



## DRFT 1400

**Division:** Career and Technical Education

**Department:** Drafting Technology

**Course:** DRFT 1400

**Title:** Topographical Drafting

**Catalog Description:**

This course studies map drawing, contours, stadia points, plans, and profiles and introduces surveying procedures.

**General Education Requirements:** N/A

**Semesters Offered:** TBA

**Credit/Time Requirement:** Credit: 3; Lecture: 2; Lab: 3

**Clock/Hour Requirements:** 75

**Offered for Non-Credit:** No

**Prerequisites:** DRFT 1010

**Corequisites:** None

**Justification:**

This course is approved by the program advisory committee and corresponds to SLCC course ARCH 1120.

**Student Learning Outcomes:**

Upon successful completion of this course, students will be able to:

- understand the terminology and symbols used in the topographical field
- understand the uses of topographical drawings as they are applied to the engineering field
- tell the differences and advantages of the different types of charts
- understand the many employment opportunities in the engineering field
- identify and use the different instruments and media that are used in the topographical field
- understand basic inking procedures
- complete contour drawings
- complete open and closed traverse plotting
- draw, plan, and profile drawings
- understand the principles of photogrammetry
- have a basic understanding of surveying practices.

**Content:**

Course objectives will be achieved by providing students with instructional and hands-on experiences in the following areas:

- discussion of terminology and symbols used in the topographical field

- discussion of the uses of maps used in the engineering field
- showing the different charts and explain their uses
- employment opportunities in the engineering field
- identifying and using the different instruments and media used in the topographical field
- inking procedures
- plotting of open and closed traverses
- drawing plan and profile drawings
- principles of photogrammetry
- basic surveying practices.

### **General Education Outcomes:**

2) Write clearly, informatively, and persuasively.

Students are required to complete descriptive term-sheets which provide information about the vocabulary and terminology used in this specific area. The descriptions are reviewed, graded, and returned to students for improvement.

4) Retrieve, evaluate, interpret, and deliver information through a variety of traditional and electronic media.

Students will research information (i.e. styles, layouts, mechanical parts, connectors, fasteners, etc.) through the Internet, written manuals, journals, and other publications. This information is used to complete projects and assignments throughout the program.

5) Apply a cultural and historical awareness to a variety of phenomena.

Students must understand the historical aspects of architectural styles and the methods utilized in the drafting field. This historical perspective is addressed in lecture and students are required to identify styles through exams and projects.

6) Apply computational skills to a variety of contexts.

The field of drafting requires the combination of basic math, geometry, and algebra skills. Students will utilize these skills when producing drawings, cost estimates, and material lists.

### **Key Performance Indicators:**

#### **In class:**

- Students will demonstrate mastery of course competencies by completing assignments/projects, tests, and quizzes. Assignments/projects are worth 75%, tests are worth 15%, and quizzes are worth 10% of the final grade.

#### **Following class:**

- Students will have the skills to continue more advanced civil drafting classes. Students will also have a better knowledge of environment, lay of the land, and advantages and disadvantages of site development for a future home.

### **Representative Text and/or Supplies:**

- *Mapping and Topographical Drafting*, current edition, South Western Publishing Company.

**Optimum Class Size:** 12

**Maximum Class Size:** 20

**Signatures:**

I hereby submit this course syllabus:

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Craig Conder, ,

I hereby find this course consistent with the goals and resources of the Drafting Technology Department:

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Craig Conder, , , Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

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Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

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Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

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Michelle Olsen, MLS, Campus Librarian (Richfield Campus)