DRFT 101. Introduction to Drafting and Design Technologies
1 Credit
Professional and student organizations associated with the Drafting and Design Technologies program, degree requirements, employment skills and work habits, and university and college policies and procedures will be explored. Students will be introduced to the current learning management system and career-readiness certification. Restricted to Community Colleges only.

DRFT 105. Technical Drawing for Industry
3 Credits (2+2P)
Technical sketching, basic CAD, and interpretation of drawings with visualization, speed and accuracy highly emphasized. Areas of focus include various trades such as machine parts, welding, heating and cooling, and general building sketches/plan interpretation.

DRFT 108. Drafting Concepts/Descriptive Geometry
2 Credits (1+2P)
Basic manual drafting skills, sketching, terminology and visualization. Graphical solutions utilizing applied concepts of space, planar, linear and point analyses. Metric and S.I. units introduced.

DRFT 109. Computer Drafting Fundamentals
3 Credits (2+2P)

DRFT 112. Drafting Concepts/Computer Drafting Fundamentals I
4 Credits (2+2P)
Basic drafting skills, terminology, and visualization. Introduction to principles and fundamentals of computer-aided drafting. Same as E T 106.
Prerequisite(s): OECS 207, OECS 125 or consent of instructor.

DRFT 113. Drafting Concepts/Computer Drafting Fundamentals II
4 Credits (2+2P)
Drafting for mechanical/industrial applications; machine part detailing, assemblies in orthographic, isometric, auxiliary, oblique, and sectional views. Two-dimensional AutoCAD with introduction to 3-D AutoCAD. Same as E T 216. Restricted to: Community Colleges only.
Prerequisite: DRFT 112.

DRFT 114. Introduction to Solid Modeling
3 Credits (2+2P)
2D mechanical drafting and 3D mechanical solid modeling utilizing the latest version of AutoCAD software. Industry dimensioning and annotation standards will be emphasized. 2D multi-view working drawings, 3D solid models, and basic 3D model assemblies will be introduced. Restricted to Community Colleges campuses only.
Prerequisite(s): DRFT 109.

DRFT 115. General Construction Safety
3 Credits
Overview of general construction safety related to building, highway and road construction, and surveying field work for entry-level individuals. Students will also have the opportunity to earn a 10-hour construction industry OSHA card. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

DRFT 116. Introduction to Construction Management
3 Credits
Introduction to the construction industry and construction management; construction documents and contracts; project planning, scheduling and administration; construction site management; and the role of Building Information Modeling (BIM) in construction management. Pre/ Restricted to: Community Colleges only.
Corequisite(s): DRFT 151 or consent of instructor.
DRFT 164. Intermediate Mechanical Drafting/Solid Modeling  
3 Credits (2+2P)  
Intermediate 3D mechanical parametric solid modeling and assembly creation utilizing the latest version of Autodesk Inventor software. The creation of 2D working drawings from 3D solid models will be emphasized. Geometric Dimensioning and Tolerancing (GD&T), basic material properties, and industry standard fastening and manufacturing methods will be introduced.  
Prerequisite(s)/Corequisite(s): DRFT 114. Restricted to Community Colleges campuses only.

DRFT 165. Introduction to Building Information Modeling  
3 Credits (2+2P)  
Introduction to Building Information Modeling (BIM) in the development of virtual 3D building models, construction documents, renderings and basic animations related to architectural, structural, and mechanical/electrical/plumbing building components. Utilizes the latest BIM technologies in the integration one, parametric BIM. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

DRFT 176. Solid Modeling, Rendering and Animation  
3 Credits (2+2P)  
Introduction to three dimensional drafting and solid modeling, rendering and animation for architecture and engineering fields. Material application, mapping, and scene lighting will be introduced. Restricted to: Community Colleges only.  
Prerequisite(s): DRFT 109.

DRFT 177. Computer Rendering and Animation I  
3 Credits (2+2P)  
Introduction to technical applications of computer generated renderers and animations for the architecture and engineering fields. 3D models, photo-realistic renderings, and basic animation movie files will be produced utilizing Autodesk VIZ and Google SketchUp software. May be repeated for a maximum of 6 credits.

DRFT 180. Residential Drafting  
3 Credits (2+2P)  
Basic residential drafting including, floor plans, foundation plans, sections, roof plans, exterior and interior elevations, and site plans. Applicable residential building and zoning codes, construction methods and materials, adaptable residential design, and drawing and sheet layout for architectural drafting will be introduced. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

DRFT 181. Commercial Drafting  
3 Credits (2+2P)  
Drafting principles, plan coordination, and code analysis applicable in the development of working drawings for commercial, public, and industrial building projects. Students will utilize National Cad Standards, ADA Standards, and will be introduced to modern office practice. Pre/Restricted to: Community Colleges only.  
Prerequisite(s): DRFT 109.  
Corequisite(s): DRFT 180.

DRFT 190. Finding and Maintaining Employment  
2 Credits  
Techniques in self-evaluations, resume writing, application completion, job interviewing, and job retention. Exposure to work ethics, employee attitudes, and employer expectations.
DRFT 242. Roadway Development Drafting
3 Credits (2+2P)
Advanced civil/survey technology and drafting related to roadway development. Emphasis is on relevant terminology, codes/standards, and the production of complex working drawings such as topographical/grading, drainage, master utilities, roadway plans/details/etc., according to agency standards. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.
Prerequisite(s): DRFT 143.

DRFT 243. Land Development Drafting
3 Credits (2+2P)
Advanced civil/survey technology and drafting related to land development. Emphasis is on relevant terminology codes/standards, and the production of complex working drawings such as subdivision plats, local utility and drainage plans, construction details roadway plans, etc., according to local development/agency standards.
Prerequisite: DRFT 143 and DRFT 153.

DRFT 250. Principles of Detailing and Design
3 Credits (2+2P)
Advanced practice in construction documentation in the development and coordination of working drawings & specifications. In particular, will utilize Architectural Graphic Standards, National CAD Standards, and ADA standards to develop detail drawings related to Architectural, Civil, Structural and Building Mechanical systems. Will also be introduced to basic principles, factors, and process of building design such as space planning, site analysis, and basic architectural programming.
Prerequisite: DRFT 180 or DRFT 181.

DRFT 254. Spatial Data Processing
3 Credits (2+2P)
Utilizes the tools and technologies of GIS, processing volumes of geodata identifying a numerical, coded or listed map. Involves the analysis of spatial data from various diverse applications and place in a descriptive mapping process. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.
Prerequisite(s): DRFT 204.

DRFT 255. Independent Study
1-3 Credits (1-3)
Instructor-approved projects in drafting or related topics specific to the student’s individual areas of interest and relevant to the drafting and graphics technology curriculum. Consent of instructor required. May be repeated for a maximum of 6 credits.

DRFT 265. Advanced Building Information Modeling Applications
3 Credits (2+2P)
Advanced applications of Building Information Modeling (BIM) including the creation of, and practice in collaborative work sets, data and design analyses, energy modeling and analysis, preliminary LEED analysis, construction take-offs & estimation, and construction animation, through use of various BIM and related software.
Prerequisite(s): DRFT 165.

DRFT 274. GIS Theory and Analysis
3 Credits (2+2P)
Analyzes the hypothesis in which location and spatial data sufficiently quantifies the appropriate statistical methodology. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.
Prerequisite(s): DRFT 254.

DRFT 276. Computer Rendering and Animation I
3 Credits (2+2P)
Introduction to technical applications of computer generated renderings and animations for the architecture and engineering fields. 3D models, photo-realistic renderings, and basic animation movie files will be produced utilizing industry standard modeling and animation software.

DRFT 277. Computer Rendering and Animation II
3 Credits (2+2P)
Continuation of DRFT 276. Covers advanced modeling and animation techniques using 3-D animation software.
Prerequisite: DRFT 276.

DRFT 278. Advanced CAD Applications
3 Credits (2+2P)
Introduction to advanced CAD commands, applications, usage techniques, and user customization. The latest version of the National CAD Standards will also be explored.
Prerequisite(s): DRFT 109.

DRFT 288. Portfolio Development
3 Credits (2+2P)
Production of a portfolio consisting of previously produced student work related to the student’s individualized degree option. Process shall include the compilation and organization of working and presentation drawings, construction documents, BIM Models, and renderings/animations. Students will learn the basics of design layout and online portfolio documentation. Job search and resume preparation activities will also be required. Production of new material and content may also be required. This course is designed as a last semester course in the Drafting & Design curricula. May be repeated up to 3 credits. Restricted to Community Colleges campuses only.

DRFT 290. Special Topics
1-4 Credits (1-4)
Topics subtitled in the Schedule of Classes. May be repeated for a maximum of 12 credits.

DRFT 291. Cooperative Experience
1-6 Credits (1-6)
Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Student meets with advisor weekly. Graded S/U.
Prerequisite: consent of instructor.

DRFT 295. Professional Development and Leadership DAGA
1 Credit
Students gain experience in leadership, team building, performing community service, and membership and/or leadership in a student organization. May be repeated up to 6 credits. Restricted to Community Colleges campuses only.