COMPUTER AIDED DRAFTING (CAD)

CAD 140. Technical Drawing. (3 Credits)
Enhances the principles learned that are related directly to the field of drafting and design. Gives a more in-depth exposure to detail and working drawings, dimensioning, tolerancing and conventional drafting practices. Teaches CAD modeling, may include parametric modeling. (Credit will not be awarded for both CAD 140 and DRF 140). Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week.

CAD 161. Blueprint Reading I. (2 Credits)
Teaches the application of basic principles, visualization, orthographic projection, detail of drafting shop processes and terminology, assembly drawings and exploded views. Considers dimensioning, changes and corrections, classes of fits, tolerances and allowances, sections and convention in blueprint reading. (Credit will not be awarded for both CAD 161 and DRF 161). Laboratory 3 hours per week. Total 3 hours per week.

CAD 165. Architectural Blueprint Reading. (3 Credits)
Emphasizes reading, understanding and interpreting standard types of architectural drawings including plans, elevation, sections and details. (Credit will not be awarded for both CAD 165 and DRF 165). Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week.

CAD 225. Machine Drawing and Design. (3 Credits)
Teaches design of basic machine elements and the analysis of linear and geometric tolerancing including the preparation of complete design and production drawings. (Credit will not be awarded for both CAD 225 and DRF 225.) Lecture 2 hours per week. Laboratory 3 hours per week. Total 5 hours per week. Prerequisites: CAD 140 and CAD 241.

CAD 241. Parametric Solid Modeling I. (3 Credits)
Focuses on teaching students the design of parts by parametric solid modeling. Topics covered will include, but not limited to, sketch profiles; geometric and dimensional constraints; 3-D features; model generation by extrusion, revolution and sweep; and the creation of 2-D drawing views that include sections, details and auxiliary. (Credit will not be awarded for both CAD 241 and DRF 241). Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Prerequisite: CAD 140.

CAD 242. Parametric Solid Modeling II. (3 Credits)
Focuses on teaching students the design of parts by parametric solid modeling. Topics covered will include, but not limited to, sketch profiles; geometric and dimensional constraints; 3-D features; model generation by extrusion, revolution and sweep; and the creation of 2-D drawing views that include sections, details and auxiliary. Part I of II. (Credit will not be awarded for both CAD 241 and DRF 241). Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Prerequisite: CAD 241.

CAD 243. Parametric Solid Modeling III. (3 Credits)
Focuses on teaching students the software for the design of parts and assemblies by means of advanced parametric solid modeling to include advanced mechanical drafting techniques and building mechanical assemblies.(Credit will not be awarded for both CAD 243 and DRF 243). Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Prerequisites: CAD 241 and CAD 242.