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.
• Function effectively on both self-directed and team-oriented projects.
• Ability to grasp spatial relationships.

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/financial-aid/tuition-and-fees for details.

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

SPECIAL NOTE
Program can also be completed by attending evenings.

CAREER & EDUCATION ADVANCEMENT OPPORTUNITIES
LTC credits transfer to over 30 universities. For more information visit gotoltc.edu/future-students/transfer.

CONTACT
Chou Yang, Admissions Specialist
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Curriculum and Program Acceptance requirements are subject to change. Program start dates vary; check with your advisor/counselor 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.

BASIC MODELING USING 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)

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 SOCIOLGY...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

MANUFACTURING PROCESSES AND APPLICATIONS...introduces the learner to machining processes including, milling, turning, drilling and grinding. 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 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 Creo

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: 10606107 Drafting Mechanical IV/CAD IV or 10606105 Basic Modeling Using 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: 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