ENGINEERING TECHNOLOGY/DRAFTING

ETD 1320C, Introduction to CAD Introduction to CAD
4 hrs., 3 crs.,
(Offered fall). Introduction to interactive graphics, description of CAD systems, advantages, applications, and operational skills with emphasis on developing a database.

ETD 2364C, Introduction to Solidworks Introduction to Solidworks
4 hrs., 3 crs.,
(Offered spring). This course is an introduction to the new designing techniques and capabilities of solid modeling using the SolidWorks software. Topics include the integration of advance parametric solid modeling drawing tools into SolidWorks.

ETD 2368C, Advanced Solidworks Advanced Solidworks
4 hrs., 3 crs.,
(Offered fall). Prerequisite: ETD2364C. This course presents the advanced use of new designing techniques and capabilities of solid modeling using the SolidWorks software, including the integration of the advanced parametric modeling and drawing tools for SolidWorks. The course topics to be covered include advanced 3D sketching, advanced work planes, advanced assembly construction, bottom up and top down, part configuration, Solid Works Tool Box applications, concept of mold design, and creation of sheet metal parts and assemblies.

ETD 2371C, Introduction to 3D Printing Introduction to 3D Printing
4 hrs., 3 crs.,
$56.00 lab fee. (Offered fall). Prerequisite: *ETD1320C. This course provides an introduction to the world of 3D printing and scanning. Using 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.

ETD 2372C, Advanced Rapid Prototyping Advanced Rapid Prototyping
4 hrs., 3 crs.,
71.00 lab fee. (Offered spring). Prerequisite: ETD2371C. This course builds upon ETD2371C 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 of3D printers and scanners.

ETD 2383C, Intermediate CAD/CAE/CAM Intermediate CAD/CAE/CAM
4 hrs., 3 crs.,
(Offered spring). Prerequisite: *ETD1320C. This course is a continuation of ETD1320C, Introduction to CAD. Advanced design concepts along with the application of generative design, rendering, animation and simulation with an introduction to CAM, computer aided manufacturing. The student will learn to create 2D models for laser engraving/cutting, waterjet and CNC plasma cutting.

ETD 2384C, Advanced CAD/CAE/CAM Advanced CAD/CAE/CAM
4 hrs., 3 crs.,
(Offered fall). Prerequisite: *ETD1320C, *ETD2383C. This course is a continuation of ETD2383C, Intermediate CAD/CAE/CAM. The student will learn to develop models for outputting G code for use with CNC controlled machines.

ETD 2949, COOP/Work Experience/Drafting COOP/Work Experience/Drafting
1 hr., 1 cr.,
1-3 crs. Cooperative Education courses may be taken toward completion of most of the Associate in Arts and Associate in Science degree programs. A maximum of six credit hours may be used in meeting the A.A. degree requirements. Prerequisite: Minimum of 2.0 GPA, meet with the co-op coordinator, and availability of co-op work experience slot. Supervised, practical work experience that seeks to combine theories and apply practical skills to projects in the student?s major field of study. Requirements include online weekly, mid-term, and end-of-term reflection assignments.