COURSE INFORMATION FORM

DISCIPLINE
Land Surveying

COURSE TITLE
Subdivision Planning and Layout

CR.HR 3  LECT HR. 3  LAB HR.  CLIN/INTERN HR.  CLOCK HR. 

CATALOG DESCRIPTION

Physical elements of designing land subdivisions including traffic circulation, sewer and drainage systems, soils and earthwork, grading considerations, erosion control, lot and block arrangement, topography and existing land use factors, geometric analysis; laws and codes affecting land subdivisions; environmental considerations; site analysis procedures.

PREREQUISITES

SRVY 135 or DRAF 152

EXPECTED STUDENT OUTCOMES IN THE COURSE (ESO)

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

1. Apply the principles of site analysis and selection.
2. Explain geometric principles of land planning.
3. Use the analysis of slope and topographic characteristics for subdivisions and the calculations involved.
4. Describe street classifications systems.
5. Analyze the design, location, and grades of streets, sewers, and parking areas.
6. Analyze and design of surface water and storm drainage systems.
7. Explain the influence of soil characteristics on land development.
GENERAL EDUCATION OUTCOMES (ESO)
Specify which general education outcomes, if any, are substantially addressed by the course. Numbers in parentheses identify the Expected Student Outcomes linked to the specific General Education Outcome.
PROGRAM-LEVEL OUTCOMES

CAREER AND TECHNICAL EDUCATION PROGRAM OUTCOMES
Specify which Career and Technical program outcomes, if any, are substantially addressed by the course by completing the “Career and Technical Education template” to show the relationship between course and program outcomes to assessment measures.

1. Students will apply technical skills and critical thinking skills to solve surveying related problems.
2. Students will work with others by engaging in real world field exercises that relate to land surveying.
3. Students will demonstrate the skills necessary to research and apply information of the public record as it applies to both boundary retracement and the subdivision of real property.

CLASS-LEVEL ASSESSMENT MEASURES
Student accomplishment of expected student outcomes will be assessed using the following measures. (Identify which measures are used to assess which outcomes.)

1. Midterm & final exams (1-7)
2. Quizzes (1-7)
3. Homework (1-7)
4. Term project: preparation of a subdivision plat & construction plans (1-7)
COURSE OUTLINE FORM

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Individual instructors may order this outline as fits the needs of their individual courses. In addition, they may place more emphasis on some areas than on others. What is assured is that this particular list is covered in the course. Other topics may be added to a course as the instructor sees fit, and as time and interest allow. An *asterisk can be used to mark an item as optional.

I.  
Laws affecting land subdivision
    A. Zoning and subdivision regulations
    B. Master plans and official maps

II.  
Site selection and analysis procedures

III.  
Geometric design in subdivisions
    A. Basic street system patterns
    B. Basic lot and block patterns
    C. Detailed large-scale geometric applications

IV.  
Topography, slopes and earthwork considerations
    A. Influence of topography on development
    B. Analysis of slopes in subdivision design
    C. Balancing earthwork, grading calculations

V.  
Design of circulation systems
    A. Classification of streets
B. Street design procedures
C. Intersections and other special considerations
D. Parking area design

VI. Sewer and drainage system designs
   A. Surface runoff and watershed analysis
   B. Design of storm drainage systems
   C. Sanitary sewer design

VII. Soils and their influence on development
   A. Affect of soil type on suitability for construction
   B. Soil characteristics

VIII. Environmental factor analysis
   A. Visual and aesthetic considerations
   B. Considerations of sunlight, noise, climate
   C. Consideration of existing land uses