

**Mt. San Jacinto College
Integrated Course Outline of Record**

Form B

Submitted by:	James Bae	Date:	11/12/2020
----------------------	-----------	--------------	------------

Department	Subject	Course Number	Title
Engineering: Technologies	Engineering: Technologies ENGR	566	Legal Aspects of Surveying (formerly ENGR-166)

Units/Hours

Each lecture unit requires 1 hour per week of class time, and 2 hours per week of study outside of class.

Each laboratory unit requires 3 hours per week of class time.

Each activity unit requires 2 hours per week of class time and 1 hour per week of study outside of class.

Lecture Units

3.00

Total Units

3.00

Lecture Contact Hours

48.00 - 54.00

Total Contact Hours

48.00 - 54.00

Lecture Homework Hours

96.00 - 108.00

Stand Alone:

Program Applicable

AA/AS Degree General Ed Breadth Area(s):

-none-

General Education Justification:

Maximum Enrollment:

40

Maximum Enrollment Justification:

Justification:

Grading Method:

Letter Grade or P/NP

TOP code:

0957.30*

**Can be
Taken**

1

time(s) for credit (max 4)

- ☐ - Visual or Performing Arts course that is required to meet major requirements for UC/CSU
- ☐ - Intercollegiate athletics course
- ☐ - Academic/vocational competition course

Catalog Description:

(Please do not refer to transferability or degree, certificate, or employment concentration applicability. Please only describe the course). (75 words or less in gray box below).

This course teaches the legal aspects of public land surveys, municipal property surveys, and applicable laws. The course is designed for surveyors, engineers, realtors, and any person who deals with property descriptions. Topics include history of land survey system, establishment of township subdivisions, reestablishing private subdivisions, and reading, interpreting, and writing land descriptions.

Schedule Description:

(Please do not refer to transferability or degree, certificate, or employment concentration applicability. Please only describe the course). (25 words or less in gray box below).

This course teaches students the Public Land Survey System, the interpretation and preparation of legal descriptions, and surveying principles for property surveys.

Need for the course:

This course provides critical information for the passing of Land Surveyor in Training (LSIT) testing and certification - the first step in becoming a CA state certified Professional Land Surveyor. This class provides a foundation for students pursuing the engineering, surveying occupation - including pursuing the A.S. Drafting Technology and pathways to a 4-year education in Civil Engineering, Surveying, GIS, and other engineering occupations. The Center of Excellence for Labor Market Research (California Community Colleges) estimates that entry-level Engineering Technology jobs (Civil, Electrical, Industrial, Mechanical, amongst other Technicians) will continue to grow in the Inland Empire/San Bernardino area from 2018-2023 by 3%, while offering positions earning above estimated "living wage" rates. This estimated 300 annual jobs outpaced the awards given at the time by local community colleges. This indicates a major opportunity for MSJC to continue to provide entry level Engineering job training, while growing the program to more advanced training to support professional training in the future. This course supports and is attached to: ENGR - Engineering: Drafting Technology - Certificate (Elective), ENGR - Surveying - Employment Concentration (Required)

Prerequisite(s):

Prerequisites go through a separate approval process. See Forms E1-E6 for details.

(For further clarification, contact the Prerequisite Subcommittee)

-none-

Corequisite(s):

Corequisites go through a separate approval process. See Forms E1-E6 for details.

-none-

Recommend Preparation:

Recommended Preparation goes through a separate approval process. See Forms E1-E6 for details.

- ENGL 098 or
- ESL 098 or
- ENGL 101

Other Enrollment Criteria:

-none-

Learning Objectives:

(please number each objective and express in behavioral terms)

Upon the completion of the course the student will be able to do the following:

1. Assess, analyze, and explain the purpose and function how/why the United States Public Land Survey System was developed.
2. Illustrate, explain and describe how government corners are to be established.
3. Differentiate between lost and obliterated corners of the Public Land System.
4. Demonstrate competency in establishment of property corners of subdivision boundaries and property boundaries.
5. Compare, analyze, and review land descriptions.
6. Compare and contrast the principles of the California Subdivision Map Act and Land Surveyor's Act.
7. Evaluate professional surveying integrity and the utilization in today's work place.

Course Content:

(please number the outline of main topics and subtopics)

1. Introduction to Land Surveys
 1. Historical Development of Property Surveys
 1. Establishment of property lines from public lands
 2. Perpetuation of property lines
 2. Historical Development of Public Land Surveys
 1. Setting of the San Bernardino initial point
 2. Development of sectionalized lands
 3. Introduction of California Land Surveyor's Act
 1. The effect of the act on land surveyors
 2. The role of the State Board of Registration
2. Public Land Surveys
 1. General Procedure
 1. Initial Point
 2. Baseline and Principal Meridian
 3. Guide Meridians
 4. Standard Parallels
 5. Township Lines
 6. Section Lines
 2. Record of Survey
 1. Types of Survey that require one
 2. Submittal
 3. "Portion of" Survey
 1. Regular Section
 2. Fractional Section
 3. Government Lots
 4. Retracement
 1. Township Corners and Lines
 2. Closing Corners
 3. Rancho Boundaries
 4. Meander Lines
 5. Section Lines
3. Property Surveys
 1. Original Surveys
 1. Subdivisions
 2. Metes and Bounds

2. Retracement Surveys Using "Best Available Evidence"
3. "Portions of" Surveys
4. Legal Principles and Descriptions
 1. Legal Principles
 1. Reversion Rights
 2. Eminent Domain
 2. Land Transfer by Unwritten Means
 1. Riparian Rights
 2. Adverse Possession
 3. Prescriptive Rights
 4. Eminent Domain
 3. Legal Descriptions
 1. Types of Deeds
 2. Quitclaim
 3. Grant
 4. Easement
 1. Types of Descriptions
 2. Strip
 3. Metes and Bounds
 4. Area
 5. Coordinates
5. Title Search and Report
 1. Essentials to Pass Title
 2. Chain of Title
 3. Color of Title
6. Law Affecting a Surveyor
 1. Land Surveyor's Act
 2. Subdivision Map Act
 3. Laws Affecting Monumentation
 4. Maintaining Surveying/Personal Integrity and Ethics

Methods of Instruction:

Methods of instruction may include, but are not limited to the following:

- **Method:** Lecture
Integration: The lecture will be based on material generated from the course textbook and supplemental material covering United States Public Land Survey System, how government corners are established, the principles of California Subdivision Map Act and the Land Surveyor's Act.
- **Method:** Readings
Integration: Information will be provided as supplemental material (PowerPoint presentations, handouts, periodicals, and professional magazines) and used in discussion in the areas of the Public Land Survey System, integration, and surveying in today's work place. Thus, allowing for up to date material and information to be introduced and discussed in the course.
- **Method:** Activity
Integration: Students, using case studies, will outline and analyze problems on lost and obliterated corners and review and prepare legal land descriptions.

Methods of Evaluation:

A student's grade shall be determined by the instructor using multiple measures of performance related to the course objectives.

Methods of evaluation may include but are not limited to the following:

- **Method:** Papers
Integration: Writing assignment demonstrating application of competencies of purpose and function of the U.S. Land Survey System, Land descriptions, surveying integrity, establishment of property corners, and/or

the principles for the California subdivision Map Act and land Surveyor's Act. An effective response will be evaluated for completeness, accuracy and clarity of course material.

- **Method:** Projects

Integration: Written analysis of case study graphical interpretation of a sectional breakdown. Effective responses will evaluate the comprehension of the course material.

- **Method:** Exams/Tests

Integration: The final examination will, in part, require the student to prepare a written analysis of case study for various written descriptions and the area described. Demonstration of application of course material and understand what the description is describing. Students will prepare a description to assess their learning comprehension and manipulation of material in various scenarios.

Examples of Assignments:

Students will be expected to understand and critique college level texts or the equivalent. Reading and writing, as well as out of class assignments are required. These assignments may include but are not limited to the following:

1. Define the following terminology used in the United States Public Land System: Initial Point; Baseline and Principal Meridian; Guide Meridians; Standard Parallels; Township Lines; Section Lines
2. Read the attached case study which describes proportions/intersections. Analyze and determine the location of government corners.
3. Read the attached case studies and write an analysis of the laws and the ethical practice affecting land surveyors in the case study.

Textbooks:

- Robillard, W. G., Wilson, D. A. (2014). *Brown's Boundary Control and Legal Principles* Wiley. ISBN: 9781118431436
- United States. Bureau of Land Management (2012). *Manual Of Instructions For The Survey Of The Public Lands Of The United States...* Nabu Press . ISBN: 9781279206720
- United States Bureau of Land Management (2018). *Manual of Surveying Instructions for the Survey of the Public Lands of the United States and Private Land Claims* Franklin Classics. ISBN: 0342603361

Other Resources:

Minimum Qualification

- Engineering (Masters Required) **or**
- Engineering Support **or**
- Engineering Technology (Masters Required)