ETD: ENGINEERING TECH: DRAFTING

Courses

	Credit(s)	Contact	Lab
ETD 1031C. INTRODUCTION TO CONSTRUCTION/ DRAFTING TECHNOLOGY.	3	2	1

INTRODUCTION TO CONSTRUCTION/DRAFTING TECHNOLOGY Overview of experience, academic and technical requirements in construction/ architecture, drafting, civil technology and surveying. Introduction to computers and application software. This course includes learning activity designed to ensure competence in the basic use of computers. (Lab Fee: $59.00).

ETD 1103C. ENGINEERING GRAPHICS WITH CAD.	3	2	2

ENGINEERING GRAPHICS WITH CAD Survey of principles and practices involved in making and reading engineering drawings. Engineering graphics will place emphasis on visualization, orthographic projection and line techniques. Introduction to computer-aided drafting/design will emphasize skills and competencies necessary to function in systems drafting environment. Includes keyboard commands, menu printer/ plotter, input devices, computer terminology and systems operation. Provides hands-on experience to create, save and retrieve drawings having various shapes, lines, types, dimensions and layers. This course includes learning activity designed to ensure competence in the basic use of computers. (Special Fee: $66.00).

ETD 1340C. ADVANCED CADD.	3	2	2

ADVANCED CADD Prerequisites: ETD 1100C or ETD 1103C or ETD 1320C or departmental approval Provides experienced CADD student opportunity to approach detailed and intricate drafting and design problems from computer perspective. Provides hands- on experience in creating custom menus, slides, text fonts, attributes, extractions, 3-D drawings, and rotations. (Special Fee: $66.00).

ETD 1701C. MECHANICAL DRAFTING I.	3	2	2

MECHANICAL DRAFTING I Pre-requisite: ETD 1340C or Department approval. Drawing basic machine elements and subassemblies including screw, threads, linkage, gears and cams with consideration to precision and limit dimensioning, tolerance allowances and limits. Study of working assembly and outline drawings with attention to drawing of assembly and details from pictorial drawings and sectional views of assemblies. (Special Fee: $59.00).

ETD 2355C. 3-D CADD.	3	2	2

3-D CADD Prerequisite: ETD 1103C or ETD 1320C or Department Approval. This course provides the CADD student with the opportunity to approach mechanical drafting and design problems from a 3-D solid modeling perspective. The student will learn how to create parametric 3-D solid models with computer software and how to take advantage of the information contained within to improve the design process. (Special Fee: $66.00).

ETD 2371C. INTRODUCTION TO 3D PRINTING.	3	1	2

INTRODUCTION TO 3D PRINTING Prerequisites: ETD 2355C or Department Approval This course provides an introduction to the world of 3D printing and scanning. Using existing knowledge of CADD software to create and export STL files, students will bring their digital work to life. Each student will become familiar with the interface and preparation of multiple three-dimensional printers. The class will also learn and present on how various industries are using this technology. (Lab fee: $59.00).

ETD 2372C. ADVANCED RAPID PROTOTYPING.	3	1	2

ADVANCED RAPID PROTOTYPING Prerequisites: ETD 2371C or Department Approval This course builds upon ETD 2371C with more advanced project applications. Students will explore simulation and design analysis of rapid prototyping and learn the relationships of physical prototyping to the design industry by examining case studies. When available, field trips to local manufacturing facilities will expose the students to current industry practices and the latest technologies. Several problem-solving projects will test their creativity, design abilities and 3D printing skills. The class environment will foster a design community providing feedback and critique from classmates. Students will receive a refresher on different physical and digital interfaces using a variety of 3D printers and scanners. (Lab fee: $59.00).

ETD 2614C. ELECTROMECHANICAL DRAFTING.	3	2	2

ELECTROMECHANICAL DRAFTING Prerequisite: ETD 1103C or ETD 1320C Study in fundamentals of electromechanical drafting designed to provide student with basic concepts and principles needed to prepare electromechanical working drawings. Student introduced in laboratory to various circuit elements and devices used in preparation of writing diagrams, schematics, block diagrams, layout of electronic chassis and wire harnesses. Emphasis on printed circuit board layout, as well as advanced microcircuit and integrated circuit drafting techniques. (Special Fee: $59.00).

ETD 2731C. MECHANICAL DRAFTING II.	3	2	2

MECHANICAL DRAFTING II Prerequisite: ETD 1701C This is a continuation of the Mechanical Drawing I course with emphasis placed on precision, accurate drawings, proper dimensioning schemes, and design processes. We will also focus on the basic application and use of Geometric Dimensioning and Tolerancing (GD&T) techniques as applied by the latest ASME standard. This is a hands-on interactive learning course using CAD software to design and draft various components of an assembly. (Special Fee: $59.00).

ETD 2930. SELECTED TOPICS IN DRAFTING AND DESIGN TECHNOLOGY.	1-3	variable

SELECTED TOPICS IN DRAFTING AND DESIGN TECHNOLOGY Prerequisite: Departmental approval. Provides exposure to various technical and non-technical disciplines in which student is likely to become involved upon entry into drafting and design environment. May be repeated for credit and grade forgiveness cannot be applied.

ETD 2942. INTERNSHIP IN DRAFTING AND DESIGN TECHNOLOGY.	1-4	variable

INTERNSHIP IN DRAFTING AND DESIGN TECHNOLOGY Prerequisites: Satisfactory completion of all mandated courses in reading, mathematics, English and English for Academic Purposes; a minimum 2.0 institutional or overall GPA; and 12 credits, including ETD 1320. The Program Director/Program Chair/Program Coordinator or Internship Placement Office has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course is a planned work-based experience that provides students with supervised career exploration activities and/ or practical experiences. Each earned credit of internship requires a minimum of 80 clock hours of work. Multiple credit course. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: $10.00).