# COMPUTER ASSISTED DESIGN (CAD)

**CAD 181. Intro To Computer-Aided Drftng. (1 Credit)**
This is an introduction to the fundamental concepts and techniques of two-dimensional drawing using AutoCAD software. Topics include file management, the drawing environment, basic drawing and editing commands, multi-view object representation, text creation, dimensioning, and section views. 1 credit (2 laboratory hours), fall or spring semester

**CAD 184. CAD for Mechanical Design. (2 Credits)**
A comprehensive introduction to two-dimensional drafting techniques. Topics include file management, drawing environment and coordinate systems, geometry construction and modification, inquiry techniques, text, dimensioning, sectional views, blocking and assembly drawing. Emphasis is placed on accuracy of object geometry construction. This course has an additional lab fee. Co-requisite: DRFT 151 or permission of instructor 2 credits (1 lecture hour, 2 lab hours), fall semester

**CAD 186. 3-D Parametric Solid Modeling. (2 Credits)**
Utilization of 3D parametric modeling software to develop and document mechanical part component and assembly models. Topics include the parametric model concept, dimensional and geometric constraints, feature-based modeling techniques, fits in assembly, and plotting dimensioned multiview drawings. Emphasis is placed on model integrity and documentation. Prerequisite CAD 184 or permission of instructor 2 credits (1 lecture hour, 2 laboratory hours), spring semester

**CAD 288. Advanced Solid Modeling. (2 Credits)**
Advanced parametric solid modeling concepts and applications. Topics include solid modeling with 3D sketches, surface modeling, functional assembly modeling, simple mold design, sheet metal modeling, fasteners, visualization and animation tools, kinematic motion analysis, static stress analysis, and dimensioning with geometric tolerances. Emphasis is placed on model integrity and documentation. Prerequisite: CAD 186, DRFT 252 2 credit hours (4 laboratory hours), spring semester