

# DRAFTING TECHNOLOGY (DRT)

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## DRT F101 Introduction to Drafting

3 Credits

Offered As Demand Warrants

Introduction to basic drafting skills necessary to communicate in the building, construction, design and process technology industries for freshman-level students and for certificate or associate degree-seeking students. Limited manual drafting techniques will be used to gain basic skills and to contrast the speed and accuracy to that of computer-aided drafting (CAD).

**Lecture + Lab + Other:** 2 + 2 + 0

## DRT F110 Computer Literacy for Technicians

3 Credits

Offered As Demand Warrants

Introduction to operating systems and their applications to technology. Emphasis will be placed on computer literacy for technology and industrial business applications relevant to technicians.

**Lecture + Lab + Other:** 2 + 2 + 0

## DRT F112 Introduction to GIS

3 Credits

Offered As Demand Warrants

Provides drafters with a general overview of what GIS is, who uses GIS, where GIS is used, and how GIS information is obtained and assimilated. There will be a section of practical use on one of the following systems: Manifold, Autodesk MAP, or Arch View.

**Lecture + Lab + Other:** 3 + 0 + 0

## DRT F115 Graphics I

3 Credits

Offered As Demand Warrants

Study and application of methods, problems and solutions in graphic design using AutoCAD and Viz.

**Lecture + Lab + Other:** 3 + 0 + 0

## DRT F121 Construction Documents and Drawings

3 Credits

Offered As Demand Warrants

Reading and interpretation of construction documents for residential, light commercial and heavy commercial structures using conventional symbols and representation.

**Lecture + Lab + Other:** 3 + 0 + 0

## DRT F123 Uniform Building Code

3 Credits

Offered As Demand Warrants

Covers the minimum required construction standards of the Uniform Building Code. Use of local zoning ordinances and the UBC as comprehensive building guides and their principal aspects applied to various building types and trades. Concentrates on zoning, the UBC and some fire codes. Mechanical and electrical codes are introduced only for student familiarity.

**Recommended:** Working knowledge of building systems.

**Lecture + Lab + Other:** 3 + 0 + 0

## DRT F140 Architectural Drafting

3 Credits

Offered As Demand Warrants

Architectural drafting principles including site plans, foundations, floor plans, elevations, architectural sections, framing plans, area plans and graphic standards.

**Lecture + Lab + Other:** 2 + 2 + 0

## DRT F141 Architectural Concepts

2 Credits

Offered As Demand Warrants

Architectural drafting concepts including basic site plans, foundations, floor plans, elevations, architectural sections, framing plans, area plans and graphic standards. Also available online via UAF eCampus.

**Lecture + Lab + Other:** 2 + 0 + 0

## DRT F145 Structural Drafting

3 Credits

Offered As Demand Warrants

Introduces technical skills needed by structural drafters and technicians to work with structural engineers. Includes office practices, staff relationships, and structural drawing production. Develops computer-aided drafting skills in symbols, conventions, dimensioning systems, sheet organizations, code analysis and research methods for steel, wood, and reinforced concrete buildings.

**Prerequisites:** DRT F170 or permission of program coordinator.

**Lecture + Lab + Other:** 3 + 0 + 0

## DRT F150 Civil Drafting

3 Credits

Offered As Demand Warrants

Civil drafting principles including plotting traverse and surveys by bearing and distance, latitudes and departures, topographic drawings and maps, contours and elevations, profiles and highway curves, cross-section drawings and grading plans.

**Lecture + Lab + Other:** 2 + 2 + 0

## DRT F151 Civil Concepts

2 Credits

Offered As Demand Warrants

Overview of civil drafting concepts and survey drafting including the plotting of traverse and surveys by bearing and distance.

**Lecture + Lab + Other:** 2 + 0 + 0

## DRT F155 Mechanical and Electrical Drafting

3 Credits

Offered As Demand Warrants

Introduces technical analysis, theory, code requirements, and CAD techniques to produce construction drawings for mechanical and electrical building systems. Includes drafting conventions, drawing symbols, terminology, and research methods for residential and commercial building systems and equipment.

**Prerequisites:** DRT F170 or permission of program coordinator.

**Lecture + Lab + Other:** 3 + 0 + 0

## DRT F170 Beginning CAD

3 Credits

Offered As Demand Warrants

Instruction in basic working knowledge of CAD software and its applications in drafting. Topics covered include an introduction to CAD software applications, basic CAD skills and tools, through plotting finished drawings. Practical applications.

**Lecture + Lab + Other:** 2 + 2 + 0

**DRT F210 Intermediate CAD**

3 Credits

Offered As Demand Warrants

Techniques for construction and drafting output using CAD. Emphasis will be on the construction drawings produced for a building project and the software tools used in this process.

**Prerequisites:** DRT F170 or enrolled as a CE Major or permission of the program coordinator.

**Lecture + Lab + Other:** 2 + 2 + 0

**DRT F250 Civil Drafting II -- Advanced**

3 Credits

Offered As Demand Warrants

Techniques of highway design, boundaries, right of way layouts, curves and grades, bridges, cut and fill detail drawings, gas and water services, sewers, culverts, signs and guard rails.

**Prerequisites:** DRT F150; DRT F151; or permission of program coordinator.

**Lecture + Lab + Other:** 2 + 2 + 0

**DRT F260 Drafting Internship**

1-6 Credits

Offered As Demand Warrants

Supervised work experience in process organizations. Assignments will be individually arranged with cooperating organizations from the private and public sectors. A maximum of 6 credits may be earned.

**Prerequisites:** Permission of program coordinator.

**Lecture + Lab + Other:** 0 + 3-18 + 0

**DRT F270 Advanced CAD**

3 Credits

Offered As Demand Warrants

Advanced areas of CAD (3-D, menu modifications and Auto lisp).

**Prerequisites:** DRT F170; DRT F210; or permission of program coordinator.

**Lecture + Lab + Other:** 2 + 2 + 0