

CUYAMACA COLLEGE
COURSE OUTLINE OF RECORD

Surveying 220 – Boundary Control and Legal Principles

3 hours lecture, 3 units

Catalog Description

Legal and professional aspects of surveying such as U.S. public land surveys, property surveys, title search, report laws affecting a surveyor, resurveys or surveys based on the deed or record, and the new divisions of land.

Prerequisite

“C” grade or higher or “Pass” in SURV/ENGR 218 or equivalent

Entrance Skills

Without the following skills, competencies and/or knowledge, students entering this course will be highly unlikely to succeed:

- 1) Demonstrate the proper care and use of surveying instruments.
- 2) Calculate the area of a closed figure using the double meridian and least squares method.
- 3) Demonstrate knowledge of the North American Datum (N.A.D. '83) coordinate system.
- 4) Understand the methods of differential and profile leveling.

Course Content

- 1) History of boundaries
 - a. Significance of boundaries
 - b. Boundary references
 - c. Boundary disputes
 - d. Original written title
 - e. Rights and interests in land
 - f. Role of the court
 - g. Federal and California state survey law
 - h. Easements and licenses
- 2) Ownership, transfer, and description of real property
 - a. Concepts of land ownership and land description
 - b. Public and private lands
 - c. Sources of title
 - d. Chain of title
 - e. Deed of trust
 - f. Magnetic directions
 - g. Reference datums
 - h. Elements of land descriptions
- 3) Boundaries, law and presumptions
 - a. Constitutional law and the surveyor
 - b. Jurisdiction
 - c. Federal government, agency or officer as a party
 - d. Legal research
 - e. Evidence and presumptions
- 4) GLO (General Land Office) boundaries
 - a. Original surveys and corrective surveys
 - b. Manuals and special instructions

- c. The public land survey system (PLSS) 2009 Manual
- d. California state instructions and statutes
- e. Defective boundaries encountered in resurveys
- f. Sectionalized surveys and innovations
- g. The GLO system
- 5) Creation of non-sectionalized boundaries
 - a. Methods of creating non-sectionalized descriptions
 - b. Metes descriptions
 - c. Bounds descriptions
 - d. Strip descriptions and stationing
 - e. Creating boundaries in descriptions
 - f. Tax descriptions
 - g. Features of platting acts
 - h. Writing land descriptions
- 6) Federal and state non-sectionalized land surveys
 - a. United States military tract
 - b. Prior land grants from foreign governments
 - c. Mineral surveys
 - d. Veins, lodes, and ledges
- 7) Locating easements and reversions
 - a. Fee title or easement right
 - b. Conveyances with private boundaries
 - c. Use of easements
 - d. Creation of easement boundaries
 - e. Apportioning reversion rights
 - f. Lots adjoining two subdivision boundaries
 - g. Describing vacated streets and easement
- 8) Riparian and littoral boundaries
 - a. Rivers
 - b. Tides
- 9) Resurveying and retracing sectionalized lands
 - a. Types
 - b. Identifying corners and lines
 - c. Restoration of lost corners
- 10) Locating sequential and simultaneous conveyances
 - a. Sequential conveyances
 - b. Simultaneously created boundaries
 - c. Combination descriptions and conveyances
- 11) The role of the surveyor
 - a. The surveyor's function
 - b. Establishment of boundaries
 - c. The surveyor's authority

Course Objectives

Students will be able to:

- 1) Using federal and California state law, discuss the history of boundaries in the United States and California.
- 2) Compare and contrast ownership, transfer and description of real property citing legal and professional aspects of boundaries.
- 3) Describe boundaries according to law and presumptions.
- 4) Describe the relationship between the General Land Office and boundaries.
- 5) Describe how non-sectional boundaries are created including the methods for creating non-sectionalized boundaries and citing Federal and state non-sectionalized land surveys.
- 6) Explain how easements are located and what they are used for.

- 7) Describe resurveying and retracing sectionalized lands based on type, identifying corners and lines, and restoration of lost corners.
- 8) Locate sequential and simultaneous conveyances by applying the rules for boundary determination.
- 9) Understand the role of a surveyor.

Method of Evaluation

A grading system will be established by the instructor and implemented uniformly. Grades will be based on demonstrated proficiency in subject matter determined by multiple measurements for evaluation, one of which must be essay exams, skills demonstration or, where appropriate, the symbol system.

- 1) Quizzes and/or exams that measure students' ability to describe the role of the surveyor, the General Land Office, boundaries, resurveying, retracing, and to identify corners, lines, and restoration of lost corners.
- 2) In-class activities that measure students' ability to locate easements, sequential and simultaneous conveyances, and to resurvey and retrace sectionalized lands.
- 3) Research projects or reports that measure students' ability to define boundaries and compare and contrast ownership, transfer, and description of real property using federal and California state law.

Special Materials Required of Student

None

Minimum Instructional Facilities

Smart classroom

Method of Instruction

- 1) Lecture and discussion
- 2) Video lecture

Out-of-Class Assignments

- 1) Write legal descriptions of property
- 2) Deed analysis and mathematical computations

Texts and References

- 1) Required (representative example): Wilson, D., Nettleman, C., Robillard, W., *Brown's Boundary Control and Legal Principles (2023)*, 8th ed., ISBN-13: 978-1119911708
- 2) Supplemental: None

Exit Skills

Students having successfully completed this course exit with the following skills, competencies and/or knowledge:

- 1) Define and explain the following terms: Subdivision, Proration, Senior and junior rights, Natural monument, Record monument, Artificial monument, Accessories, Corner, Closing corner, Call, Deed, Intent of deed, Fee simple, Easement, Appurtenant, Basis of bearings, Common law, Statute law, Course, Encroachment, Exception, Reservation, Prescriptive right, Evidence, Parole evidence.
- 2) Recognize the necessary parts of a land contract.
- 3) Write a legal description of a parcel of land.
- 4) Locate, on a map land from a legal description.
- 5) Describe legal presumptions used in land cases.
- 6) Describe the differences between types of deeds.
- 7) Determine sequential and simultaneous conveyances.
- 8) Determine property boundaries based on the U.S. Public Land Survey System.
- 9) Establish boundaries along waterways.

- 10) Apply the rules for boundary determination in simultaneous conveyances.
- 11) Apply the rules for boundary determination between the holders of junior and senior rights.
- 12) Establish boundaries based on interpretation of legal descriptions.
- 13) Identify and resolve conflicting deed calls in legal descriptions.

Student Learning Outcomes

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

- 1) Mathematically breakdown the public land surveying boundary problems in accordance with the 2009 BLM Manual of Survey Instructions.
- 2) Understand and apply the rules of evidence, junior and senior rights to boundary law.
- 3) Demonstrate proficiency in reading and writing legal descriptions that pertain to describing real property.