THE PROGRAM

Nursing assistants play an important role in basic patient/resident care activities in hospitals, nursing homes, and other healthcare settings, including home healthcare. If you're a good communicator, compassionate, and interested in caring for people, becoming a nursing assistant may be a rewarding career choice for you.

PROGRAM OUTCOMES

- Communicate and interact with clients, families and coworkers.
- Maintain and protect client rights.
- Report and record observations.
- Demonstrate ethical and legal responsibilities of the NA/HHA.
- Perform the basic nursing skills required of the NA/HHA.
- Provide for personal care and hygiene.
- Assist with the client rehabilitation and restorative care, promoting independence.
- Assist clients with long-term disabling conditions including dementia.
- Distinguish color and color intensity.
- Read and converse in English.
- Work under stress of time and job demands.
- Maintain emotional control.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Work with Career Coach to:
 - Submit online application.
 - Complete background check and \$20 processing fee.
 - Complete the online Student Success Questionnaire.
 - Review and complete Nursing Assistant Handbook.
 - Complete health requirements.

APPROXIMATE COSTS

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

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 Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
	Term 1	
30543300	Nursing Assistant	3
TOTAL 3		

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



NURSING ASSISTANT...is designed to prepare learners for employment in home care agencies, nursing homes, and hospitals. Learners are supervised by qualified RNs in classroom, lab, and clinical areas. Classes are presented by means of online and face-to-face instruction. Lab and clinical activities are scheduled at designated locations in Manitowoc and Sheboygan Counties. Upon successful completion, the graduate will be eligible 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

- Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving identity as a nurse committed to evidence-based practice, caring, advocacy, and quality care.
- Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts.
- Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making.
- Provide patient centered care by utilizing the nursing process across diverse populations and health care settings.
- Minimize risk of harm to patients, members of the health care team, and self through safe individual performance and participation in system effectiveness.
- Lead the multidisciplinary health care team to provide effective patient care throughout the lifespan.
- Use information and technology to communicate, manage data, mitigate error, and support decision making.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete and submit Technical Standards form.
- Read the Nursing Program Handbook and submit the signed signature page.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

PROGRAM READY TO DO'S

- Pass HESI exam (Health Occupations Entrance assessment) with a 75% or higher.
- Complete and submit health form.
- Complete chemistry requirement.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

- High school Chemistry may fulfill admission requirement.
- CPR BLS Healthcare Provider certification is required prior to starting clinicals.
- Nursing Assistant skills must be attained within one semester prior to starting clinicals.
- LTC's Nursing—Associate Degree program is accredited by the Accreditation Commission for Education in Nursing, 3343 Peachtree Road N.E., Suite 850, Atlanta, Georgia 30326. 404-975-5000 Fax 404-975-5020. www.acenursing.org

CONTACT

LTC Career Coach
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10806177	General Anatomy & Physiology	4
10809198	Introduction to Psychology	3
10801195	Written Communications	3
		10
Term 2		
10806179	Advanced Anatomy & Physiology	4
10801196	Oral/Interpersonal Communications	3
10809188	Developmental Psychology	3
		10
Term 3		
10806197	Microbiology	4
10809172	Introduction to Diversity Studies OR 10809196 Introduction to Sociology	3
		7
Term 4		
10543101	Nursing Fundamentals	2
10543102	Nursing Skills	3
10543103	Nursing Pharmacology	2
10543104	Nsg: Intro to Clinical Practice	2
		9
Term 5		
10543105	Nursing Health Alterations	3
10543106	Nursing Health Promotions	3
10543107	Nsg: Clinical Care Across Lifespan	2
10543108	Nsg: Intro Clinical Care Management	2
		10
Term 6		
10543109	Nsg: Complex Health Alterations 1	3
10543110	Nsg: Mental Health Community Concepts	2
10543111	Nsg: Intermediate Clinical Practice	3
10543112	Nsg: Advanced Skills	1
		9
Term 7		
10543113	Nsg: Complex Health Alterations 2	3
10543114	Nsg: Management & Professional Concepts	2
10543115	Nsg: Advanced Clinical Practice	3
10543116	Nursing Clinical Transition	2
		10
		TOTAL 65
Recommended Support		
10-543-124	Virtual Clinical for 2nd Semester Nursing	1
10-543-125	Virtual Clinical for 3rd Semester Nursing	1

Lakeshore Technical College's Nursing-Associate degree program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examination, or licensure for other states.

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

ADVANCED 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, and flu vaccine. Student must have completed third semester courses. Course requires a minimum grade of "C" or better. COREQUISITE: 10543113 Nursing Complex Health Alterations II and CONDITION: 105431 Nursing - Associate Degree enrollment requirements met

NSG: CLINICAL CARE ACROSS LIFESPAN...applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized. Student must have completed all first semester courses. Student needs a current TB test, AHA CPR card (1 and 2 person, adult, infant, and child, AED), and flu vaccine. Course requires a minimum grade of "C" or better. CONDITION: 105431 Nursing - Associate Degree enrollment requirements met and COREQUISITE: 10543106 Nursing Health Promotion

NSG: COMPLEX HEALTH ALTERATIONS 1...prepares the learner to provide and evaluate care for patients across the lifespan with alterations in cardiovascular, respiratory, endocrine, and hematologic systems as well as patients with fluid/electrolyte and acid-base imbalance, and alterations in comfort. Student must have completed all second semester courses. Course requires a minimum grade of "C" or better. PREREQ: 10543105 Nrsng Hlth Alt, 10543106 Nrsng Hlth Promotion, 10543107 Clin Care Across Lifespan, 10543108 Intro Clin Care Mgmt and CONDITION: 105431 Nursing-Associate Degree enrollment req met

NSG: COMPLEX HEALTH ALTERATIONS 2...prepares the learner to provide and evaluate care for patients across the lifespan with alterations in the immune, neuro-sensory, musculoskeletal, gastrointestinal, hepatobiliary, renal/urinary, reproductive systems and shock/burns and trauma. The learner will also focus on management of care for patients with high-risk perinatal conditions and high-risk newborns. This course requires a minimum grade of "C" or better. PREREQUISITE: 10543109 Nrsng Complex Hlth Alt 1 and 10543112 Nrsng Adv Skills and 10543110 Nrsng Mental Hlth Comm Concepts and 10543111 Nrsng Interm Clin Prac and CONDITION: 105431 Nursing-Associate Degree enrollment requirements met

NSG: INTERMEDIATE CLINICAL PRACTICE...develops the RN role when working with clients with complex health care needs. A focus of the course is developing skills needed for managing multiple clients across the lifespan and priorities. Using the nursing process students will experience adapting nursing practice to meet the needs of clients with diverse needs and backgrounds. Student must have completed all second semester courses. Student needs a current TB test, AHA CPR card (1 and 2 person, adult, infant, and child, AED), and flu vaccine. Course requires a minimum grade of "C" or better. COREQUISITE: 10543112 Nursing Advanced Skills and 10543109 Nursing Complex Health Alterations I and 10543110 Nursing Mental Health Community Concepts and CONDITION: 105431 Nursing - Associate Degree enrollment reqs met

NSG: INTRO CLINICAL CARE 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), and flu vaccine. Course requires a minimum grade of "C" or better. CONDITION: 105431 Nursing - Associate Degree enrollment requirements met and COREQUISITE: 10543105 Nursing Health Alterations

NSG: INTRO CLINICAL PRACTICE...is an introductory clinical course that emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients across the lifespan. Emphasis is placed on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation, and medication administration. Student needs a current TB test, AHA CPR card (1 & 2 person, adult, infant, and child, AED), and flu vaccine. Student needs to be enrolled in the Nursing program. Course requires a minimum grade of "C" or better. CONDITION: 105431 Nursing-Associate Degree Enrollment Req Met and COREQUISITE: 10543101 Nursing Fund & 10543102 Nursing Skills & 10543103 Nursing Pharm

NSG: MENTAL HEALTH COMMUNITY CONCEPTS...cover topics related to the delivery of community and mental health care. Specific health needs of individuals, families, and groups will be addressed across the lifespan. Attention will be given to diverse and at-risk populations. Mental health concepts will concentrate on adaptive/maladaptive behaviors and specific mental health disorders. Community resources will be examined in relation to specific types of support offered to racial, ethnic, and economically diverse individuals and groups. Student must have completed all second semester courses. Course requires a minimum grade of "C" or better. PREREQ: 10543105 Nrsng Hlth Alt, 10543106 Nrsng Hlth Promo, 10543107 Clin Care Lifespan, 10543108 Intro Clin Care Mgt, and CONDITION: 105431 Nursing-Associate Degree enrollment req met

NSG: MANAGEMENT & PROFESSIONAL CONCEPTS...covers nursing management and professional issues related to the role of the registered nurse. Emphasis is placed on preparing for practice as a registered nurse. This course requires a minimum grade of "C" or better. PREREQUISITE: 10543109 Nrsng Complex Hlth Alterations 1 and 10543112 Nursing Advanced Skills and 10543110 Nrsng Mental Hlth Comm Concepts and 10543111 Nrsng Interm Clin Practice and CONDITION: Nursing-Associate Degree enrollment requirements met

NURSING ADVANCED SKILLS...focuses on the development of advanced clinical skills across the lifespan. Content includes advanced IV skills, blood product administration, chest tube systems, basic EKG interpretation and nasogastric/feeding tube insertion. This course requires a minimum grade of "C" or better. PREREQ: 10543105 Nrsng Hlth Alt, 10543106 Nrsng Hlth Promotion, 10543107 Clin Care Across Lifespan, 10543108 Intro Clin Care Mgmt, and CONDITION: 105431 Nursing-Associate Degree enrollment requirements met

NURSING CLINICAL TRANSITION...integrates all knowledge learned in the previous courses in transitioning to the role of the graduate nurse. The course promotes relatively independent clinical decisions, delegation, and works collaboratively with others to achieve client and organizational outcomes. Continued professional development is fostered. Student needs a current professional AHA CPR card, TB test, and flu vaccine. Student must have completed all third semester courses. Course requires a minimum grade of "C" or better. COREQUISITE: 10543115 Nrsng Advanced Clinical Practice and 10543114 Nursing Management Concepts and 10543113 Nursing Complex Health Alterations II and CONDITION: 105431 Nursing - Associate Degree enrollment requirements met

NURSING FUNDAMENTALS...focuses on basic nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients. This course requires a minimum grade of "C" or better. COREQUISITE: 10806177 or 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 Nrsng Fund and 10543102 Nrsng Skills and 10543103 Nrsng Pharm and 10543104 Nrsng: Intro to Clin Practice and CONDITION: 105431 Nursing-Associate Degree enrollment requirements met

NURSING HEALTH PROMOTION...focuses on topics related to health promotion in for individuals and families throughout the lifespan. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. Recognizing the spectrum of healthy families we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyle choices for individuals of all ages. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development. Course requires a minimum grade of "C" or better. PREREQ: 10543101 Nrsng Fundamentals, 10543102 Nrsng Skills, 10543103 Nrsng Pharmacology, 10543104 Nrsng Intro Clinical Prac, and CONDITION: 105431 Nrsng-Associate Degree enrollment requirements met

NURSING PHARMACOLOGY...introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis on the use of the components of the nursing process when administering medications. Student must be enrolled in the Nursing program. Course requires a min grade of "C" or better. Do not register for this class until you are assigned a clinical slot in 543-104 in current or next semester. CONDITION: 105431 Nursing-Associate Degree Enrollment Req Met and COREQ: 10806177 or 10806177OL or 10806177SA Gen Anat & Phys

NURSING SKILLS...focuses on development of evidence-based clinical skills and physical assessment across the lifespan. Content includes mathematical calculations and conversions related to clinical skills. In addition the course includes techniques related to obtaining a current health history and basic physical assessment skills using a body systems approach. Course requires a min grade of "C" or better. CONDITION: 105431 Nursing-Associate Degree Enrollment Req Met and COREQUISITE: 10806177 or 10806177OL or 10806177SA Gen Anat & Physiology

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

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

RELATED PROGRAMS

- Administrative Professional Associate Degree

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10103121	Excel - Level 1	1
10103161	PowerPoint - Level 1	1
10103191	Word - Level 1	1
10106101	Document Formatting	1
10106110	Records Management	2
10106107	Office Technology	2
10106132	Keyboard Speedbuilding	1
10801195	Written Communication	3
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
		15
Term 2		
10103101	Access - Level 1	1
10103122	Excel - Level 2	1
10103192	Word - Level 2	1
10106124	eCommunications	3
10106130	Office Professionalism	3
10106138	Web Technologies	2
10116129	Professional Career Search Techniques OR 10106106 Internship-Office Assistant	1
		12
		TOTAL 27

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



ACCESS - LEVEL 1...introduces students to the process of creating a database, building and populating a table, establishing table relationships, and creating queries, forms, and reports. This course is offered in a self-paced format.

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

ECOMMUNICATIONS...prepares the learner to apply proofreading skills -- punctuation, grammar, spelling, word usage, capitalization, number usage--to edit or compose error-free business documents; transcribe and correctly format business documents from dictation, dictate podcasts and other items; exposure to speech recognition functions; take and key meeting minutes; and facilitation of meetings. PREREQUISITE: 10106131 Document Formatting or 10106101 Document Formatting and 10103191 Word - Level 1 or equivalent

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

EXCEL - LEVEL 2...will explore Excel tables and charts, working with multiple worksheets and workbooks at once, creating applications and rules, protecting worksheets and workbooks and learning about macros and comments. This course is offered in a self-paced format. 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. This course is offered in a self-paced format.

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

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

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

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

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

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 Ophthalmic Medical Assistant program prepares students for employment in ophthalmic and optometric practices and in 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

- Eye exam required prior to Ophthalmic Pre-testing course (minimum of 12 months prior).
- Students must provide proof of First Aid certification and CPR certification before Ophthalmic Clinical Experience course.

CONTACT

LTC Career Coach
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10501101	Medical Terminology	3
31516306	Basic Ocular Science	3
		6
Term 2		
31509302	Human Body in Health & Disease OR 10530182 Human Diseases for Health Professions (3 cr)	3
31516302	Optical Dispensing	4
31516303	Optical Concepts	3
31516304	Ophthalmic Pre-Testing	4
		14
Term 3		
31501308	Pharmacology for Allied Health	2
31509309	Medical Law, Ethics and Professionalism	2
31516312	Contact Lenses	2
31516330	Ophthalmic Clinical Procedures Specialty Testing	4
31516343	Ophthalmic Clinical Experience	2
		12
		TOTAL 32

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



BASIC OCULAR SCIENCE...introduces learners to the structures, microscopic anatomy, and functional aspects of the eye and visual system. Clinical application emphasizes diseases, disorders and common treatments including pharmacological. CONDITION: 315164 Ophthalmic Medical Assistant program requirements met

CONTACT LENSES...provides the student in-depth exposure to the technical aspects of clinical contact lens practice. Lecture and laboratory experiences emphasize lens verification, patient education and evaluation. COREQUISITE: 31516343 Ophthalmic Clinical Experience and PREREQUISITE: 31516302 Optical Dispensing

HUMAN BODY IN HEALTH & DISEASE...students learn to recognize human body structure and function in health and disease states. Students explore the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis, and prevention of diseases commonly diagnosed and treated in the medical office setting. COREQUISITE: 10501101 Medical Terminology and Reading placement assessment equivalent

MEDICAL 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.

OPHTHALMIC CLINICAL EXPERIENCE...will have students participate in assigned clinical experience beginning with vision screenings on patients from the college and continues in an optometric, ophthalmology or optical setting. Class discussions are held analyzing the results of the screening as well as the students' performance. The student is expected to achieve specific educational objectives determined for this experience. PREREQUISITE: 31516302 Optical Dispensing and COREQUISITES: 31516312 Contact Lenses and 31516330 Ophthalmic Clinical Procedures Specialty Testing

OPHTHALMIC CLINICAL PROCEDURES SPECIALTY TESTING...provides the student experience and knowledge in areas of special vision care procedures: subjective refraction, visual field testing, slit lamp evaluation, Goldmann and non-contact tonometry, ultrasound, basic concepts of orthoptics, and the treatment of eye diseases, including instillation of eye medications and eye patching. Patient instruction and assistance are emphasized in laboratory sessions. COREQUISITE: 31516343 Ophthalmic Clinical Experience and PREREQUISITE: 31516302 Optical Dispensing

OPHTHALMIC PRE-TESTING...covers the history of optometry, relationships between optometry, ophthalmology and opticianary and various paraprofessional careers in vision care. The course involves the study of and practical experience in patient pre-testing such as case history, visual acuity, color vision, pupil evaluation, and depth perception as well as the specialized testing procedures such as keratometry and blood pressure measurement. COREQUISITE: 31516302 Optical Dispensing

OPTICAL CONCEPTS...begins the study of the neutralization and verification of spectacle lens powers, to include spherical, cylindrical and prism lenses. The properties of light and the function of a lens in vision correction as well as a review of basic math needed in vision care and the physiological aspects of vision. COREQUISITE: 31516302 Optical Dispensing

OPTICAL DISPENSING...introduces learners to frame definition, parts and types of frames, measurement of frames and lenses, alignment of frames, inserting and removing lenses, introduction to dispensing of eyewear and frame repairs. COREQUISITES: 31516303 Optical Concepts and 31516304 Ophthalmic Pre-Testing and 31516306 Basic Ocular Science and CONDITION: 315164 Ophthalmic Medical Assistant program requirements met

PHARMACOLOGY FOR ALLIED HEALTH...introduces students to medication classification, basic pharmacology principles, and supplements. Students apply basic pharmacodynamics to identify common medications and calculate dosages in preparation for medication administration. COREQUISITES: 31509302 Human Body in Hlth & Disease and 31509306 Medical Assist Clinical Proc 2

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

ABOUT THE PROGRAM

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 Paralegal Studies 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE 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 Paralegal program is approved by the American Bar Association.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10102160	Business Law 1	3
10103191	Word - Level 1	1
10110101	Introduction to Paralegalism and Legal Ethics	3
10110130	Real Estate Law - Paralegal	3
10801195	Written Communication	3
10809196	Introduction to Sociology OR 10809166 Introduction to Ethics	3
		16
Term 2		
10101155	Accounting for Professionals OR 10101111 Accounting 1 (4 cr)	3
10110102	Civil Litigation 1	3
10110104	Legal Research	3
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
10110160	Employment Law - Paralegal	3
		15
Term 3		
10110103	Civil Litigation 2	3
10110105	Legal Writing	3
10110132	Personal Branding-Paralegal	1
10110168	Criminal Law Paralegal	3
10809122	Introduction to American Government OR 10809195 Economics	3
10809198	Introduction to Psychology	3
		16
Term 4		
10110107	Legal Aspects of Business Organizations	3
10110114	Administration of Estates	3
10110143	Paralegal Internship OR 10110145 Paralegal Studies	2
10110106	Family Law	3
10806112	Principles of Sustainability OR 10804107 College Mathematics	3
		14
		TOTAL 61

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



ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQUISITE: 10804123 Math w Business Applications or CONDITION: 101101 Paralegal program requirements met

ADMINISTRATION OF ESTATES...provides the learner with the skills to assist attorneys to administer estates, differentiate between probate and nonprobate property, contrast various forms of marital property, gather appropriate factual and financial information, select and draft appropriate forms to open an estate, prepare an inventory, draft a final accounting and documents to close an estate, draft tax documents, prepare powers of attorney and simple wills, and assist in the valid execution of estate planning documents. PREREQUISITE: 10110101 Intro to Paralegalism

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

CIVIL LITIGATION 1...provides the learner with the skills to evaluate causes of action and defenses; conduct an initial client interview; perform an initial investigation; draft a summons and complaint, answer, counterclaim, cross complaint, motions and supporting documents, select appropriate discovery devices; draft interrogatories and responses; prepare for depositions; draft a Notice of deposition and Subpoenas; analyze fact patterns; and evaluate evidentiary objections. PREREQUISITE: 10110101 Intro to Paralegalism

CIVIL LITIGATION 2...provides the learner with the skill to evaluate and summarize depositions; evaluate evidentiary challenges; prepare a witness list; draft settlement documents; locate expert witnesses; prepare witnesses; prepare for presentation of evidence at trial; prepare a trial notebook; draft a Bill of Costs; prepare post trial motions; evaluate and research appellate issues. PREREQUISITE: 10110102 Civil Litigation

CRIMINAL LAW-PARALEGAL...provides the learner with the skills to analyze state and federal criminal procedures, determine if a search and arrest is in accordance with the Fourth Amendment, analyze the Miranda rules, draft a criminal summons and complaint, determine possible defenses for a defendant, draft motions, analyze a criminal complaint and jury instructions for required elements, create demonstrative evidence, create a trial notebook, conduct a client interview, and contrast prosecution and defense roles. PREREQUISITE: 10110101 Intro to Paralegalism

EMPLOYMENT LAW-PARALEGAL...provides the learner with the skills to analyze state and federal law governing employment relationships, job discrimination, sexual harassment, workplace privacy, labor standards and human resource management. PREREQUISITE: 10110101 Intro to Paralegalism

FAMILY LAW...provides the learner with the skills to conduct an initial client interview for a family law matter, including divorce and domestic violence; draft initial pleadings for divorce, financial family law documents, divorce discovery documents, and concluding documents in divorces; assess the need for post-divorce modification and enforcement; and outline factors involving child custody and support. PREREQUISITE: 10110101 Intro to Paralegalism

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

INTRODUCTION TO PARALEGALISM AND LEGAL ETHICS...introduces the learner to the paralegal profession, including civil, criminal, and administrative procedure; state and federal judicial systems; legal research; case briefing; ethical rules that apply to paralegals; law office software; and substantive civil law.

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

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

LEGAL ASPECTS OF BUSINESS ORGANIZATIONS...provides learners with the skills to analyze legal aspects of the formation, operation, and dissolution of sole proprietorships, partnerships, limited liability entities, and corporations; draft documents related to various business entities such as Certificates of Limited Partnership; Articles of Organization and Incorporation, Name Reservation Applications, Organizational Resolutions, Form SS-4 and 2553, Stock Certificates, Resolutions and Minutes, and Amendments and Articles of Dissolution. PREREQUISITE: 10110101 Intro to Paralegalism

LEGAL RESEARCH...provides the learner with the skills to differentiate between primary or secondary authority, locate statutes and constitutional provisions, locate case law, locate administrative regulations, locate secondary authority, use correct citation form, verify and update legal authority, formulate legal issues, use effective research strategies, evaluate solutions to legal problems, and use computer-assisted and internet legal research strategies. Some classes will be held off campus in a law library. PREREQUISITE: 10110101 Intro to Paralegalism

LEGAL WRITING...provides the learner with the skills to draft legal correspondence, operative legal documents, case briefs, and legal and office memoranda; analyze and synthesize legal authority; use correct citation form; draft a civil pleading, affidavit, trial brief, and appellate brief; and apply rules of civil procedure. PREREQUISITE: 10110104 Legal Research and 10801195 Written Comm or 10801195OL Written Comm Online

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

PARALEGAL INTERNSHIP...enhances the participant's ability to perform the duties of a paralegal; to seek and obtain employment as a paralegal; apply paralegal skills in an actual workplace setting; to perform legal research and writing; and understand law office systems and administration. Students are responsible for seeking and obtaining an internship position for a minimum of 144 hours in a legal environment under the supervision of an attorney or other qualified professional, completing an internship agreement and e-portfolio, 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 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Submit Wisconsin Emergency Medical Technician License.
- Complete Technical Standards form.
- Complete DMI (District Mutual Insurance) form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Career Coach 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 Career Coach
920.693.1162 • CareerCoach@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 HPS Lab 1	1
10531930	Paramedic Clinical I	1
		17
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 HPS Lab 2	1
		11
Term 2		
10531919	Medical Emergencies	4
10531921	Special Patient Populations	3
10531923	Paramedic Capstone	1
10531933	Paramedic HPS Lab 3	1
10531929	Paramedic Field Clinical	2
10531931	Paramedic Internship	1
		12
Term 3		
10804107	College Mathematics	3
10806177	General Anatomy & Physiology	4
10801195	Written Communication	3
10809198	Introduction to Psychology	3
		13
Term 4		
10806179	Advanced Anatomy & Physiology	4
10801196	Oral/Interpersonal Communication	3
		7
		TOTAL 60

To contact CoAEMSP:
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Rowlett, TX 75088
214-703-8445
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www.coaemsp.org

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



ADVANCED ANATOMY AND PHYSIOLOGY...is the second semester in a two-semester sequence in which normal human anatomy and physiology are studied using a body systems approach with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Instructional delivery within a classroom and laboratory setting. Experimentation within a science lab will include analysis of cellular metabolism, the individual components of body systems such as the nervous, neuro-muscular, cardiovascular, and urinary. Continued examination of homeostatic mechanisms and their relationship to fluid, electrolyte, acid-base balance and blood. Integration of genetics to human reproduction and development are also included in this course. PREREQUISITE: 10806177 Gen Anatomy & Physiology or equiv and Reading placement assessment 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 Param Tech or 315311 EMT Param or 105312 Fire Medic prog reqs met & COREQ: 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 Tech or 315311 EMT Paramedic or 105312 Fire Medic prog reqs met and COREQUISITE: 10531913 Adv Patient Assessment Prin

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 equiv

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

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 reqs met and COREQUISITE: 10531918 Adv Emergency Resuscitation

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

PARAMEDIC CAPSTONE...provides the final opportunity to incorporate knowledge and skills through labs and scenario-based practice and evaluations prior to taking the NREMT written and practical exams. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531922 EMS Operations

PARAMEDIC CARDIOLOGY 1...provides the principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and a plan for a patient with a cardiovascular complaint. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic program requirements met and COREQUISITE: 10531915 Paramedic Respiratory Management

PARAMEDIC CARDIOLOGY 2...continues the paramedic's knowledge of cardiology. Incorporates basic and advanced electrocardiogram rhythm interpretation as well as introduces students to Advanced Cardiovascular Life Support (ACLS).

PARAMEDIC CLINICAL 1...allows paramedics their first experiences providing advanced level skills and assessments on patients in a healthcare setting. Students will be assigned to an area hospital to begin their clinical training and meeting their assigned clinical competencies. Activities may include rotations within hospital emergency departments, operating rooms, intensive care units, and/or rotations with lab or respiratory staff. COREQUISITE: 10531911 EMS Fundamentals and CONDITION: 15311 Paramedic Technician or 105312 Fire Medic or 315311 EMT Paramedic program admission requirements met

PARAMEDIC CLINICAL 2...provides student with the opportunity to enhance their learning through the skills practice in a health care environment experience with actual patients under the supervision of approved preceptors or high-fidelity human patient simulator. CONDITION: 105311 Paramedic Technician or 315311 EMT Paramedic or 105312 Fire Medic Program Requirements Met and COREQUISITE: 10531930 Paramedic Clinical 1

PARAMEDIC 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 HPS LAB 3...provides instruction for continued growth for paramedic students towards mastery in patient assessment, treatment, team management, and ambulance operations during this capstone Human Patient Simulation experience. Paramedic Human Patient Simulation Lab 1...reinforces student learning through the practice of paramedicine in a controlled environment utilizing high-fidelity human patient simulators and realistic emergency response scenarios with support and guidance of instructors. The student will apply assessment knowledge and demonstrate paramedic level skills in a variety of emergency response scenarios and environments.

PARAMEDIC HUMAN PATIENT SIMULATION LAB 2...reinforces student learning through the practice of paramedicine in a controlled environment utilizing high-fidelity human patient simulators and realistic emergency response scenarios with support and guidance of instructors. The student will evaluate patient presentations, formulate treatment plans, reassess interventions, and implement corrective actions by integrating pathophysiological principles and assessment findings. CONDITION: 105311 Paramedic Technician or 105312 Fire Medic or 315311 EMT Paramedic program admission reqs met

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 and COREQUISITE: 10531919 Paramedic Medical Emergencies

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 Rdg & Study Skills or Reading placement assessment equivalent

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 work place. Pharmacy Technicians are able to provide a wide range of duties in the pharmacy, and will enhance their technical skills through additional knowledge in third party payment processing and related reimbursement issues, staff scheduling processes, customer service, and enhancing store sales. Marketing, management, and business operations are also introduced in this degree. The program culminates in a capstone course that provides the student with the opportunity to apply their education to a real-life situation through increasing store sales, creating efficient operations, improving management practices, or enhancing service to patients. Graduates will find positions as Senior Pharmacy Technicians, Assistant Store Managers, Trainers, Pharmacy Technician Managers, and many related positions in hospital or retail pharmacies or related organizations.

PROGRAM OUTCOMES

- Perform all pharmacy technician functions.
- Incorporate into practice professional ethics, laws, regulations, and policies established by the licensing state and regulatory agencies (Pharmacy Examining Board, FDA, DEA).
- Pursue lifelong professional growth and development through self-directed learning, participation in professional organizations, and continuing education.
- Maintain an awareness of developments in the pharmacy and management fields as they relate to job responsibilities.
- Manage human resources and employee development.
- Resolve conflict and build teams.
- Implement a mission and goals.
- Demonstrate critical thinking and problem solving skills.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Complete Pharmacy Technician Program Handbook form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your 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		
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
10809198	Introduction to Psychology	3
10536143	Pharmacy Hospital Clinical OR 10536142	2
	Pharmacy Community Clinical-Adv (2 cr)	
10536141	Pharmacy Computer Lab	2
10536138	Pharmacy Community Clinical	2
		17
Term 3		
10104102	Principles of Marketing OR 10182108	3
	Purchasing	
10801195	Written Communication OR 10801141	3
	Introduction to Mass Communications OR	
	10801136 English Composition 1	
10806112	Principles of Sustainability	3
10809195	Economics	3
10103121	Excel - Level 1	1
		13
Term 4		
10182102	Service Operations Management OR	3
	10102110 Introduction to Business (3 cr)	
10196191	Supervision	3
10536150	Advanced Pharmacy Services Applications	3
10809166	Introduction to Ethics: Theory & Application	
	OR 10809172 Introduction to Diversity	
	Studies (3 cr)	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 2020-2021 rates and are subject to change prior to the start of the academic year.

ADVANCED PHARMACY SERVICES APPLICATIONS...allows the learner to integrate skills learned in the Pharmacy Services Management courses and apply them to the pharmacy workplace. Areas include staff training, development, supervision, and scheduling; customer service; PBM processing and claims rejection management; and improving efficiency of operations, maximizing profits, and increasing sales. PREREQUISITE: All courses in the Associate Degree plan need to be completed prior to this course. PREREQUISITES: 10536143 Pharmacy Hospital Clinical and 10536138 Pharmacy Community Clinical and CONDITION: 105361 Pharmacy Services Mng

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

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

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

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

INTRODUCTION TO ETHICS: THEORY AND APPLICATION...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

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

MARKETING, PRINCIPLES OF...introduces the student to the consumer decision process model, the bases used to segment a market, basic concepts about goods, services, and ideas, the nature of supply chain and distribution, integrated marketing communications, and the stages of the product life cycle and their impact on the marketing mix.

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, alligations, 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. PREREQ: 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 data bases, 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 Rdg & Study Skills or Reading placement assessment equivalent

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

ABOUT THE PROGRAM

If you're 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're 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete health requirements.
- Complete Pharmacy Technician Program Handbook form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Career Coach 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'll attend live, interactive TV classes sent from LTC to your local technical college; receive laboratory training in local pharmacies; participate in real-world, hands-on training during a 16-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.

RELATED PROGRAMS

- Pharmacy Services Management Associate Degree

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10501101	Medical Terminology	3
10501102	Health Insurance and Reimbursement	3
10536110	Pharmaceutical Calculations	3
10536113	Pharmacy Business Applications	3
10536115	Pharmacy Law	2
10536120	Fundamentals of Reading Prescriptions	1
10536122	Pharmacology	3
		18
Term 2		
10536125	Pharmacy Drug Distribution Systems	2
10536126	Pharmacy Parenteral Admixtures	3
10801196	Oral/Interpersonal Communication	3
10536143	Pharmacy Hospital Clinical OR 10536142 Pharmacy Community Clinical-Adv (2 cr)	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 2020-2021 rates and are subject to change prior to the start of the academic year.



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

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

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

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, alligations, 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. PREREQ: 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 data bases, 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

**Program Number 50-427-5
5-Year Contract**

**Work Hours (including related instruction): 8000
Related Instruction Hours: 572 • Night School Hours: 260**

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

Imagine a home or business without a plumbing system—drinking a cool glass of water, cooking, and showering would be an inconvenience at best. Plumbing systems and those who install, repair, and maintain them are critical to the building process. The Plumbing Apprenticeship program is an employer-sponsored, hands-on training program under the direction of a master plumber. If you're looking for a specialized career that's always in demand, becoming a journey-level plumber is an excellent choice.

CAREERS

Graduates of LTC's Plumbing Apprenticeship program are required to take and pass the journey-level license exam provided by the Department of Commerce before working as journey-level or master plumbers in a variety of residential or commercial settings.

CONSTRUCTION APPRENTICE APPLICATION REQUIREMENTS

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

PROGRAM OUTCOMES

- Apply state plumbing code requirements to the installation and repair of sanitary drain systems.
- Apply state plumbing code requirements to the installation and repair of venting systems.
- Apply state plumbing code requirements to the installation and repair of water supply systems.
- Apply state plumbing code requirements to the installation and repair of storm drain systems.
- Apply state plumbing code requirements to the installation and repair of POWTS systems.
- Refer to the Wisconsin Administrative Plumbing codes.
- Prepare for Journey level licensure examination

APPROXIMATE COSTS

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

MINIMUM PLACEMENT SCORES

Accuplacer: Arithmetic-237, Reading-239, QAS-216
ACT: Mathematics-15, Reading-16

SPECIAL NOTE

Upon completion of the apprentice application 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. Apprentices registered by the Lake to Lake Plumbing Committee will attend paid-related instruction at Fox Valley Technical College.

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		
50427751	Sanitary Drains 1	2
Term 2		
50427752	Vents and Venting Systems	2
Term 3		
50427753	Water Distribution 1	2
Term 4		
50427754	Water Distribution 2	2
Term 5		
50427755	Sanitary Drains 2	2
Term 6		
50427756	Private Onsite Wastewater Treatment Systems (POWTS)	2
Term 7		
50427757	Green Plumbing Applications	2
Term 8		
50427758	Plumbing Advanced Topics	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 2019-2020 rates and are subject to change prior to the start of the academic year.



GREEN PLUMBING APPLICATIONS...provides plumbing apprentices with an introduction to green applications and prepares students to take certification exams. Union Programs: UA Green Awareness Certification (geared toward journey workers, not apprenticeship); WTCS Programs: Green Plumbers USA Certification Program. Learning materials from both certificate programs have been incorporated into the development of this course as appropriate. CONDITION: 504275 Plumbing Apprentice requirements met

PLUMBING ADVANCED TOPICS...provides the apprentice with the opportunity to select and complete an applied plumbing project in collaboration with the instructor. Projects will apply the skills required to identify, design, install, and service various plumbing applications that are listed in plumbing codes. Apprentices will use the code language and tables in accordance with the Wisconsin Plumbing Code. This course builds upon the theory, work experience, and the application of plumbing code principles. CONDITION: 504275 Plumbing Apprentice requirements met

PRIVATE ONSITE WASTEWATER TREATMENT SYSTEM...provides the apprentice with the skills to identify, design, install, and service various applications for private onsite wastewater treatment systems that are listed in plumbing codes or individual component manuals. Apprentices will use the code language and tables in various plumbing systems in accordance with the Wisconsin Plumbing Code. Other topics include pretreatment, soil evaluation, site planning, and new technologies. CONDITION: 504275 Plumbing Apprentice requirements met

SANITARY DRAINS 1...provides plumbing-related instruction of sanitary drain systems. Course includes a review of codes and trade practices related to sanitary drains and drainage. CONDITION: 504275 Plumbing Apprentice requirements met

SANITARY DRAINS 2...provides the apprentice with the skills to identify, design, install, and service various applications for storm water, clear water, and drainage systems. Apprentices will use the code language and tables in various plumbing systems in accordance with the Wisconsin Plumbing Code. The course focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations. CONDITION: 504275 Plumbing Apprentice requirements met

VENTS AND VENTING SYSTEMS...is designed to provide the apprentice with the skills to identify and design sanitary vent piping in a plumbing system in accordance with the Wisconsin Plumbing Code. This course focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations. CONDITION: 504275 Plumbing Apprentice reqs met

WATER DISTRIBUTION 1...provides the apprentice with the skills to identify, design, install and service various applications for water supply systems that are listed in plumbing codes. Apprentices will use the code language and tables in various plumbing systems in accordance with the Wisconsin Plumbing Code. Course topics include commercial to single family and private well pump systems. The course focuses on theory, work experience, and the application of plumbing code principles through discussion. CONDITION: 504275 Plumbing Apprentice requirements met

WATER DISTRIBUTION 2...provides the apprentice with the skills to identify, design, install and service cross-connection controls, water treatment equipment, and multipurpose piping systems in accordance with the Wisconsin Plumbing Code. The course focuses on theory, work experience, and the application of plumbing code principles through discussions, drawing exercises, work sheets, and evaluations. CONDITION: 504275 Plumbing Apprentice requirements met

**Program Number 31-543-1
 Technical Diploma**

ABOUT THE PROGRAM

If you're ill or injured, it's comforting to know you're in the care of highly skilled, well-educated healthcare professionals. If you work well under pressure; like math, science, communications, and problem solving; are independent; and have a strong desire to work with and help people—a career as a practical nurse may be the choice for you.

PROGRAM OUTCOMES

- Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving identity as a nurse committed to caring, advocacy, and quality care while adhering to evidence-based practice.
- Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts.
- Integrate knowledge of social, mathematical, and physical sciences, pharmacology, and disease processes while participating in clinical decision making.
- Provide patient centered care under supervision by participating in the nursing process across diverse populations and health care settings.
- Minimize risk of harm to patients, members of the health care team, and self through safe individual performance and participation in system effectiveness.
- Collaborate as an active member of the multidisciplinary health care team to provide effective patient care throughout the lifespan.
- Use information and technology to communicate, manage data, mitigate error, and support decision making.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

LTC credits transfer to over 30 universities. For more information visit gotltc.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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete and submit Technical Standards form.
- Read the Nursing Program Handbook and submit the signed signature page.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

PROGRAM READY TO DO'S

- Pass HESI (Health Occupations Entrance assessment) with a 70% or higher.
- Complete and submit health form.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

- Nursing Assistant skills must be attained within one semester prior to starting clinicals.
- CPR BLS Healthcare Provider certification is required prior to starting clinicals.
- Classes may run 3 to 4 evenings per week and some Saturdays.
- In order to facilitate the evening hours, the theory classes will extend to a 17 week semester in the final term of the program.
- This program has been approved by the Wisconsin Board of Nursing.
- LTC's Practical Nursing program is accredited by the Accreditation Commission for Education in Nursing, 3343 Peachtree Road N.E., Suite 850, Atlanta, Georgia 30326, 404-975-5000 Fax 404-975-5020. www.acenursing.org

CONTACT

LTC Career Coach
 920.693.1162 • CareerCoach@gotltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall)		
10809188	Developmental Psychology	3
10801195	Written Communication	3
6		
Term 2 (Spring)		
10806103	Body Structure and Function OR 31509302 Human Body in Health and Disease OR 10806177 General Anatomy & Physiology (4 cr)	3
10801196	Oral/Interpersonal Communications	3
6		
Term 3 (Summer)		
31543301	Nursing Fundamentals	2
2		
Term 4 (Fall)		
31543302	Nursing Skills	3
31543303	Nursing Pharmacology	2
31543304	Nsg: Intro Clinical Practice	2
7		
Term 5 (Spring)		
31543305	Nursing Health Alterations*	3
31543306	Nursing Health Promotions*	3
31543307	Nsg: Clinical Care Across Lifespan	2
31543308	Nsg: Intro Clinical Care Management	2
10		

TOTAL 31

*Begins prior to start of semester.

Lakeshore Technical College's Practical Nursing program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examination, or licensure for other states.

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

BODY STRUCTURE AND FUNCTION...introduces the learner to the structures and functions of the integumentary, musculoskeletal, nervous, sensory, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

DEVELOPMENTAL PSYCHOLOGY...introduces the student to the study of human development throughout the lifespan. This course explores developmental theory and research with an emphasis on the interactive nature of the biological, cognitive, and psychosocial changes that affect the individual from conception to death. Application activities and critical thinking skills will enable students to gain an increased knowledge and understanding of themselves and others. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

NSG: CLINICAL CARE ACROSS LIFESPAN...applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized. Student must have completed all first semester and general education courses. Student needs a current TB test, flu vaccine, and professional AHA CPR card (1 and 2 person, adult, infant, and child, AED). Course requires a minimum grade of "C" or better. Some Saturday hours are required. COREQUISITE: 31543306 Nursing Health Promotion and CONDITION: 315431 Practical Nursing admission requirements met

NSG: INTRO CLINICAL CARE MANAGEMENT...applies nursing concepts and therapeutic nursing interventions to groups of clients across the lifespan. It also provides an introduction to leadership, management, and teambuilding. Student must have completed all first semester and general education courses. Student needs a current TB test, flu vaccine, and professional AHA CPR card (1 and 2 person, adult, infant, and child, AED). Course requires a minimum grade of "C" or better. COREQUISITE: 31543305 Nursing Health Alterations and CONDITION: 315431 Practical Nursing admission requirements met

NSG: INTRO CLINICAL PRACTICE...is an introductory clinical course that emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients across the lifespan. Emphasis is placed on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation, and medication administration. Student needs a current TB test, flu vaccine, and professional AHA CPR card (1 and 2 person, adult, infant, and child, AED). Student needs to be admitted to the Practical Nursing program. Course requires a minimum grade of "C" or better. CONDITION: 315431 Practical Nursing Admissions Requirements Met; and COREQUISITE: 31543301 Nursing Fundamentals and 31543302 Nursing Skills and 31543303 Nursing Pharmacology

NURSING FUNDAMENTALS...focuses on basic nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients. This course requires a minimum grade of "C" or better. PREREQUISITES: 10806103 Body Struc Func or 10806177 Gen Anatomy and Phys or 31509302 Human Body in Health & Disease, 10809188 Develop Psych, 10801196 Oral Interpersonal Comm, and 10801195 Written Comm and CONDITION: 315431 Practical Nursing Admission Requirements Met.

NURSING HEALTH ALTERATIONS...elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of clients through the lifespan, utilizing problem solving and critical thinking. This course will provide an opportunity to study conditions affecting different body systems and apply evidence-based nursing interventions. It will also introduce concepts of leadership and management. Course requires a minimum grade of "C" or better. PREREQUISITES: 31543301 Nursing Fundamentals and 31543302 Nursing Skills and 31543304 Nursing: Intro to Clinical Practice and CONDITION: 315431 Practical Nursing admission requirements met

NURSING HEALTH PROMOTION...focuses on topics related to health promotion for individuals and families throughout the lifespan. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. Recognizing the spectrum of healthy families we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyle choices for individuals of all ages. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development. Course requires a minimum grade of "C" or better. PREREQUISITES: 31543301 Nursing Fundamentals, 31543303 Nursing Pharmacology, and 31543304 Nursing: Intro to Clinical Practice and CONDITION: 315431 Practical Nursing admission requirements met

NURSING PHARMACOLOGY...introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications. Student must be admitted to the Practical Nursing program. Course requires a minimum grade of "C" or better. Do not register for this class until you are assigned a clinical slot in 543-304 in current or next semester. PREREQUISITES: 10806103 Body Struc Func or 10806177 Gen Anatomy and Phys or 31509302 Human Body in Health & Disease, 10809188 Develop Psych, 10801196 Oral Interpersonal Comm, and 10801195 Written Comm and CONDITION: 315431 Practical Nursing Admission Requirements Met

NURSING SKILLS...focuses on development of evidence-based clinical skills and physical assessment across the lifespan. Content includes mathematical calculations and conversions related to clinical skills. In addition the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach. This course requires a minimum grade of "C" or better. PREREQUISITES: 10806103 Body Struc Func or 10806177 Gen Anatomy and Phys or 31509302 Human Body inHealth & Disease, 10809188 Develop Psych, 10801196 Oral Interpersonal Comm, and 10801195 Written Comm and CONDITION: 315431 Practical Nursing Admission Requirements Met

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

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

ABOUT THE PROGRAM

Quality Assurance is a program for the systematic monitoring and evaluation of the various aspects of a project, service, or facility to ensure that standards of quality are being met. In simple business terms, quality assurance is the difference between success and failure. If you believe in the idea of “quality in, quality out,” and you want to play a vital role in helping an organization achieve success through quality, LTC’s Quality Assurance Technician program is the way to realize your goal.

PROGRAM OUTCOMES

- Define the operations of a business across functional areas.
- Measure the current state of an organization’s quality system.
- Analyze data and processes to meet organizational goals.
- Improve the quality system and processes.
- Control business processes.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

CONTACT

LTC Career Coach
 920.693.1162 • CareerCoach@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 OR 10801136 English Composition 1	3
10809198	Introduction to Psychology OR 10809188 Developmental Psychology	3
		17
Term 2		
10809166	Introduction to Ethics OR 10806112 Principles of Sustainability	3
10801198	Speech OR 10801196 Oral/Interpersonal Communication	3
10804123	Math with Business Applications	3
10623193	ISO 9001 Internal Auditor OR 10623195 ISO 9001 Concepts	3
10809195	Economics	3
		15
Term 3		
10101155	Accounting for Professionals	3
10105128	Personal Branding	2
10196188	Project Management	3
10623110	Lean Six Sigma - Measure and Analyze	4
10623111	Lean Sigma Tools - Improve & Control	4
		16
Term 4		
10182102	Service Operations Management	3
10623112	Lean Six Sigma - Implementation	3
10623114	Lean Six Sigma Tools - 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 2020-2021 rates and are subject to change prior to the start of the academic year.

ACCOUNTING FOR PROFESSIONALS...study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQ: 10804123 Math wBus Apps or CONDITION: 101101 Paralegal prog 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 participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQ: 10838105 Intro Reading & Study Skills or Reading placement asmt equiv or CONDITION: 610062 Agribusiness/Financial Basic prog adms met

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

INTRODUCTION TO ETHICS: THEORY AND APPLICATION...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. COREQ: 10838105 Intro Reading & Study Skills or Reading placement 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: Reading placement asmt equiv or COREQ: 10838105 Intro to Reading & Study Skills

ISO 9001 INTERNAL AUDITOR...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. 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. PREREQ: 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. MiniTab skill expansion is included. 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. MiniTab introduction is included.

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). Advanced lean tools are explored including 3P, Jidoka, and Heijunka. 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 Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

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

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

QUALITY CONCEPTS...provides an overview of quality systems, methods and analysis 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 ISO 9000 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.

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 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2020)		
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 2021)		
10623193	ISO 9001 Internal Auditor OR 10623195 ISO 9001 Concepts	3
10623101	Quality Concepts	3
10809198	Introduction to Psychology	3
10623110	Lean Six Sigma - Measure and Analyze	4
		13
Term 3 (Summer 2021)		
10801195	Written Communication	3
10623111	Lean Six Sigma - Improve and Control	4
		7
Term 4 (Fall 2021)		
10623112	Lean Six Sigma - Implementation	3
10809166	Introduction to Ethics OR 10809112 Principles of Sustainability	3
10623114	Lean Six Sigma Tools - Black Belt	4
10101155	Accounting for Professionals	3
		13
Term 5 (Spring 2022)		
10623123	Blueprint Reading and Metrology	3
10105128	Personal Branding	2
10196188	Project Management	3
10182102	Service Operations Management	3
		11
Term 6 (Summer 2022)		
10801196	Oral/Interpersonal Communications	3
		3
		TOTAL 61

ACCOUNTING FOR PROFESSIONALS...study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQ: 10804123 Math wBus Apps or CONDITION: 101101 Paralegal prog 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 participant with an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems. growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. COREQ: 10838105 Intro Reading & Study Skills or Reading placement assessment equiv or CONDITION: 610062 Agribusiness/Financial Basic prog adms met

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

INTRODUCTION TO ETHICS: THEORY AND APPLICATION...provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations. COREQ: 10838105 Intro Reading & Study Skills or Reading placement 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: Reading placement assmt equiv or COREQ: 10838105 Intro to Reading & Study Skills

ISO 9001 INTERNAL AUDITOR...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. 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. PREREQ: 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. MiniTab skill expansion is included. 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. MiniTab introduction is included.

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). Advanced lean tools are explored including 3P, Jidoka, and Heijunka. 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 Reading and Study Skills or Reading placement assessment equivalent or CONDITION: 610061 Agribusiness/Agronomy Basic program admissions requirements met

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

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

QUALITY CONCEPTS...provides an overview of quality systems, methods and analysis 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 ISO 9000 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.

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 materialplanning 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 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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

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 Career Coach
920.693.1162 • CareerCoach@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 2020-2021 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 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. 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. MiniTab skill expansion is included. 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. MiniTab introduction is included.

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 ISO 9000 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.

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

ABOUT THE PROGRAM

Radiation safety in today's healthcare, energy, manufacturing, defense, and pharmaceutical research fields depends on qualified experts to perform technical duties in areas using radioisotopes. These radiation safety/health physics experts play a vital role in the health, safety, and well-being of their coworkers, patients, the public, and the environment. If you have a strong interest in science, thrive on precision, are attentive to details, have the ability to follow exact instructions, and are comfortable working with technology and people, becoming a radiation safety technician is an ideal way to maximize your talents. This program is an excellent springboard for a four-year degree in the high-demand field of health physics.

PROGRAM OUTCOMES

- Provide radiological safety in the workplace.
- Understand the natural laws of ionizing radiation.
- Maintain control over radioactive materials in compliance with regulatory requirements and accepted industry practices.
- Perform surveys to detect contamination, radiation safety, radiation levels, and assess hazards.
- Mitigate hazards associated with the use of radioactive materials and devices that produce ionizing radiation.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

- Classes are offered at LTC's main campus with videoconferencing to NWTC's Green Bay Campus and BTC's Milton campus.
- Gaining employment in the radiation safety and health physics field likely includes a very comprehensive background check of one's lifespan. This includes not only criminal activities, but likely also civil actions.
- ONLINE OPTION: Available to working adults in the Radiation Safety/Health Physics industry. To register for online courses, search for the catalog numbers and the online option. Online courses have prerequisites. Online students work with their industry supervisor to identify suitable activities at their worksite to enhance their learning.

CONTACT

Don Geiger, Advisor
 920.693.1378 • donald.geiger@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10624105	Health Physics Calculations and Statistics	3
10624110	Radioactivity and Regulations	3
10804113	College Technical Mathematics 1A	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
10624145	Applied Health Physics	3
10624146	Applied Health Physics Lab OR 10624156 Radiation Safety Internship	2
10482135	Energy Power and Force OR 10806154 General Physics 1 (4 cr)	3
10809198	Introduction to Psychology	3
		13
Term 4		
10529150	Hazardous Waste Site Worker 40-Hour Training*	2
10624140	Radiochemistry	3
10624144	Environmental HP & Decommissioning	3
10624133	Radiological Emergencies	3
10624134	Radiation Shielding	2
10624135	Radiation Shielding Lab	1
		14

TOTAL 60

* This class is offered in a two-week-long in-person seminar format outside of the traditional semester and is not available online. However, online students who have completed this 40-hour training may provide their transcript to their program advisor for these credits.

Most classes in this program have prerequisites.

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



APPLIED HEALTH PHYSICS...prepares 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. PRERQUISITES: 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.

ENVIRONMENTAL HP AND DECOMMISSIONING...prepares the student to deal with issues associated with the environmental radiation, radiation accidents, environmental restoration, clean-up remediation, facility decommissioning, decontamination and the introduction of MARSSIM. PREREQUISITES: 10624138 Radioactive Materials Management, 10624133 Radiological Emergencies, and 10624134 Radiation Shielding.

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

HAZARDOUS WASTE SITE WORKER...provides training to respond to a hazardous material incident both in an industrial setting and field setting. Student will receive hazardous waste site worker certificate upon successful completion of the class.

HEALTH PHYSICS CALCULATIONS AND STATISTICS...prepares the learner to solve linear and exponential equations, logarithms, plot graphs, determine counting statistics and instrument reliability, and work with geometry and trigonometry problems. COREQUISITE: 10624110 Radioactivity and Regulations.

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

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

NUCLEAR DC AND AC APPLICATIONS...prepares nuclear, radiation safety, and health physics learners to apply direct current (DC) and alternating current (AC) concepts and laws; perform calculations to identify basic electrical terms, symbols, units; etc.; to apply the electrical laws (such as, Ohm's law, Kirchhoff's voltage and current laws); to analyze DC/AC electronic circuit, power, etc.; to analyze AC waveform (including single-phase versus three-phase), batteries, chargers, etc. PREREQUISITE: 10624105 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 and Sources, 10624122 Rad Physics, 10624123 Rad Phys-Lab, and 10804113 College Tech Math 1A

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

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

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

RADIATION SAFETY/HEALTH PHYSICS

Program Number 10-624-2 Associate Degree in Applied Science

ABOUT THE PROGRAM

Radiation safety in today's healthcare, energy, manufacturing, defense, and pharmaceutical research fields depends on qualified experts to perform technical duties in areas using radioisotopes. These radiation safety/health physics experts play a vital role in the health, safety, and well-being of their coworkers, patients, the public, and the environment. If you have a strong interest in science, thrive on precision, are attentive to details, have the ability to follow exact instructions, and are comfortable working with technology and people, becoming a radiation safety technician is an ideal way to maximize your talents. This program is an excellent springboard for a four-year degree in the high-demand field of health physics.

PROGRAM OUTCOMES

- Provide radiological safety in the workplace.
- Understand the natural laws of ionizing radiation.
- Maintain control over radioactive materials in compliance with regulatory requirements and accepted industry practices.
- Perform surveys to detect contamination, radiation safety, radiation levels, and assess hazards.
- Mitigate hazards associated with the use of radioactive materials and devices that produce ionizing radiation.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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APPROXIMATE COSTS

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FINANCIAL AID

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SPECIAL NOTE

- Classes are offered at LTC's main campus with videoconferencing to NWTC's Green Bay Campus and BTC's Milton campus.
- Gaining employment in the radiation safety and health physics field likely includes a very comprehensive background check of one's lifespan. This includes not only criminal activities, but likely also civil actions.
- ONLINE OPTION: Available to working adults in the Radiation Safety/Health Physics industry. To register for online courses, search for the catalog numbers and the online option. Online courses have prerequisites. Online students work with their industry supervisor to identify suitable activities at their worksite to enhance their learning.

CONTACT

Don Geiger, Advisor
920.693.1378 • donald.geiger@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2020)		
10801195	Written Communication	3
10804113	College Technical Mathematics 1A	3
6		
Term 2 (Spring 2021)		
10801196	Oral/Interpersonal Communications	3
10809122	Introduction to American Government	3
6		
Term 3 (Fall 2021)		
10624105	Health Physics Calculations and Statistics	3
10624110	Radioactivity and Regulations	3
6		
Term 4 (Spring 2022)		
10624114	Nuclear Systems and Sources	3
10624122	Radiation Physics	3
10624123	Radiation Physics - Lab	2
8		
Term 5 (Fall 2022)		
10103121	Excel - Level 1	1
10482135	Energy Power and Force	3
10624138	Radioactive Materials Management	2
6		
Term 6 (Spring 2023)		
10624-103	Nuclear DC and AC Applications	3
10624-140	Radiochemistry	3
10624-133	Radiological Emergencies	3
9		
Term 7 (Summer 2023) (Nights)		
10624-118	Radiation Biology	3
3		
Term 8 (Fall 2023)		
10624145	Applied Health Physics	3
10624146	Applied Health Physics Lab	2
10809198	Introduction to Psychology	3
8		
Term 9 (Spring 2024)		
10529150	Hazardous Waste Site Worker-40 Hr Training*	2
10624144	Environmental HP & Decommissioning	3
10624134	Radiation Shielding	2
10624135	Radiation Shielding Lab	1
8		
		TOTAL 60

* This class is offered in a two-week-long in-person seminar format outside of the traditional semester and is not available online. However, online students who have completed this 40-hour training may provide their transcript to their program advisor for these credits.

Most classes in this program have prerequisites.

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. PRERQUISITES: 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

ENERGY POWER AND FORCE...studies the laws and theories of electric power generation that govern motion and how to apply them to a range of concepts including rotational inertia, acceleration, velocity, lift, force, torque, etc. Studies the law of Conservation of Energy and basic atomic theory and how these concepts apply to electric power generation. The use and function of simple machines, and how they relate to electric power generator function, is also explored.

ENVIRONMENTAL HP AND DECOMMISSIONING...prepares the student to deal with issues associated with the environmental radiation, radiation accidents, environmental restoration, clean-up remediation, facility decommissioning, decontamination and the introduction of MARSSIM. PREREQUISITES: 10624138 Radioactive Materials Management, 10624133 Radiological Emergencies, and 10624134 Radiation Shielding.

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

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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

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 and Sources, 10624122 Rad Physics, 10624123 Rad Phys-Lab, and 10804113 College Tech Math 1A

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

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

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 10-526-1 Associate Degree in Applied Science • Six Terms

ABOUT THE PROGRAM

Radiography prepares individuals for a career in diagnostic radiology (x-ray) as a radiographer. The radiographer is a technologist who produces images of the human body to aid physicians in the diagnosis of injuries and diseases. Graduates of the program are eligible to take the entry-level certification examination administered by the American Registry of Radiography Technologists (ARRT) and may obtain employment in x-ray departments associated with hospitals, medical clinics, veterinary clinics, and private offices.

Program curriculum focuses on theoretical and applied radiography and includes a clinical experience in a radiographic department. The program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). Students learn to use x-ray imaging machines to demonstrate body parts on x-ray films for diagnostic purposes, including diagnostic radiology, bedside and trauma procedures, pediatric radiography, and special procedures.

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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete background check and \$20 processing fee.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

PROGRAM READY TO DO'S

- Complete health requirements.
- Complete 4 hours of clinical observation and submit form.
- Complete CPR BLS Healthcare Provider certification.
- Complete CNA course within the past 10 years prior to clinical start or be on current registry.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

- LTC offers its Radiography program in cooperation with Nicolet Technical College. As a radiography student, you'll attend live or interactive TV classes and take general studies classes at your local technical college.
- LTC's Radiography program is accredited by The Joint Review Committee on Education in Radiologic Technology, 20 North Wacker Drive, Suite 2850, Chicago, Illinois 60606-3182. Phone: 1.312.704.5300.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
10806177	General Anatomy and Physiology	4
Term 1		
10526149	Radiographic Procedures 1	5
10526158	Introduction to Radiography	3
10526159	Radiographic Imaging	3
10526168	Radiography Clinical 1	2
		13
Term 2 (Summer)		
10526192	Radiography Clinical 2	3
10804107	College Mathematics	3
		6
Term 3		
10526230	Advanced Radiographic Imaging	2
10526191	Radiographic Procedures 2	5
10526193	Radiography Clinical 3	3
10801196	Oral/Interpersonal Communication	3
		13
Term 4		
10526194	Imaging Equipment Operation	3
10526231	Imaging Modalities	2
10526199	Radiography Clinical 4	3
10526189	Radiographic Pathology	1
10809198	Introduction to Psychology	3
		12
Term 5 (Summer)		
10526190	Radiography Clinical 5	2
10801195	Written Communication	3
		5
Term 6		
10526174	ARRT Certification Seminar	2
10526195	Radiographic Image Analysis	2
10526197	Radiation Protection & Biology	3
10526198	Radiography Clinical 6	2
10809196	Introduction to Sociology	3
		12
		TOTAL 65

Prerequisites: Chemistry and Medical Terminology

Lakeshore Technical College's Radiography program prepares students to obtain the required licensure to be employed/practice in the state of Wisconsin. The College does not guarantee its curriculum matches the requirements for preparation, examination, or licensure for other states.

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



ADVANCED RADIOGRAPHIC IMAGING...explores the 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. PREREQUISITE: 10526159 Radiographic Imaging

ARRT CERTIFICATION SEMINAR...provides preparation for the national certifying examination prepared by the American Registry of Radiologic Technologists. Emphasis is placed on the weak areas of the individual students. Simulated registry examinations are utilized. Successful completion of the Radiography program requirements is required to enroll in this course. PREREQUISITE: 10526190 Radiography Clinical 5 and CONDITION: 105261 Radiography admissions requirements met

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

GENERAL ANATOMY AND PHYSIOLOGY...examines basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare health care professionals who need to apply basic concepts of whole body anatomy and physiology to informed decision-making and professional communication with colleagues and patients. PREREQUISITE: 10806134 General Chemistry or equivalent and Reading placement assessment equivalent

IMAGING EQUIPMENT OPERATION...introduces radiography students to the principles and application of x-ray technology. Students analyze how x-rays are produced and determine the corrective actions necessary for common equipment malfunctions. PREREQUISITE: 10526230 Advanced Radiographic Imaging and CONDITION: 105261 Radiography Admissions Requirements Met

IMAGING MODALITIES...introduces radiography students to imaging modalities with an emphasis in computed tomography and cross-sectional anatomy. PREREQUISITES: 10526191 Radiographic Procedures 2 and CONDITION: 105261 Radiography Admissions Requirements Met

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

INTRODUCTION TO RADIOGRAPHY...introduces students to the role of radiography in health care. Students apply legal and ethical considerations to patient care and pharmacology in the radiologic sciences. PREREQUISITE: 10501101 Medical Terminology and CONDITION: 105261 Radiography admissions requirements met

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

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

RADIATION PROTECTION & BIOLOGY...prepares radiography students to protect themselves and others from exposure to radioactivity. Students examine the characteristics of radiation and how radiation affects cell biology. Students apply standards and guidelines for radiation exposure. PREREQUISITE: 10526194 Imaging Equipment Operation and CONDITION: 105261 Radiography admissions reqs met

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 108061770L 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

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

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 Clin 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

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 31-104-8 Technical Diploma • Two Terms

ABOUT THE PROGRAM

The Sales Representative technical diploma prepares the student to be a professional in both business-to-business and business-to-consumer environments. The student will have a fundamental understanding of selling techniques, sales strategies, customer relations management and customer service, professionalism, and Web-based selling and marketing. A graduate holding such a diploma may be expected to manage customers and accounts, prepare quotes and close sales, provide sales data and marketing analysis, and work inside sales, outside sales, retail sales, and other customer support roles. This technical diploma will ladder into the Marketing associate degree program.

PROGRAM OUTCOMES

- Develop marketing strategies.
- Develop selling strategies.
- Deliver sales presentations.
- Analyze sales information.
- Apply customer relationship building strategies.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

This program is also offered in an online delivery format. Contact an advisor for details.

RELATED PROGRAMS

- Marketing In A Digital Era Associate Degree

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10102110	Intro to Business	3
10103121	Excel - Level 1	1
10104102	Marketing, Principles of	3
10104104	Selling Strategies	3
10105128	Personal Branding	2
10801198	Speech	3
		15
Term 2		
10104105	B2B Sales and CRM	3
10104124	Research and Web Analytics	3
10104134	Direct Marketing, PR and Media	3
10104136	Retail Marketing	3
		12
		TOTAL 27

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



B2B SALES AND CRM...enhances the student's ability to create business to business selling strategies and understand the factors affecting the sales funnel. Students will develop an understanding of CRM, account management, sales leadership and motivation, and sustaining the brand in the new era of Sales 2.0. PREREQUISITE: 10104104 Selling Strategies

DIRECT MARKETING, PR AND MEDIA...provides the student with an overview of direct marketing, public relations, and social media as it relates to the consumer. Various channels of direct marketing will be investigated including social media, mobile marketing, email marketing, and traditional direct marketing strategies. PREREQUISITE: 10104102 Principles of Marketing

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 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.

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

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.

RESEARCH AND WEB ANALYTICS...provides the student with the ability to distinguish between quantitative and qualitative research techniques, primary and secondary data, and the marketing research process. In addition students will learn how web analytics and mobile technology have affected the marketing research process. PREREQUISITE: 10104102 Principles of Marketing

RETAIL MARKETING...provides the student with current developments in retail marketing. Students will learn about types of retailers, customer service, distribution and inventory control, and online and traditional retailing methods. PREREQUISITE: 10104102 Principles of Marketing

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. COREQUISITE: 10104102 Prin 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

**Program Number 50-432-1
5-Year Contract**

**Work Hours (including related instruction): 9000
Related Instruction Hours: 512 • Night School Hours: 250**

ABOUT APPRENTICESHIP

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

ABOUT THE CAREER

Sheet metal workers plan and lay out work from blueprints and sketches, fabricate parts using hand and power equipment, assemble HVAC (Heating, Ventilation, and Air Conditioning) and architectural units, and install the assembled units in the final structure. The Sheet Metal Apprenticeship program is an employer-sponsored, hands-on training program. If you like to work on projects from start to finish, using a variety of skills, check out a career as a journey-level sheet metal worker.

CAREERS

Graduates of LTC's Sheet Metal Apprenticeship program work as journey-level sheet metal workers in a variety of workplace settings.

CONSTRUCTION APPRENTICE APPLICATION REQUIREMENTS

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

PROGRAM OUTCOMES

- Work safely in a variety of work situations.
- Demonstrate proficiency in welding.
- Install sheet metal components according to industry standards.
- Lay out sheet metal components according to specifications.
- Fabricate sheet metal components using a variety of metal fabricating machinery.
- Interpret trade-related documents.
- Demonstrate proficiency using acetylene and hand plasma cutting.

APPROXIMATE COSTS

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

MINIMUM PLACEMENT SCORES

Accuplacer: Arithmetic-250, Reading-239, QAS-216

ACT: Mathematics-16, Reading-16

SPECIAL NOTE

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

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

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

Catalog No.	Class Title	Credit(s)
Term 1		
50432501	Sheet Metal Apprentice 1	2
Term 2		
50432502	Sheet Metal Apprentice 2	2
Term 3		
50432503	Sheet Metal Apprentice 3	2
Term 4		
50432504	Sheet Metal Apprentice 4	2
Term 5		
50432505	Sheet Metal Apprentice 5	2
Term 6		
50432506	Sheet Metal Apprentice 6	2
Term 7		
50432507	Sheet Metal Apprentice 7	2
Term 8		
50432508	Sheet Metal Apprentice 8	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 2019-2020 rates and are subject to change prior to the start of the academic year.



SHEET METAL APPRENTICE 1...introduces the apprentice to the sheet metal industry; learn craftsmanship; use drafting equipment and materials, The apprentice will learn trade overview and history; learn hand tools and their proper use; begin learning fundamentals of fabrication on metal; learn drafting tools and materials; learn lines and lettering; develop orthographic projections; begin layout techniques; learn layout tools and terms and principles; and begin fabricating fittings with metal. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met..

SHEET METAL APPRENTICE 2...introduces the apprentice to parallel line, radial line, and triangulation pattern development. The apprentice will learn the following layout principles: Ogee offsets, parallel line layout, radial line layout, triangulation layout, and soldering. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met.

SHEET METAL APPRENTICE 3...introduces the apprentice to the basics of organizing time; introduction to computers; the use of scientific calculators for trigonometry and everyday equations. The apprentice will revisit orthographic drawing development; learn pattern development and fabrication of the following - round tee's, round elbows, round tapers, roof jacks, square to rounds, and transitions. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met.

SHEET METAL APPRENTICE 4...introduces the apprentice to the basics of Architectural Sheet Metal, describes the primary functions and forms of architectural sheet metal, including shelter, durability, and appearance. It also identifies the larger concepts of architectural sheet metal, including moisture control, expansion and contraction, roof and wall systems, shop layout and fabrication including soldering of architectural components, installation, safety, and project management. It also describes the contributions of architectural sheet metal to architecture, art, and design. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met.

SHEET METAL APPRENTICE 5...provides the apprentice with skills to understand the concepts of HVAC systems. The apprentice will learn how to understand the different systems and components, heat transfer theories, refrigeration theories, electrical theories, automatic controls, and field installation roles and responsibilities. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met.

SHEET METAL APPRENTICE 6...provides the apprentice with skills to understand the concepts of HVAC systems and reading plans and specs. Apprentices will interpret load calculations and sizing ductwork; understand test and balance (TAB) procedures, understand commissioning duties, become an effective project manager, interpret plans and specs, and create CAD drawings. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met.

SHEET METAL APPRENTICE 7...introduces the apprentice to Industrial Sheet Metal skills. The apprentice will be able to identify types of materials used in industrial sheet metal work, understand the weldability of each of the types of materials used in industrial work, identify the primary steps of stock metal used in industrial sheet metal applications--plates, angles, bars, beams and channels, calculate the weight of stock metal components represented in a drawing, calculate the cost of stock metal components represented in a drawing, identify the welding and drawing symbols used in industrial sheet metal, understand where pipe welding is used, understand how to safely operate power equipment that is used for industrial work, and know the appropriate PPE to use for any given situation and how to use the equipment correctly. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met

SHEET METAL APPRENTICE 8...teaches the apprentice to become familiar with layout principles for sheet metal items commonly found in industrial environments. The apprentice will understand the difference between plan view and elevation view, understand how to lay out a project using a combination of two of the three methods of an industrial project, be familiar with the technical aspects related to cutting heavy metals, be familiar with common shop workflow procedures, be familiar with the types of job sites where industrial work might be performed, identify and describe the six steps used for field installation, be familiar with the challenges of scheduling an industrial job, understand the importance of communicating and cooperating with other trades, understand the overall purpose and function of an industrial ventilation/exhaust system, understand the principles of airflow and how it impacts industrial ventilation/exhaust system design, be familiar with basic rigging principles, and be familiar with hand signals used during hoisting operations. CONDITION: 504321/504322 Sheet Metal Apprentice requirements met

Program Number 31-182-1 Technical Diploma • Two Terms

ABOUT THE PROGRAM

This technical diploma, Supply Chain Assistant, provides you with the basic skills needed to perform entry level work in supply chain management. This credential 'ladders' up the associate degree credential, Supply Chain Management. Words such as logistics, purchasing, or material management all encompass part of a supply chain. Supply chains are led and managed by people who enjoy working with others and analyzing data. Without supply chain management, you could not get the products or services you need every day. If you want to be a part of an ever-changing and growing field, supply chain management is for you, and this introductory credential, the Supply Chain Assistant Technical Diploma, can help get you started.

PROGRAM OUTCOMES

- Define (plan) operations, transportation, procurement and distribution.
- Measure operations, transportation, procurement and distribution.
- Analyze operations, transportation, procurement and distribution.
- Improve operations, transportation, procurement and distribution.
- Control operations, transportation, procurement and distribution.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

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 Career Coach
920.693.1162 • CareerCoach@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 2020-2021 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. MiniTab introduction is included.

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 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

- Define (plan) operations, transportation, procurement and distribution.
- Measure operations, transportation, procurement and distribution.
- Analyze operations, transportation, procurement and distribution.
- Improve operations, transportation, procurement and distribution.
- Control operations, transportation, procurement and distribution.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10103121	Excel - Level 1	1
10103191	Word - Level 1	1
10182108	Purchasing	3
10182131	Supply Chain Management	3
10623118	Lean Manufacturing Overview	3
10801195	Written Communication OR 10801136 English Composition 1	3
		14
Term 2		
10105128	Personal Branding	2
10801196	Oral/Interpersonal Communication OR 10801198 Speech	3
10804123	Math with Business Applications	3
10809198	Introduction to Psychology OR 10809188 Developmental Psychology	3
10182160	Global Supply Chain Management	3
		14
Term 3		
10101155	Accounting for Professionals	3
10196188	Project Management	3
10623110	Lean Six Sigma - Measure and Analyze	4
10182114	Enterprise Resource Planning and Control	3
10182115	Computer Simulation for Operational Management	3
		16
Term 4		
10182102	Service Operations Management	3
10182122	Logistics	3
10182107	Portfolio Assessment-Supply Chain	1
10623193	ISO 9001 Internal Auditor OR 10623195 ISO 9001 Concepts	3
10809195	Economics	3
10806112	Principles of Sustainability OR 10809166 Introduction to Ethics	3
		16
		TOTAL 60

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

ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. **PREREQUISITE:** 10804123 Math w Business Applications or **CONDITION:** 101101 Paralegal program requirements met

COMPUTER SIMULATION FOR OPERATIONAL MANAGEMENT...introduces the student to simulation software. The course is structured to introduce basic simulation terminology, develop models, and analyze the information derived from modeling. Students will utilize a 3D simulation software to model, simulate, predict, and analyze systems in manufacturing and logistics organizations.

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

ENTERPRISE RESOURCE PLANNING AND CONTROL...prepares the participant to interpret material requirements planning reports, build a master production schedule, construct capacity plans, and understand sales and operations planning. The curriculum is developed from the American Production and Inventory Controls exam certification's domain of knowledge. **PREREQUISITE:** 10182131 Supply Chain Mng

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

GLOBAL SUPPLY CHAIN MANAGEMENT...introduces the student to supply chain financial transactions which include foreign exchange market, fluctuations of the market, role of the global capital market, major determinants in country risk, methods of foreign market entry, international contracts and commercial documents, export packaging, customs clearance, and global supply chain logistics infrastructure.

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

ISO 9001 INTERNAL AUDITOR...is designed to introduce participants to the current 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. 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. MiniTab introduction is included.

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 Reading and Study Skills or Reading placement assessment equivalent or **CONDITION:** 610061 Agribusiness/Agronomy Basic program admissions requirements met

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

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

PORTFOLIO ASSESSMENT-SUPPLY CHAIN...prepares the student to identify what they have learned through the supply chain program, write career goals, re-examine their resume, research and collect project samples of their achievements, and analyze their achievements within the college core abilities. **PREREQUISITES:** 10105128 Personal Branding

PRINCIPLES OF SUSTAINABILITY...prepares students to develop sustainable literacy, analyze interconnections among physical and biological sciences and environmental systems, summarize effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal/recycling in the U.S., and analyze approaches used by your community. **COREQUISITE:** 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

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

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

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

SUPPLY CHAIN MANAGEMENT...has been developed to provide a basic understanding of the planning and control of materials into, through, and out of organizations. In addition, those who want to become certified by APICS need a fundamentals course to learn about the material planning and control system. This course will provide a basis for further study leading to certification.

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

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

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CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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FINANCIAL AID

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CONTACT

LTC Career Coach
 920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2020)		
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 2021)		
10623193	ISO 9001 Internal Auditor OR 10623195 ISO 9001 Concepts	3
10182122	Logistics	3
10809198	Introduction to Psychology	3
10196188	Project Management	3
		12
Term 3 (Summer 2021)		
10801195	Written Communication	3
		3
Term 4 (Fall 2021)		
10809166	Introduction to Ethics OR 10809112 Principles of Sustainability	3
10101155	Accounting for Professionals	3
10809195	Economics	3
10105128	Personal Branding	2
		11
Term 5 (Spring 2022)		
10182115	Computer Simulation for Operational Management	3
10182102	Service Operations Management	3
10623110	Lean Six Sigma - Measure and Analyze	4
		10
Term 6 (Summer 2022)		
10801196	Oral/Interpersonal Communication	3
		3
Term 7 (Fall 2022)		
10182160	Global Supply Chain Management	3
10182114	Enterprise Resource Planning and Control	3
10182107	Portfolio Assessment - Supply Chain	1
		7
		TOTAL 60

ACCOUNTING FOR PROFESSIONALS...is the study of the information that can be interpreted from financial statements. Students analyze financial statements and apply managerial accounting concepts in an accelerated format. PREREQUISITE: 10804123 Math w Business Applications or CONDITION: 101101 Paralegal program requirements met

COMPUTER SIMULATION FOR OPERATIONAL MANAGEMENT...introduces the student to simulation software. The course is structured to introduce basic simulation terminology, develop models, and analyze the information derived from modeling. Students will utilize a 3D simulation software to model, simulate, predict, and analyze systems in manufacturing and logistics organizations.

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PRINCIPLES OF SUSTAINABILITY...prepares students to develop sustainable literacy, analyze interconnections among physical and biological sciences and environmental systems, summarize effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal/recycling in the U.S., and analyze approaches used by your community. COREQUISITE: 10838105 Intro Reading and Study Skills or Reading placement assessment equivalent

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

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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 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 Apprenticeship Completion Certificate 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 21 credits of General Education.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

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

APPROXIMATE COSTS

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

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

Don Geiger, Advisor
920.693.1378 • donald.geiger@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: 6 Credits Required	6
		TOTAL 60

Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor for details. The tuition and fees are approximate based on 2020-2021 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 2019-2020 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
2		
Term 2		
50420734	Mathematics for Machinist Apprentice 1	1
50420715	Mechanical Hardware and Hand Tools for Machine Trades Apprentice	0.5
50420720	Materials and Cut-Off Machines for Machine Trades	0.5
2		
Term 3		
50420721	Math for Machine Trades 2	0.5
50420722	Engineering Drawings for Machine Trades 2	0.5
50420718	Drilling Machines for Machine Trades Apprentice	0.5
50420717	Milling Machines for Machine Trades Apprentice	0.5
2		
Term 4		
50420724	CNC Programming and Planning for Machine Trades	1
50420716	Turning Machines for Machine Trades Apprentice	0.5
50420723	Intro to CAM for Machine Trades Apprentice	0.5
2		
Term 5		
50420725	Basic CAD/CAM for Machine Trades Apprentice	1
50420726	Jig and Fixture Design for Machine Trades Apprentice	0.5
50420719	Grinding Machines for Machine Trades Apprentice	0.5
2		
Term 6		
50420733	CNC Operations for Machine Tool Trades Apprentice	1
50420727	Geometric Design and Tolerancing for Machine Trades	0.5
50420731	Metallurgy for Machine Trades Apprentice	0.5
2		
Term 7		
50420732	Electrical Discharge Machining for Machine Trades	1
50420728	Basic Stamping Diemaking for Machine Trades	1
2		
Term 8		
50420730	Stamping Die Design Applications for Machine Trades Apprentice	1
50420729	Mold Making for Machine Trades Apprentices	1
2		
TOTAL		16



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 Requirements 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

Program Number 31-442-1 Technical Diploma • One Term

ABOUT THE PROGRAM

Evidence of welders' work is all around us—everything from battleships, cars, and piping to the amazing dome on the U.S. Capitol Building. If you like hands-on work, have solid math and reading skills, are dedicated to accuracy, and have an eye for detail, welding is the perfect career for you.

PROGRAM OUTCOMES

- Demonstrate industry-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.

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire..

APPROXIMATE COSTS

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

FINANCIAL AID

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

SPECIAL NOTE

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 Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
31442300	Welding Introduction	1
31442308	Welding Metallurgy	1
31442350	Welding Hand/Power Tools	1
31442351	Welding Measurement 1	1
31442310	Welding Shielded Metal Arc 1 (Stick)	1
31442312	Welding Shielded Metal Arc 2 (Stick)	1
31442314	Welding Shielded Metal Arc 3 (Stick)	1
31442316	Welding Shielded Metal Arc 4 (Stick)	1
31442320	Welding Gas Metal Arc 1 (Wire/Mig)	1
31442322	Welding Gas Metal Arc 2 (Wire/Mig)	1
31442324	Welding Gas Metal Arc 3 (Wire/Mig)	1
31442326	Welding Gas Metal Arc 4 (Wire/Mig)	1
31442304	Welding Submerged Arc (SAW)	1
31442330	Welding Gas Tungsten Arc 1 (Heli-Arc/TIG)	1
31442332	Welding Gas Tungsten Arc 2 (Heli-Arc/TIG)	1
31442334	Welding Gas Tungsten Arc 3 (Heli-Arc/TIG)	1
31442336	Welding Gas Tungsten Arc 4 (Heli-Arc/TIG)	1
31442318	Pipe Welding Fundamentals	1
31442382	Welding Math 1	1
31442385	Welding Print Reading	1
31442340	Welding Advance Process 1	1
31442342	Welding Advance Process 2	1
31442357	Welding Fabrication Introduction	2
10106116	Computer Essentials	1
31801359	Communication Skills for the Workplace	2

TOTAL 27

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



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

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

PIPE WELDING FUNDAMENTALS...demonstrates safe shop working practices. The learner will weld pipe to plate in the 2F, 5F and 6F positions while using the SMAW, GMAW, FCAW and GTAW welding processes. Students will weld pipe groove welds in the 1G, 2G, 5G and 6G positions while using the SMAW, GMAW, FCAW and GTAW welding processes. COREQUISITES: 31442326 Wldg Gas Metal Arc 4, 31442316 Wldg Shielded Metal Arc 4, and 31442336 Wldg Gas Tungsten Arc 4

WELDING ADVANCE PROCESS 1...is a student selected welding process. In it the student will begin to use that process to weld in all positions including pipe. The learner will prepare to become a certified welder. COREQUISITE: 31442326 Welding Gas Metal Arc 4 or 31442316 Welding Shielded Metal Arc 4 or 31442336 Welding Gas Tungsten Arc 4

WELDING ADVANCE PROCESS 2...is a student selected welding process. In it the student will learn to use that process to weld in all positions including pipe. The learner will have the opportunity to become a certified welder in the chosen welding process. COREQUISITE: 31442340 Welding Advance Process 1

WELDING FABRICATION INTRODUCTION...introduces the learner to various methods of steel fabrication. The learner will produce steel fabrications from drawings which includes the learner's ability to read and interpret drawings, sketches using appropriate welding symbols, follow written procedures, and cut parts to proper size. The learner will fit simple assemblies, and will pass workmanship tests using GMAW, FCAW and GTAW welding processes. COREQUISITE: 31442385 Welding Print Reading and 31442342 Welding Advance Process 2 or 31442342S3 Welding Advance Process 1B (Stick) or 31442342M3 Welding Advance Process 1B (Mig) or 31442342T3 Welding Advance Process 1B (Heli-Arc/Tig)

WELDING GAS METAL ARC 1...prepares the learner to demonstrate safe shop work practices; learners will perform set up and shut down of GMAW and FCAW equipment; weld mild steel using the GMAW and FCAW welding processes, and weld in all positions using the GMAW process. COREQUISITE: 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

WELDING GAS METAL ARC 2...will use safe shop work practices while producing 3/4" fillet welds using the FCAW and MCAW welding processes and 1/4" fillet welds while welding tube to plate in the horizontal position. Learners will produce V-groove weldments in all four positions, using .035 hard wire, .052 Flux Core and Metal electrode wires. COREQUISITE: 31442320 Welding Gas Metal Arc 1

WELDING GAS METAL ARC 3...will have learners demonstrate safe shop working practices while welding fillet welds in all positions using the FCAW and MCAW welding process. Learners will perform single bevel groove welds and V-groove welds in all positions using the multiple GMAW welding process, and will perform groove welds with and without backing material. COREQUISITE: 31442322 Welding Gas Metal Arc 2

WELDING GAS METAL ARC 4...demonstrates safe shop working practices, while welding fillet welds in all positions using the FCAW and MCAW welding process. Students perform single bevel groove welds and V-groove welds in all positions using the multiple GMAW welding process. Students weld pipe to plate in the 5 and 6F position using the FCAW welding process. COREQUISITE: 31442324 Weld Gas Metal Arc 3

WELDING GAS TUNGSTEN ARC 1...prepares the learner to demonstrate safe shop work practices, weld mild steel, stainless steel and aluminum in the flat position or horizontal positions using the GTAW process. COREQUISITE: 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

WELDING GAS TUNGSTEN ARC 2...prepares the learner to demonstrate safe shop work practices while welding mild steel, stainless steel and aluminum in the horizontal and vertical up positions using the GTAW process. The learner will be introduced to the GTAW Pulse welding process while welding mild steel in the 2F position. COREQUISITE: 31442330 Welding Gas Tungsten Arc 1

WELDING GAS TUNGSTEN ARC 3...demonstrates safe shop work practices while welding square butt joints on mild steel in the 2F, 3F and 4F positions; weld lap joints on mild steel in the 2F, 3F, and 4F positions using the; weld tee joints on mild steel in the 2F, 3F, and 4F positions using the GTAWP/GTAW process. The learner will also learn how to minimize oxidation in stainless steel during the welding process, welding thin SST in the 1G & 2G positions and proper food grade post weld cleanup to these joints. COREQUISITE: 31442332 Welding Gas Tungsten Arc 2

WELDING GAS TUNGSTEN ARC 4...prepares the learner to demonstrate safe shop work practices while welding V-grooves in all positions on 1/4" mild steel plate using either the GTAW or GTAWP welding processes. Learners will make 2-piece and 3-piece corner joints in the 1F, 2F and the 3F positions on 11 ga. HRS and 14 ga. SST. Learners will be introduced to a welding technique called "walking the cup" and will make fillet welds in the 1F position on 1/4" mild steel. COREQUISITE: 31442334 Welding Gas Tungsten Arc 3

WELDING HAND/POWER TOOLS...prepares the learner to communicate proper measurement terminology used in industry; will develop safety practices for the work place; proper use of measuring equipment and obtain measurement readings from measuring equipment; layout steel fabrication using hand measuring devices and layout equipment. The learner will inspect a variety of steel fabrications and how to classify industrial fasteners. Learners will have the opportunity to receive up to three NC3/Starrett measuring certifications. COREQUISITE: 31442351 Welding Measurement 1 and 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

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

WELDING MATH 1...provides the learner with the necessary skills to solve problems involving whole numbers, fractions, and decimal numbers using pad and pencil and calculator. The course is designed for individualized student needs. This is credit one of the twomath credits need for the Welding program.

WELDING MEASUREMENT 1...prepares the learner to communicate proper measurement terminology used in industry; will develop safety practices for the work place; proper use of measuring equipment and obtain measurement readings from measuring equipment; layout steel fabrication using hand measuring devices and layout equipment. The learner will inspect a variety of steel fabrications and how to classify industrial fasteners. Learners will have the opportunity to receive up to three NC3/Starrett measuring certifications.

WELDING METALLURGY...prepares learner to interpret properties of ferrous materials, heat treat ferrous metals; and test the hardness of ferrous materials. Learner will interpret weld discontinuities and how heat of the weld affects base metal properties.

WELDING PRINT READING...prepares the learner to apply orthographic projection principles and AWS welding symbols as they relate to welding fabrications. Students will learn the basics of print reading including alphabet lines, tolerances, bill of materials, title blocks, and revision blocks.

WELDING SHIELDED METAL ARC 1...prepares the learner to demonstrate safe shop work practices; make bead on plate welds on mild steel; make padding plate welds on mild steel; make fillet welds in 3/8" mild steel plate in the flat and horizontal positions; and make groove welds in mild steel plate. COREQUISITE: 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

WELDING SHIELDED METAL ARC 2...will have the learner demonstrate safe shop work practices; make horizontal padding plate welds on 1/2" mild steel with E7018 electrode; 1/4", 3/8" and 3/4" fillet welds in the horizontal position, 1/4" fillet welds on round and square tubing; open root groove welds with a 3/32" root opening in mild steel in the 1G position; groove welds with 1/4" root opening and 1/4" backup bar on mild steel in the 2G position using E7018 electrode; padding plates and fillet welds in the vertical position. COREQUISITE: 31442310 Welding Shielded Metal Arc 1

WELDING SHIELDED METAL ARC 3...teaches the learner to use safe shop work practices; Students will experience the art of welding in the vertical and overhead position. To better understand the vertical and overhead positions, students will perform padding plate welds on mild steel with E7018 electrode; Perform fillet welds in the vertical and overhead positions; Groove welds will also be performed in the vertical and overhead position. Groove welds will be with and without backing.. COREQUISITE: 31442312 Welding Shielded Metal Arc 2

WELDING SHIELDED METAL ARC 4...prepares the learner to demonstrate safe shop work practices while making multi pass groove welds in the 1G, 3G, and 4G positions using E7018 electrodes. Students will make multi pass fillet welds to pipe to plate in the 2F, 5F and 6F positions, and will be introduced to pipe welding in the 1G position. COREQUISITE: 31442314 Welding Shielded Metal Arc 3

WELDING SUBMERGED ARC (SAW)...is a common arc welding process. It requires a continuously fed consumable electrode. The molten weld and the arc zone are protected from atmospheric contamination by being "submerged" under a blanket of granular fusible flux. The learner will interpret SAW terminology, setup and shut down of SAW equipment, SAW weld safety; and perform SAW welds in the flat position. COREQUISITES: 31442326 Welding Gas Metal Arc 2B and 31442300 Welding Intro or 31442346 Industrial Maint Welding Intro or 31442345 Auto Servicing Welding

ABOUT THE PROGRAM

Develop the skills you need to pursue a great career in metal fabrication and welding. In this program, the learner will discover the wonderful world of welding and fabrication through the use of the three major electrical welding processes; Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Gas Tungsten Arc Welding (GTAW). Learners will weld in all positions preparing you for a career in many fields of work, including manufacturing, shipbuilding, custom fabrication and pipe welding. Learners will perfect their welding technique on mild steel, stainless steel and aluminum with a thickness range of 16 gauge up to one inch thick. Learners will perfect their weld quality techniques by using visual inspection and destructive testing. Throughout this program, the learner will apply math and print reading to today's industry standards. In this technical diploma, learners will set up, program, and use metal cutting and forming equipment to produce steel fabrication to industry specifications. Students will be introduced to Lean manufacturing by applying their welding and fabrication skills in an automated fabrication cell to include robotic welding.

PROGRAM OUTCOMES

- Demonstrate industry recognized safety practices.
- Form materials to detailed drawings.
- Cut materials to detailed drawings.
- Join materials to detailed drawings.
- Layout components/assemblies.
- Inspect product.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

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FINANCIAL AID

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CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1		
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31442310	Welding Shielded Metal Arc 1 (Stick)	1
31442312	Welding Shielded Metal Arc 2 (Stick)	1
31442314	Welding Shielded Metal Arc 3 (Stick)	1
31442316	Welding Shielded Metal Arc 4 (Stick)	1
31442320	Welding Gas Metal Arc 1 (Wire/Mig)	1
31442322	Welding Gas Metal Arc 2 (Wire/Mig)	1
31442324	Welding Gas Metal Arc 3 (Wire/Mig)	1
31442326	Welding Gas Metal Arc 4 (Wire/Mig)	1
31442304	Welding Submerged Arc (SAW)	1
31442330	Welding Gas Tungsten Arc 1 (Heli-Arc/TIG)	1
31442332	Welding Gas Tungsten Arc 2 (Heli-Arc/TIG)	1
31442334	Welding Gas Tungsten Arc 3 (Heli-Arc/TIG)	1
31442336	Welding Gas Tungsten Arc 4 (Heli-Arc/TIG)	1
31442318	Pipe Welding Fundamentals	1
31442382	Welding Math 1	1
31442385	Welding Print Reading	1
31442340	Welding Advance Process 1	1
31442342	Welding Advance Process 2	1
31442357	Welding Fabrication Introduction	2
10106116	Computer Essentials	1
31801359	Communication Skills for the Workplace	2
		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	Welding Print Reading 2	1
31442337	Weld Inspection and Processes	1
31442339	Stainless Steel Polishing and Finishing	1
10620167	Robotics-Teach Pendant/Controls	1
10620179	Robotics-Editing Programs	1
31442327	Robotic Welding 1	1
31442329	Robotic Welding 2	1
31457331	Fabrication 1	2
31457333	Fabrication 2	2
31457343	Fabrication 3	2
31457335	Fabrication Design and Application	2
31449301	Industrial Safety	1
31442384	Weld Math 2	1
10606101	Basic Mechanical Drafting	2
		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 2020-2021 rates and are subject to change prior to the start of the academic year.



Please see *Industrial Welding for Term 1* course descriptions.

ADVANCED PIPE WELDING 1...will have learners producing quality pipe welds in the flat and horizontal positions. Pipe to Pipe and Socket welds will be made by using Gas Metal Arc Welding, Shielded Metal Arc Welding and the Gas Tungsten Arc Welding processes. Learners will use WPS's (welding procedure specifications sheet) of pipe welding for mild steel in accordance with various welding codes. COREQUISITES: 31442326 Wldg Gas Metal Arc 4, 31442316 Wldg Shielded Metal Arc 4, and 31442336 Wldg Gas Tungsten Arc 4

ADVANCED PIPE WELDING 2...will have learners weld pipe to pipe and socket welds in the 4F, 5F, and 5G positions. Pipe to Pipe and Socket welds will be made by using the Flux Core Arc Welding, Shield Metal Arc Welding and the Gas Tungsten Arc Welding processes. Learners will use WPS's (welding procedure specifications sheet) of pipe welding for mild steel in accordance with various welding codes. COREQUISITE: 31442301 Advanced Pipe Welding 1

ADVANCED PIPE WELDING 3...will teach learners to weld pipe to pipe and socket welds in the 6F and 6G positions. Pipe to Pipe and Socket welds will be made by using the Flux Core Arc Welding, Shield Metal Arc Welding and the Gas Tungsten Arc Welding processes. Learners will use WPS's (welding procedure specifications sheet) of pipe welding for mild steel in accordance with various welding codes. COREQUISITE: 31442303 Advanced Pipe Welding 2

ADVANCED PIPE WELDING PROCESSES...instructs the learner to weld a piping spool project. They will layout, cut, grind, bevel, fit and pressure test. The spool project will be welded using the GTAW, SMAW, GMAW and the FCAW processes. The learner will have the opportunity to test for the state certification in the 6G pipe position. The learner will choose either the SMAW or the GMAW/FCAW welding processes. All welding will be completed using welding practices and will be in accordance with the AWS and ANSI steel code. COREQUISITE: 31442305 Adv Pipe Welding 3

BASIC MECHANICAL DRAFTING USING AUTOCAD...provides the learner with the skills to utilize AutoCAD's drawing editor, viewing commands; apply coordinate entry methods, AutoCAD file commands; utilize draw commands, modify commands; create and edit text, prints & plots; apply geometric construction to solve a drawing problem; utilize selection sets, duplicating modify commands, layers & objects properties, blocks; apply principles of orthographic and multi view projection.

DRILLS...prepares the learner to interpret the attributes of hole-producing tools, follow drilling machine tool safety rules, identify drilling machine tool components, and operate sensitive drilling machine tools. COREQUISITE: 31420310 Machine Tool Hand Tools or 31420394 Ind Mtrc Machine Tool Intro or 10420194 Machine Tool Introduction

FABRICATION 1...teaches the basics of metal fabrication safety, production, measuring, hand tools, and layout. Learn how to use shears, forming, press brakes, box and pan brakes, and slip rollers. Learners will demonstrate proficiency in metal fabrication through related projects. COREQUISITES: 31442307 Welding Measurement 2 and 31442309 Welding Print Reading 2

FABRICATION 2...teaches the advanced process of forming product using automated and manual equipment. Demonstrate proficiency of forming by choice of tooling, calculations and sequence of forming. COREQUISITES: 10606101 Basic Mechanical Drafting and 31457331 Fabrication 1 or PREREQUISITE: 31442333 Fabrication 1

FABRICATION 3...teaches the advanced processes of material processing using automated and manual equipment. Demonstrate proficiency of CNC programming for automated Laser cutting processes. Demonstrate proficiency in laser cutting by proper set-up and shutdown, cutting conditions, program processing and gas selection based on material. COREQUISITE: 31457333 Fabrication 2

FABRICATION DESIGN AND APPLICATION...will have learners set-up, program, operate, weld, assemble, inspect, and finish/coat to complete metal fabrication projects and provide shop routings to demonstrate comprehension of process control in a manufacturing facility. Maintain safety in the shop for all operations with hand tools and machinery. COREQUISITE: 31457343 Fabrication 3

INDUSTRIAL SAFETY...utilizes advanced, lab-based, hands-on, and table-top interaction. Competencies focus on recognizing and promoting safe work programs. It is 'deep dive' training on; OSHA, forklift, personal protective equipment, hazards communication, hazardous materials, lockout/tagout, fall protection/confined space, emergency planning, fire prevention and suppression, CPR/AED/First-Aid, and electronic technology. You receive an OSHA 10-Hour and American Heart Association certification.

LATHE FACING AND TURNING...prepares the learner to perform lathe facing and turning operations safely.

MILL-SQUARING...prepares the learner to square a part using a vertical mill machine safely.

ROBOTIC WELDING 1...prepares the learner to perform basic robotic welding skills on the five major joints used in industry, how to load weld programs for their welding joints, and demonstrate safety practices associated with robotic welding. COREQUISITE: 31620335 Introduction to Robotics 2

ROBOTIC WELDING 2...builds upon learner's knowledge and skill of the world of robotic welding. In this course, students will learn how to weld around pipe that is 2" in diameter and larger, V-grooves and creating fixtures for different welding joints that will be used during this credit. COREQUISITE: 31442327 Robotic Welding 1

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

ROBOTICS-TEACH PENDANT/CONTROL...instructs students on using a teach pendant to control a robot. COREQUISITE: 10620169 Robotics-Editing Programs

STAINLESS STEEL POLISHING AND FINISHING...provides learning so that the student will develop and demonstrate skills needed to properly finish food grade weldments. Surface finish is an important element in any specification of stainless steel or steel regardless of the intended use. Students will demonstrate proficiency in welding projects using purging and backing techniques. Students will demonstrate proficiency in grinding within given tolerances for surface finish and flatness.

WELD INSPECTION AND PROCESSES...will teach welding metallurgy, metal properties and destructive testing. The learner will demonstrate proper evaluation of weld and base metal discontinuities. The learner will be introduced to VT and other NDE methods. COREQUISITES: 31442307 Welding Measurement 2 and Welding Print Reading 2

WELDING MATH 2...prepares the learner with the necessary skills to use scientific calculators for the application of solving problems of ratio and proportion, precision, and accuracy in measurements, unit conversions, direct-length measurements, pre-algebra, and simple and complex equations using algebra concepts. The class is designed for individualized student needs. This is credit two of the two-credits needed for the Welding program. COREQUISITE: 31442382 Weld Math 1 or CONDITION: Welding Math 1 Testout or equivalent

WELDING MEASUREMENT 2...provides the learner with the skills to: use precision hand held measuring tools and the use of semi-precision measuring tools, and use of layout and measurement tools to fabricate steel projects.

WELDING PRINT READING 2...prepares the learner to recognize and use pipe welding symbols, dual dimensioning, analyze metric units and how they can impact print reading, Inspection and Testing by the use of destructive testing symbols, and non-destructive testing symbols, understanding the International Standards symbols for welding, interpret Geometric Dimensioning and Tolerancing characteristic and symbols.

ABOUT THE PROGRAM

The wind energy industry is the fastest growing segment of new energy production. Employers seek skilled technicians for operation and maintenance activities in wind farms. There is also a demand for advanced technicians with U.S. and international wind turbine manufacturers; these include: installation technicians, quality control technicians, and warranty and commissioning technicians. Operation and maintenance positions generally remain with a given wind farm location; other technicians travel extensively with the construction of new wind farms and repair/retrofitting of wind turbines around the world.

PROGRAM OUTCOMES

- Install, inspect, test, service, and repair wind turbine components.
- Wear proper Personal Protection Equipment, identify hazards, mitigate said hazards, and safely climb towers.
- Cognitively think and use deductive reasoning as well as manufacturer information while troubleshooting or maintaining a wind turbine.
- Clearly and responsibly communicate appropriate information with stakeholders under minimal supervision.
- Practice the basics of self-evacuation and rescue.

CAREER AND EDUCATION ADVANCEMENT OPPORTUNITIES

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

ADMISSION AND PROGRAM ENROLLMENT STEPS

- Submit online application.
- Submit transcripts (high school & other colleges). NOTE: Official transcripts required for acceptance of transfer credits; Financial Aid may require.
- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

This program is eligible for financial aid. Visit gotoltc.edu/Financial-Aid or talk with your Career Coach 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. Interested transfer/dual-degree students are encouraged to contact the LTC program advisor at 920-693-1378.

CONTACT

LTC Career Coach
920.693.1162 • CareerCoach@gotoltc.edu

Catalog No.	Class Title	Credit(s)
Term 1		
10482101	Wind Systems Introduction	3
10482104	Wind Technician 1 - Rescue & Tools*	2
10482110	Energy and Solar Power	1
10620122	Industrial Wiring	2
10620103	Fluid Power 1	2
10620105	DC Fundamentals	2
10804113	College Technical Mathematics 1A	3
		15
Term 2		
10482106	Wind Technician 2 - Safety & Maintenance*	3
10482124	Wind Technician 3 Lab*	1
10482132	10482132 Turbine Maintenance* OR 10482103 Wind Farm Practical Experience (2 cr)*	2
10620104	Fluid Power 2	3
10620138	Programmable Controllers - Allen Bradley	3
10620110	AC Fundamentals	2
10620141	Industrial Controls & Motors	3
		17
Summer Term		
10482126	Wind Technician 4*	3
		3
Term 3		
10482140	Solar Technician 1 Lab	1
10482128	Wind Technician 5 Lab*	2
10482133	Wind Systems Networking	2
10482135	Energy Power and Force OR 10806154 General Physics 1 (4 cr)	3
10482136	Energy Power and Force Lab OR 10806154 General Physics 1 (4 cr)	1
10620195	Industrial Troubleshooting	1
10620130	Mechanical Drive Systems	3
10620164	Electromechanical Systems	2
		15
Term 4		
10801195	Written Communication	3
10809195	Economics OR 10809196 Introduction to Sociology (3 cr)	3
10801196	Oral/Interpersonal Communication	3
10809198	Introduction to Psychology	3
		12
		TOTAL 62

*These class dates and times may be rescheduled due to inclement weather. Students must be within safe-climbing, unequipped body weight of 115 to 295 pounds.

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

AC FUNDAMENTALS...prepares 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 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 Mtnc Trades Math or 31420320 Mach Tool Math or math placement asmtt 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 & analyze electrical quantities in series and parallel circuits; desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1

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

ELECTROMECHANICAL SYSTEMS...prepares the student to communicate with, tune, run, and troubleshoot Allen-Bradley servos; utilize electrical control of hydraulic systems, explore PID control of motor speed; and investigate open and closed loop control systems. PREREQUISITES: 10620104 Fluid Power 2 and 10620110 AC Fund or 10660110 AC Fund

ENERGY AND SOLAR POWER...provides 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 laws and theories of electric power generation that govern motion and how to apply them to a range of concepts including rotational inertia, acceleration, velocity, lift, force, torque, etc. Studies the law of Conservation of Energy and basic atomic theory and how these concepts apply to electric power generation. The use and function of simple machines, and how they relate to electric power generator function, is also explored.

ENERGY POWER AND FORCE LAB...applies the laws and theories that govern motion to energy power and force concepts including rotational inertia, acceleration, velocity, lift, force and torque. Exploration of basic atomic theory and how it applies to electric power generation is conducted. In addition, the law of conservation of energy is applied in the lab activities. The use and function of simple machines, and how they relate to generator function is also examined. COREQUISITE: 10482135 Energy Power & Force

FLUID POWER 1...prepares the learner to identify hydraulic and pneumatic component symbols; adjust a pressure relief valve; analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits; analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. COREQUISITES: 10804115 College Technical Math 1 or 10804114 College Tech Math 1A

FLUID POWER 2...enhances the learner's ability to read schematics containing fluid power component symbols; assemble systems using schematics; analyze system's operation using a schematic; evaluate the general characteristics and terms of fluids under pressure, fluid conditioning, conductors, reservoirs, accumulators, pressure control; and troubleshoot malfunctioning pressurized systems. PREREQUISITE: 10620103 Fluid Power 1 or 10620155 Industrial Maintenance Hydraulics and Pneumatics

INDUSTRIAL CONTROLS AND MOTORS...prepares 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. PREREQ: 10620122 Indust Wiring and COREQ: 10620110 AC Fund or PREREQ: 10660110 AC Fund

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 the student to understand basic PLC structure and terminology; learn to create and troubleshoot basic PLC programs using the RSLOGIX 500 software and the RSLINX communication software; become familiar with communicating with programming SLC-500 PLCs. This course is highly computer based. This class qualifies for 64 hours of Continuing Education Units (CEUs) for Electricians.

SOLAR TECHNICIAN 1 LAB...provides hands-on lab-based environment where you learn 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. PREREQUISITES: 10620110 AC Fundamentals, 10620138 Programmable Controllers-Allen Bradley, 10620104 Fluid Power 2 and 10804113 College Tech Math 1A or 10804115 College Tech Math 1 and 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. PREREQUISITE: 10482124 Wind Technician 3 Lab and 10620138 Programmable Controllers - Allen Bradley

WIND TECHNICIAN 1 - RESCUE AND TOOLS...prepares students for work at height and to perform equipment inspections on climbing and fall arrest gear; wear required PPE, PFPE, and apparel while working on wind turbine systems. Students will be SAFER certified in safe tower access, climbing, rescue, and confined space rescue, and will demonstrate proper knot tying and display professionalism and safe working habits during all tasks. Students are trained in the use of hand tools and torque tools. COREQUISITE: 10482101 Wind Systems Introduction

WIND TECHNICIAN 2 - SAFETY AND MAINTENANCE...familiarizes learners with OSHA regulations related to the wind industry and proper methods to eliminate and control hazards. Students receive training in First Aid, CPR, rigging, and confined space and receive the 10-hour OSHA for General Industry and the Tools at Height certifications. Participants develop skills in repair and maintenance of commercial wind turbines. Industry standards, training manuals, and field experience are course standards. COREQUISITE: 10482104 Wind Technician 1 - Rescue & Tools

WIND TECHNICIAN 3 LAB...certifies learner in torque tool techniques with Snap-on tools. Students will apply safe and proper techniques while using various styles of torque wrenches and adapters including hand torque and hydraulic torque wrenches. Students will demonstrate proficiency in performing a variety of maintenance functions on the GE 1.5 nacelle including oil filter changes, generator brush maintenance, and brake pad replacement while following proper safety and LOTO procedures. COREQUISITE: 10482106 Wind Technician 2 - Safety and 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 Intern & 10482128 Wind Tech 5 and 10620140 PLC Adv

WIND TECHNICIAN 5 LAB...familiarizes the students with schematic reading and prepares the student to use schematics for troubleshooting and LOTO. The student will demonstrate proficiency in the use of a multi-meter for troubleshooting and LOTO. The student will demonstrate proficiency in troubleshooting motors and safely changing out motors. In this capstone course, students will responsibly perform troubleshooting and maintenance of the wind turbines on LTC's campus. COREQUISITE: 10482126 Wind Technician 4

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, 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 10-482-1
Associate Degree in Applied Science

ABOUT THE PROGRAM

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PROGRAM OUTCOMES

- Install, inspect, test, service, and repair wind turbine components.
- Wear proper Personal Protection Equipment, identify hazards, mitigate said hazards, and safely climb towers.
- Cognitively think and use deductive reasoning as well as manufacturer information while troubleshooting or maintaining a wind turbine.
- Clearly and responsibly communicate appropriate information with stakeholders under minimal supervision.
- Practice the basics of self-evacuation and rescue.

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ADMISSION AND PROGRAM ENROLLMENT STEPS

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- Complete the online Student Success Questionnaire.
- Complete Technical Standards form.
- Schedule a Program Advising Session with your assigned advisor to plan your first semester schedule, review your entire plan of study, discuss the results of the Student Success Questionnaire.

APPROXIMATE COSTS

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

FINANCIAL AID

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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. Interested transfer/dual-degree students are encouraged to contact the LTC program advisor at 920-693-1378.

CONTACT

LTC Career Coach
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Catalog No.	Class Title	Credit(s)
Term 1 (Fall 2020)		
10482110	Energy and Solar Power	1
10620103	Fluid Power 1	2
10620105	DC Fundamentals	2
10804113	College Technical Math 1A	3
		8
Term 2 (Spring 2021)		
10620104	Fluid Power 2	3
10620138	Programmable Controllers - Allen Bradley	3
10620110	AC Fundamentals	2
		8
Term 3 (Fall 2021)		
10482101	Wind Systems Intro	3
10482104	Wind Technician 1 - Rescue and Tools*	2
10620122	Industrial Wiring	2
		7
Term 4 (Spring 2022)		
10482106	Wind Technician 2 - Safety & Maintenance*	3
10482124	Wind Technician 3 Lab*	1
10620141	Industrial Controls & Motors	3
10482132	10482132 Turbine Maintenance* OR 10482103 Wind Farm Practical Experience (2 cr)	2
		9
Term 6 (Fall 2022)		
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 2023)		
10809195	Economics OR 10809196 Introduction to Sociology	3
10801196	Oral/Interpersonal Communication	3
		6
Term 5 (Summer 2023)		
10482126	Wind Technician 4*	3
		3
Term 8 (Fall 2023)		
10620164	Electromechanical Systems	2
10620195	Industrial Troubleshooting	1
10482133	Wind Systems Networking	2
10482128	Wind Technician 5 Lab*	2
		7
Term 9 (Spring 2024)		
10801195	Written Communication	3
10809198	Introduction to Psychology	3
		6
		TOTAL 62

*These class dates and times may be rescheduled due to inclement weather. Students must be within safe-climbing, unequipped body weight of 115 to 295 pounds.



AC FUNDAMENTALS...prepares 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 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 Mtn Trades Math or 31420320 Mach Tool Math or math placement asmtt 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 & analyze electrical quantities in series and parallel circuits; desolder/solder single lead components. COREQUISITE: 10804113 College Tech Math 1A or 10804115 College Tech Math 1

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

ELECTROMECHANICAL SYSTEMS...prepares the student to communicate with, tune, run, and troubleshoot Allen-Bradley servos; utilize electrical control of hydraulic systems, explore PID control of motor speed; and investigate open and closed loop control systems. PREREQUISITES: 10620104 Fluid Power 2 and 10620110 AC Fund or 10660110 AC Fund

ENERGY AND SOLAR POWER...provides 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 laws and theories of electric power generation that govern motion and how to apply them to a range of concepts including rotational inertia, acceleration, velocity, lift, force, torque, etc. Studies the law of Conservation of Energy and basic atomic theory and how these concepts apply to electric power generation. The use and function of simple machines, and how they relate to electric power generator function, is also explored.

ENERGY POWER AND FORCE LAB...applies the laws and theories that govern motion to energy power and force concepts including rotational inertia, acceleration, velocity, lift, force and torque. Exploration of basic atomic theory and how it applies to electric power generation is conducted. In addition, the law of conservation of energy is applied in the lab activities. The use and function of simple machines, and how they relate to generator function is also examined. COREQUISITE: 10482135 Energy Power & Force

FLUID POWER 1...prepares the learner to identify hydraulic and pneumatic component symbols; adjust a pressure relief valve; analyze the operation of a pilot operated relief valve; analyze Pascal's law; evaluate flow, velocity, work and power in industrial hydraulic and pneumatic circuits; analyze meter-in, meter-out, and bypass flow control circuits; identify basic hydraulic and pneumatic control valves; and assemble hydraulic circuits. COREQUISITES: 10804115 College Technical Math 1 or 10804114 College Tech Math 1A

FLUID POWER 2...enhances the learner's ability to read schematics containing fluid power component symbols; assemble systems using schematics; analyze system's operation using a schematic; evaluate the general characteristics and terms of fluids under pressure, fluid conditioning, conductors, reservoirs, accumulators, pressure control; and troubleshoot malfunctioning pressurized systems. PREREQUISITE: 10620103 Fluid Power 1 or 10620155 Industrial Maintenance Hydraulics and Pneumatics

INDUSTRIAL CONTROLS AND MOTORS...prepares 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. PREREQ: 10620122 Indust Wiring and COREQ: 10620110 AC Fund or PREREQ: 10660110 AC Fund

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 the student to understand basic PLC structure and terminology; learn to create and troubleshoot basic PLC programs using the RSLOGIX 500 software and the RSLINX communication software; become familiar with communicating with programming SLC-500 PLCs. This course is highly computer based. This class qualifies for 64 hours of Continuing Education Units (CEUs) for Electricians.

SOLAR TECHNICIAN 1 LAB...provides hands-on lab-based environment where you learn 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. PREREQUISITES: 10620110 AC Fundamentals, 10620138 Programmable Controllers-Allen Bradley, 10620104 Fluid Power 2 and 10804113 College Tech Math 1A or 10804115 College Tech Math 1 and 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. PREREQUISITE: 10482124 Wind Technician 3 Lab and 10620138 Programmable Controllers - Allen Bradley

WIND TECHNICIAN 1 - RESCUE AND TOOLS...prepares students for work at height and to perform equipment inspections on climbing and fall arrest gear; wear required PPE, PFPE, and apparel while working on wind turbine systems. Students will be SAFER certified in safe tower access, climbing, rescue, and confined space rescue, and will demonstrate proper knot tying and display professionalism and safe working habits during all tasks. Students are trained in the use of hand tools and torque tools. COREQUISITE: 10482101 Wind Systems Introduction

WIND TECHNICIAN 2 - SAFETY AND MAINTENANCE...familiarizes learners with OSHA regulations related to the wind industry and proper methods to eliminate and control hazards. Students receive training in First Aid, CPR, rigging, and confined space and receive the 10-hour OSHA for General Industry and the Tools at Height certifications. Participants develop skills in repair and maintenance of commercial wind turbines. Industry standards, training manuals, and field experience are course standards. COREQUISITE: 10482104 Wind Technician 1 - Rescue & Tools

WIND TECHNICIAN 3 LAB...certifies learner in torque tool techniques with Snap-on tools. Students will apply safe and proper techniques while using various styles of torque wrenches and adapters including hand torque and hydraulic torque wrenches. Students will demonstrate proficiency in performing a variety of maintenance functions on the GE 1.5 nacelle including oil filter changes, generator brush maintenance, and brake pad replacement while following proper safety and LOTO procedures. COREQUISITE: 10482106 Wind Technician 2 - Safety and 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 Mtn or 10482103 Wind Farm Intern & 10482128 Wind Tech 5 and 10620140 PLC Adv

WIND TECHNICIAN 5 LAB...familiarizes the students with schematic reading and prepares the student to use schematics for troubleshooting and LOTO. The student will demonstrate proficiency in the use of a multi-meter for troubleshooting and LOTO. The student will demonstrate proficiency in troubleshooting motors and safely changing out motors. In this capstone course, students will responsibly perform troubleshooting and maintenance of the wind turbines on LTC's campus. COREQUISITE: 10482126 Wind Technician 4

WRITTEN COMMUNICATION...teaches the writing process, which includes prewriting, drafting, revising, and editing. Through a variety of writing assignments, 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

You've got lots of choices when it comes to finding the career that's right for you. LTC's Certificate programs allow you to study a concentrated area with just a few courses and a limited time commitment.

Accounting

- Tax Preparer
- Advanced Manufacturing
- Advanced Fabrication
- Advanced Pipe Welding
- Certified Welding Inspector (CWI) Prep
- Industrial Networking
- Industrial Technician - Automation
- Introduction to Electro Mechanical Technology
- Introduction to Industrial Welding
- Introduction to Machine Tool
- Introduction to Maintenance Mechanic
- Robotic Weld Technician

Agriculture & Horticulture

- Ag Ed Plus
- Ag Ed Plus - Management
- Ag Ed Plus - Production
- Agribusiness Crops and Soil - Basic
- Agribusiness Livestock Basic
- Agribusiness / Financial Basic
- Dairy Worker Training
- Greenhouse and Nursery
- Horticulture Basics

Automotive

- Automotive Electrical
- Automotive Mechanical
- Automotive Refinisher

Business Management & Administration

- Compensation & Benefits
- Employee Selection & Development
- Entrepreneurship & Business
- Human Resources Basics
- ISO 9001 Internal Auditor
- Logistics & Distribution
- Materials Management
- Project Management
- Purchasing
- Lean Six Sigma for Black Belt Certification
- Lean Six Sigma for Green Belt Certification
- Office Technology
- Supervisory Essentials

Construction

- Construction Trades Fundamentals
- Early Childhood Education
- Childcare Professional

Energy

- Radiation Safety Technician
- Radiation Safety Technician- Basic
- Radiation Safety Technician- Intermediate
- Radiation Safety Technician- Advanced
- Wind Tower Climber

Healthcare

- Community Retail Pharmacy Technician
- Employed Pharmacy Technician
- Patient Services Specialist

Hospitality & Culinary Arts

- Customer Service Skills
- Foundation of Food and Beverage Management
- Foundation of Hotel Management
- Foundation of Meeting and Event Planning
- Hospitality Management Professional
- Restaurant Service Essentials

Information Technology

- Industrial Networking
- IT-Service Center Technician
- Servers & Networking

Legal

- Paralegal Post Baccalaureate

Marketing & Graphic Design

- Adobe Creative Cloud
- Digital Media
- Digital Print Design

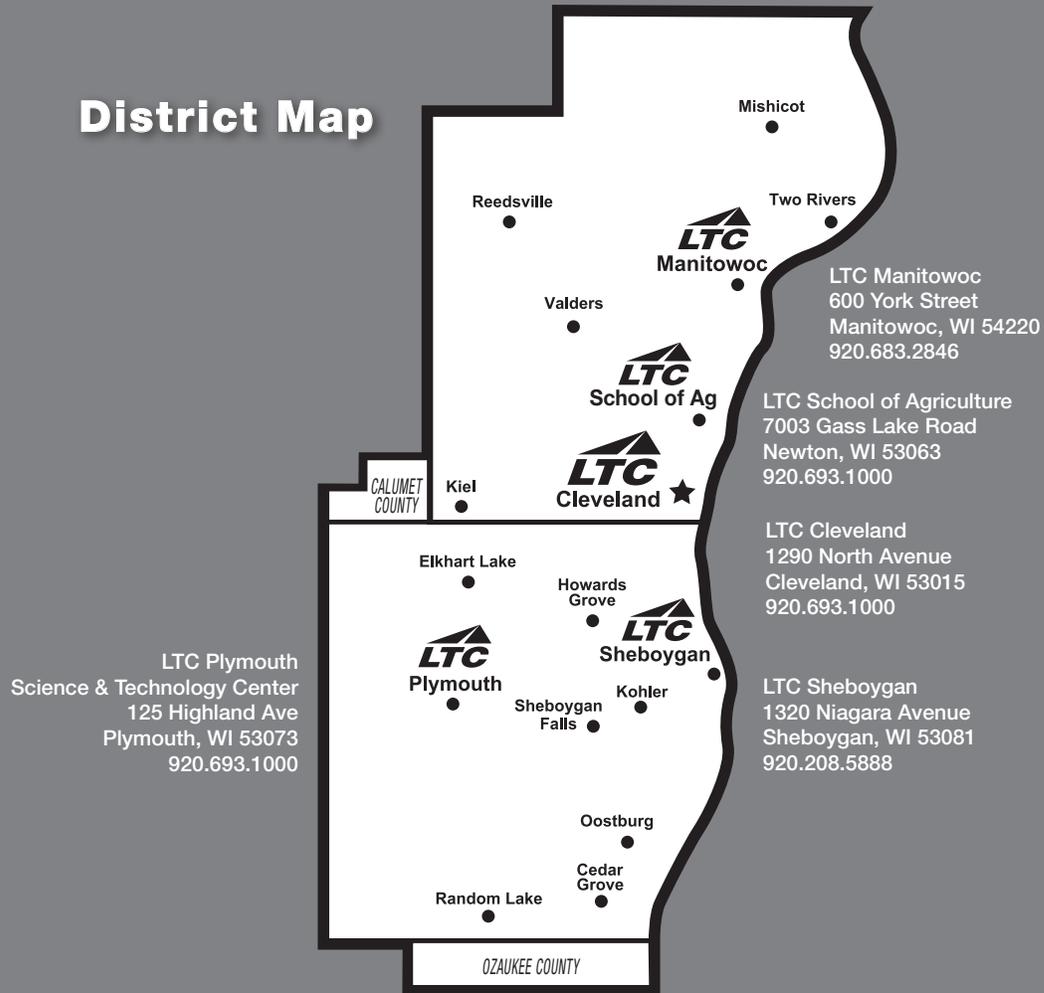
Software Learning Center

- Microsoft Office Introduction
- Microsoft Office Integration

Public Safety

- Registered Nurse to EMT

District Map



LAKESHORE TECHNICAL COLLEGE

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