SAN JUAN COLLEGE
Success Matters
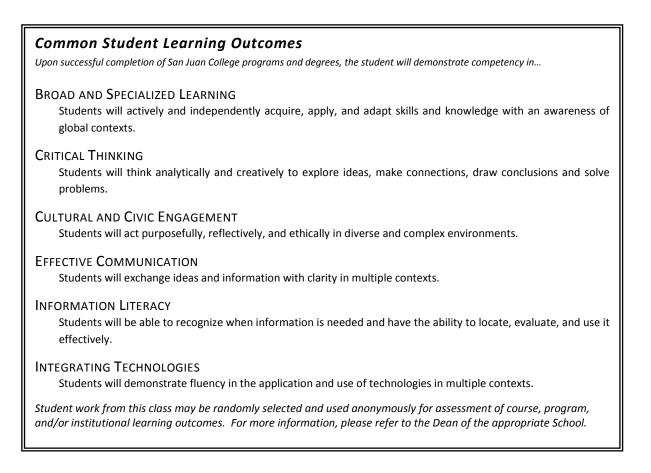
DRFT-248-CIVIL DRAFTING I 4 CREDITS

SYLLABUS

CATALOG DESCRIPTION

Advanced instruction in common techniques specific to the civil drafting environment such as horizontal alignments and profiles, earthwork and GIS.

Prerequisites: DRFT-150 and completion of MATH-096 or appropriate MATH Accuplacer score. Corequisites: MATH-160, MATH-180

Semester Offered: Fall

Common Student Learning Outcomes

Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in…

BROAD AND SPECIALIZED LEARNING
Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

CRITICAL THINKING
Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

CULTURAL AND CIVIC ENGAGEMENT
Students will act purposefully, reflectively, and ethically in diverse and complex environments.

EFFECTIVE COMMUNICATION
Students will exchange ideas and information with clarity in multiple contexts.

INFORMATION LITERACY
Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

INTEGRATING TECHNOLOGIES
Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

Course Learning Outcomes

Upon successful completion of the course, the student will be able to…

1. To develop understanding of the uses of various types of maps and drawings related to civil drafting.
2. To understand the use of symbols pertaining to civil drawing and map drafting.

3. To learn the techniques involved in the production of civil drawing and maps.
4. 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 Objectives

Upon successful completion of the course, the student will 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: (B,C,E,I,CC)
   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. Metes and bounds descriptions.
   g. 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. (B,C,E,I,CC)
3. Solve mathematical problems: Conversions, areas, volumes, and weights. (B,C,E,I,CC)
4. Apply appropriate scales. (B,C,I,CC)
5. Interpret field data. (B,C,E,I,CC)
6. Draw maps of legal descriptions. (B,C,I,CC)
7. Employ mapping techniques to the CAD program to prepare drawings. (B,C,E,I,CC)