MECHANICAL COMPUTER-AIDED DRAFTING

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.

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-2009 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.

PROGRAM ADMISSIONS STEPS

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

ENROLLMENT PROCESS

- Work with program Academic Advisor to:
  - Complete an assessment for placement (Accuplacer or ACT).
  - Complete Functional Abilities Statement of Understanding form.
  - Meet to plan your first semester schedule, review your entire plan of study, discuss placement assessment results and complete any additional enrollment requirements.

APPROXIMATE COSTS

- $142 per credit (resident)
- Other fees vary by program (books, supplies, materials, tools, uniforms, health related exams, etc.) Visit gotoltc.edu/financial-aid/tuition-and-fees for details.

FINANCIAL AID

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

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
10809196	Introduction to Sociology OR 10809198 Introduction to Psychology	3
		12
	Term 3	
10606195	Parametric Drafting Using Creo	2
10606197	Working Drawings Using Creo	2
10801196	Oral/Interpersonal Communication	3
		7
		TOTAL 29

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

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 Reading and Study Skills or equivalent

INTRODUCTION TO WORKING DRAWINGS (AUTOCAD)…provides the leaner 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 anglemeasurement 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 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 andcreate 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 andfeatures and create detail drawings from SolidWorks models. COREQUISITE: 10606105 Introduction to Working Drawings (Auto CAD)

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 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