

TECHNICAL DRAFTING (TED)

TED 108 Introduction to Drafting (3)

Introduces the application of fundamental drawing types which includes geometric construction, ortho-graphic views, sections, auxiliary views, and development. Students are instructed in the care and use of the tools and equipment.

TED 115 Technical Math (3)

This course is a math review of practical skill as related to the drafting workplace where the students utilize fractions, decimals, simple equations, powers and roots, ratios and proportion, plane geometry, right triangles, oblique triangles, computation of areas and volumes, and use of charts and graphs. Additionally, Part II of this course students will utilize plane geometry, right triangles, oblique triangles, trigonometric natural and co- functions, solutions of triangles right and oblique, computation of areas and volumes, and use of charts and graphs.

TED 125 Technical Math II (3)

This course is a math review of practical skill as related to the drafting workplace where the students utilize plane geometry, right triangles, oblique triangles, trigonometric natural and co-functions, solutions of triangles right and oblique, computation of areas and volumes, and use of charts and graphs. Prerequisite: Technical Math I

TED 128 Computer Aided Drafting I (3)

First course in a sequence introducing AutoCAD software as a drafting tool. Instruction will be given in file handling, basic commands function, drafting techniques, presentation, and plotting. Architectural and mechanical applications will be used in lab exercises to demonstrate AutoCAD commands. Work will be completed with AutoCAD.

TED 135 Computer Aided Drafting II (3)

Second course in a sequence covering intermediate AutoCAD commands including attribute blocks, dimensioning, external references, object linking/embedding, and advanced drawing set-up, and user coordinate systems. Work will be completed with AutoCAD

TED 138 Machine Design (4)

This course is an introductory to fundamentals, theory, terminology, and practical construction methods in the machine disciplines. Use of actual working drawing used as reference to industry standards. Students will use a combination of drawing board and CAD in this segment. Practical skills refinement in methods, materials identification and labeling, and drafting techniques and standards used in various types of drawings used in for the machine industries are taught.

TED 140 Machine Design (6)

This course is an introductory to fundamentals, theory, terminology, and practical construction methods in the machine disciplines. Use of actual working drawing used as reference to industry standards. Students will use CAD in this segment. Practical skills refinement in methods, materials identification and labeling, and drafting techniques and standards used in various types of drawings used in the machine industries are taught. Recommended prerequisite or co-requisites: TED100 General Drafting; TED135 CADII

TED 145 Computer Aided Drafting III (4)

This course will introduce students to 3D mechanical and industrial design software- solid edge. Developing fundamental knowledge in the areas of part and assembly modeling, using adaptive features, utilizing work groups, surfacing basics, data management, and lay-out presentation.

TED 148 Industrial Design (4)

This course will be using the acquired knowledge from the Machine Design and CAD III courses to produce industrial design projects. Additionally, students will be learning the methods and standards used in various areas including: precision sheet metal design, part design, weldments, assemblies, & mechanisms.

TED 200 Architect Design (5)

Introduces fundamental aspects of architectural drafting. Covers drafting of residential and light commercial buildings, sections and elevations, schedules, design lay-outs, details, and working drawings. Assignments will be completed primarily using Autodesk's Revit software. Recommended prerequisite or co-requisite: TED230 CAD III.

TED 208 Architectural Design I (3)

Students will learn tools and techniques used in industry to create a 3-story commercial building with Revit (3D parametric, BIM software). Featuring tools to make sections, elevations, schedules, design layouts, and details, students will wrap up their project by creating a set of construction documents. The modeling of Mechanical, Electrical, and Plumbing systems will also be introduced

TED 210 Industrial Design (6)

Introduces mechanical drafting utilizing Autodesk's INVENTOR software through parametric 3D-design tools for assembly centered modeling and collaborative engineering. Students develop fundamental knowledge in the areas of part and assembly modeling, using adaptive features, utilizing work groups, surfacing basics, data management, and lay-out presentation. Recommended prerequisites or recommended co-requisites: Machine Design; CAD III

TED 215 Architectural Design II (3)

Introducing the fundamental aspects of architectural drafting and focusing on residential house design, students will plan, design and model a residential house plan. Their projects will include making a construction set of documents including: sections and elevations, schedules, design lay-outs, and details.

TED 220 Civil Design (6)

Introduces civil drafting applications using civil, mapping, and survey products. Drawings will be developed to include plats, related civil infra-structure, public utilities, contours, and roads. Recommended prerequisite or recommended co-requisite: CAD II

TED 228 Civil Design I (3)

First course in a sequence introducing civil drafting applications using civil, mapping, and survey products. Drawings will be developed to include plats, related civil infra-structure, public utilities, contours, and roads utilizing AutoCAD.

TED 230 CAD III (5)

Third course in a three-term sequence covering advanced AutoCAD commands including advanced plotting, plotter, CAD standards, modeling 3-D wire frame, surfaces, solids, and 3-D presentation. Work will be completed with AutoCAD. Recommended prerequisite: CAD II

TED 235 Civil Design II (3)

Second course in a sequence introducing students to the different types of software used in industry. Students will use software such as Civil 3D, ArcGIS, and others to create the same type of projects featured in the TED Civil I course.

TED 238 Structural Design (3)

Introducing the fundamental aspects of structural design, students will learn the methods and standards used in industry. Students will be utilizing Tekla Structures (3D parametric, BIM software) for their projects. Students will also be able to apply this course to the Architectural and Civil design courses.

TED 245 Workplace Skills (3)

Upon successful completion of this course, the student should be able to identify the job skills necessary to have a successful career in the field of their choice. Topics included listening skills, oral communication, human relations, decision making/problem solving, how to work as a team, time and resource management, work ethics, career planning and resume building.

TED 248 Manufact. Design & 3D Printing (3)

Focusing on manufacturing materials and processes, CAD and CAM software, students will create projects using industry methods and standards. Utilizing 3D printing to simulate the design process, students will be able to make prototypes of their projects and fix any design flaws before the completion of their projects.

TED 250 Workplace Skills I (2)

Students that have completed all course objectives and criteria plus having an opportunity for employment related to the drafting field may utilize On-the-Job Training (OJT) with instructor and administrative permission.

TED 255 Presentation&Special Projects (3)

During this course students will focus on creating advanced presentations, videos and simulations utilizing previously introduced software such as Inventor, Tekla structures, Revit, etc. Hololens and other technologies related to the industry will be introduced and implemented. Students will have the opportunity to fine tune their skills by working on special projects with a chosen area of focus within the industry.

TED 260 Technical Drafting OJT (3)

Students that have completed all course objectives and criteria plus having an opportunity for employment related to the drafting field may utilize this internship course with instructor and administrative permission.