

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

- Understand total quality control concepts, inspection methods, data collection, application of sampling plans, quality cost, and quality audits.
- Utilize mathematical calculations, including metric conversions, geometry, trigonometry, and basic and advanced statistical process control techniques.
- Understand and apply Lean Six Sigma concepts of continuous improvement.
- Understand quality systems used currently in industry. These systems include, ISO 9000, Malcolm Baldrige, and Deming Prize.
- Plan quality audits to assure quality systems are working and take corrective action through continuous improvement.

ADMISSIONS STEPS

- Work with Admissions Specialist to:
 - Submit Application and \$30 Fee
 - Complete an assessment for placement (Accuplacer or ACT)
 - Submit Official Transcripts (High School and Other Colleges)
- Meet with Program Advisor/Counselor to Discuss Program Details

APPROXIMATE COSTS

- \$132 per credit (resident)
- \$198 per credit (out-of-state resident)
- Other fees vary by program (books, supplies, materials, tools, uniforms, health-related exams, etc.) Visit gotoltc.edu/payingforcollege for details.

PLACEMENT SCORES

Accuplacer/ACT scores will be used to develop your educational plan. Contact your program advisor/counselor for details.

SPECIAL NOTE

The majority of these classes are offered in an evening delivery format with a few classes available days and evenings.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES

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

CONTACT

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Catalog No.	Class Title	Credit(s)
Term 1		
10105124	Portfolio Introduction	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	3
16		
Term 2		
10623123	Blueprint Reading, Metrology, and Calibration	3
10623131	Planning for Six Sigma	3
10806112	Principles of Sustainability	3
10801198	Speech OR 10801196 Oral/Interpersonal Communications	3
10804123	Math w/ Business Applications	3
10809195	Economics	3
18		
Term 3		
10105128	Personal Branding	2
10196188	Project Management	3
10623110	Lean Six Sigma - Measure and Analyze	4
10623111	Lean Sigma Tools - Improve & Control	4
10809196	Sociology - Introduction to OR 10809122 Introduction to American Government	3
16		
Term 4		
10101155	Accounting for Professionals	3
10182102	Service Operations Management	3
10623115	Portfolio Assessment-Quality	1
10623112	Lean Six Sigma - Implementation	3
10623193	ISO 9001:2008	3
10623114	Lean Six Sigma Tools - Black Belt	4
17		
		TOTAL 67

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



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. COREQUISITE: Microsoft Excel skills or equivalent and PREREQUISITE: 10804123 Math w/ Business Applications or CONDITION: 101101 Paralegal program requirements met

BLUEPRINT READING, METROLOGY AND CALIBRATION ...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. The applications portion shows how measurement and test equipment is used to ensure useful results in practical situations.

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 equivalent

INTRO 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. COREQUISITE: 10838105 Intro Reading and Study Skills or equivalent

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

ISO 9001:2008 ...is designed to introduce participants to the QS/ISO 9001: 2008 standards. The course is structured to teach the QS/ISO 9001: 2008 standards, how to document procedures, and how to perform audits. All of the QS automotive standards will be introduced.

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 SIGMA TOOLS - 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 or 10606199 Intro Current Mfg or CONDITION: 106232 Qlty Assurance Tech or 106235 Mfg Mgmt enrollment requirements met

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. COREQUISITE: 10623111 Lean Six Sigma-Improve & Control

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. PREREQUISIT ES: 10623119 Six Sigma Tools-Supply Chain or 10623110 Lean Six Sigma-Meas/Analyze & 10623111 Lean Six Sigma-Improve/Cntrl or 10623111C3 Six Sigma-Improve/Cntrl & 10623112 Lean Six Sigma-Impl or Equiv Six Sigma Green Belt Cert w/ Project

MATH WITH BUSINESS APPS ...covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications. PREREQUISITE: 10834109 Pre-Algebra or equivalent and COREQUISITE: 10838105 Intro Reading and Study Skills or 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. PREREQUISITE: 10105124 Portfolio Introduction or 10201116 Graphic and Web Portfolio

PLANNING FOR SIX SIGMA ...uses Design for Six Sigma (DFSS) tools and techniques to build high levels of quality into the design of products, services, and processes. The DMADV process is used to identify critical-to-customer requirements and incorporate them into effective specifications, methods and process controls. The techniques for the automotive APQP process and the Stage-Gate qualification system used by industrial, health care and service businesses, are presented and applied to the course materials.

PORTFOLIO ASSESSMENT-QUALITY ...prepares the student to identify what they have learned throughout the quality assurance 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: 10105124 Portfolio Introduction and 10105126 Career Assessment or 10105128 Personal Branding

PORTFOLIO INTRODUCTION ...prepares the student to develop a personal and professional portfolio, to identify self-awareness through various self-assessments and apply these results to the workplace and other environments, to write goal statements and understand their value, to develop an individual history of events and achievements, and to identify significant learning experiences throughout the student's life.

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 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. COREQUISITE: Microsoft Excel skills or equivalent and PREREQUISITE: 10103124 Intro to MS Project - Level 1 or 10103156 Intro to MS Office Project 2013 - Level 1

QUALITY CONCEPTS ... provides an overview of quality systems, methods and analysis using Minitab software. Basic quality philosophies such as Deming's principles, continuous improvement, quality costs, supplier relations and inspection theory will be presented. The components of a basic quality system compatible with ISO9000 and Six Sigma will be explored. Minitab software will be taught and utilized to collect and analyze data. Techniques such as pareto, trend analysis, histograms, cause and effect diagrams and corrective/preventive action techniques will be applied to the data in order to address problems and improve processes. COREQUISITE: Microsoft Word and PowerPoint skills or 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.

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 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. COREQUISITE: Microsoft Word, Excel 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 Wrting equivalent and COREQUISITE: 10838105 Intro Rdg & Study Skills or equivalent