

DRAFTING TECHNOLOGY (DRAF)

DRAF 101 F Blueprint Reading for Manufacturing (formerly DRAF 070 F)

2 Units

36 hours lecture per term. This basic print reading course is designed to prepare Machine Tool, Welding, Engineering, and Metal Fabrication students to interpret drawings related to manufacturing. This course explains the importance of engineering drawings in the manufacturing environment. This course covers the basic elements of a blueprint and introduces the concepts to successfully interpret engineering drawings. This course covers the principles of shop sketching, basic review of shop mathematics, and use of common measuring tools. A study of dimensioning and drawing symbols will be included. (CSU) (Degree Credit)

DRAF 140 F AutoCAD for Industry

3 Units

Advisory: DRAF 171 F.

45 hours lecture and 27 hours lab per term. This is a comprehensive introduction to AutoCAD designed for practicing drafters, engineers, and other manufacturing oriented persons. Topics include hardware requirements and operation, database management, terminology, 2D AutoCAD drawing commands, plotting, symbol libraries, and dimensioning commands. Field trips may be optional outside of regularly-scheduled class times. (CSU) (Degree Credit)

DRAF 141 F Advanced CAD for Industry

3 Units

Prerequisite(s): DRAF 140 F with a grade of C or better or previous experience.

45 hours lecture and 27 hours lab per term. This is an advanced course in computer aided design (CAD) using AutoCAD. Students will learn advanced industrial drafting concepts while strengthening their CAD skills. Emphasis will be on drafting and design areas such as fasteners, auxiliary view, isometric view, development layout, scaling and paperspace. A "2D" approach to AutoCAD will be used. (CSU) (Degree Credit)

DRAF 143 F 3D Applications Using AutoCAD

3 Units

Prerequisite(s): DRAF 140 F with a grade of C or better.

45 hours lecture and 27 hours lab per term. This course is designed for the experienced AutoCAD user who needs a working knowledge of AutoCAD's 3D environment. Topics will include an introduction to 3D applications, the 3D coordinate system, display control wire frame modeling, surface modeling, solids modeling, analysis of a solids model (mass properties), model rendering, hardcopy output, and 2D/3D transfer. This course will be taught with an emphasis on mechanical drafting applications. (CSU) (Degree Credit)

DRAF 171 F Fundamentals of Drafting

2 Units

18 hours lecture and 54 hours lab per term. This is a beginning drafting course that will introduce the proper use of drafting instruments, lettering, geometric construction, pictorial drawings, orthographic projection, dimensions, single-auxiliary views and sections. Emphasis is placed on line quality and lettering as well as some problems drawn from the industrial field. (CSU) (Degree Credit)

DRAF 173 F Geometric Dimensioning and Tolerancing

2 Units

Advisory: DRAF 101 F.

36 hours lecture per term. This is an introductory course in the application and interpretation of geometric dimensioning and tolerancing concepts per the latest revision of the American Society of Mechanical Engineers (ASME) standard #Y14.5-2018. This course is designed for persons working in the fields of drafting, machining, manufacturing and quality control. (Degree Credit) (CSU)

DRAF 944 F Solidworks

3 Units

45 hours lecture and 27 hours lab per term. This course provides the student with instruction in the concept, practice, and development of feature based solid modeling using popular solid modeling software. Students will demonstrate the features of the software by creating parametric solid models. (Degree Credit)

DRAF 945 F Advanced Solidworks

3 Units

Prerequisite(s): DRAF 944 F with a grade of C or better

45 hours lecture and 37 hours lab per term. This course provides the student with advanced instruction in the concept, practice, and development of feature-based solid modeling using Solidworks software. Students will demonstrate the features of the software by creating advanced 3D parametric solid models, assemblies and 2D hardcopy layouts. (Degree Credit)