

SYLLABUS

COURSE NUMBER: DRFT 249
COURSE TITLE: CIVIL DRAFTING II
CREDIT HOURS: 4 (3+2P)

CATALOG DESCRIPTION:

This course comprises instruction in the basics of geodetics, point analysis, 3D curvilinear design and drafting, 3D surface modeling, 3D visualization, and surveying. Class work involves using industry standard civil design and GIS software applications to generate sites and parcels, cross-sections, alignments, contours, plan and profile drawings, corridors, drainage systems, and calculations relating to area, volume, angles, closures, and earthwork.

Semester Offered: Spring

Prerequisites: DRFT 150 or Instructor approval.

Common Student Learning Outcomes

Upon successful completion of San Juan College programs and degrees, the student will...

<i>Learn</i>	<i>Students will actively and independently acquire, apply and adapt skills and knowledge to develop expertise and a broader understanding of the world as lifelong learners.</i>
<i>Think</i>	<i>Students will think analytically and creatively to explore ideas, make connections, draw conclusions, and solve problems.</i>
<i>Communicate</i>	<i>Students will exchange ideas and information with clarity and originality in multiple contexts.</i>
<i>Integrate</i>	<i>Students will demonstrate proficiency in the use of technologies in the broadest sense related to their field of study.</i>
<i>Act</i>	<i>Students will act purposefully, reflectively, and respectfully in diverse and complex environments.</i>

GENERAL LEARNING OBJECTIVES:

- I. To develop understanding of the uses of various types of maps and drawings related to civil drafting.
- II. To understand the use of symbols pertaining to civil drawing and map drafting.
- III. To learn the techniques involved in the production of civil drawings and maps.
- IV. To prepare maps and drawings relating to land development, site plans, road design, drainage systems, utilities, oil and gas, archaeology, geology and mining.

SPECIFIC LEARNING OUTCOMES:

Upon successful completion of this course, the student should be able to:

1. Use good drafting practices to complete drawings, maps and details pertaining to civil projects including, but not limited, to the following: (L,T,C,I,A)
 - a. Concrete, wood and steel structures.
 - b. Drainage systems.
 - c. Land development and site plans.
 - d. Road, bridge and utility systems.
 - e. Cross-sections and profiles.
 - f. U.S. Land System and aliquot division.
 - g. Metes and bounds descriptions.

- h. Geology, oil and gas, mining and archaeology.
- 2. Complete computations pertaining to earthwork, excavation, horizontal and vertical curves, traverses, closures, and transcriptions of survey data. (L,T,C,I,A)
- 3. Solve mathematical problems: Conversions, areas, volumes, and weights. (L,T,C,I,A)
- 4. Apply appropriate scales. (L,T,I,A)
- 5. Interpret field data. (L,T,C,I,A)
- 6. Draw maps of legal descriptions. (L,T,I,A)
- 7. Employ mapping techniques to the CAD program to prepare drawings. (L,T,C,I,A)

Syllabus developed by: _____

Date: _____

Syllabus reviewed by: _____

Date: _____