

Discipline: Agriculture	Sub-discipline: Forestry/Natural Resources
General Course Title: <b>Introduction to Forest Surveying</b>	Min. Units: <b>3 Semester</b>
Proposed Suffix: <b>L</b>	
<p>Course Description:  Use of basic surveying equipment such as hand compass, staff compass, abney level, topographic and engineer's chain, aneroid barometer, transit, total station, self level, leveling rods, GPS receivers, in the measurement of distance, elevation, and area; collecting, recording, plotting and drafting field data. Laboratory required.</p>	
Required Prerequisites or Co-Requisites <sup>1</sup>	
Advisories/Recommended Preparation <sup>2</sup> <i>May be co-listed as Engineering – Intro to Surveying</i>	
<p>Course Objectives: <i>At the conclusion of this course, the student should be able to:</i></p> <ul style="list-style-type: none"> <li>• Demonstrate accurate field measurement of distances, direction, and elevation.</li> <li>• Understand and competently operate surveying equipment and instruments (compasses, steel tapes, levels, abneys, clinometers, etc.)</li> <li>• Organize and assemble accurate surveying field notes.</li> <li>• Prepare planimetric and topographic maps from field notes.</li> <li>• Work together as a team in the collecting and processing of surveying data</li> <li>• Know and understand the Public Land Survey System and its legal subdivisions.</li> <li>• Comprehend and demonstrate basic surveying computations.</li> </ul>	
<p>Course Content:</p> <ol style="list-style-type: none"> <li>1. Introduction and terminology <ol style="list-style-type: none"> <li>A. Surveying and forest surveying defined</li> <li>B. Uses of survey information</li> <li>C. Equipment; uses and limitations</li> <li>D. Field notes</li> </ol> </li> <li>2. Public land survey system <ol style="list-style-type: none"> <li>A. History</li> <li>B. Subdivisions</li> <li>C. Use in the legal description of rural property</li> </ol> </li> <li>3. Measurement of horizontal distance <ol style="list-style-type: none"> <li>A. Terminology and definitions</li> <li>B. Pacing</li> <li>C. Steel tapes</li> </ol> </li> <li>4. Measurement of direction <ol style="list-style-type: none"> <li>A. Terminology and definitions</li> <li>B. Hand compass</li> <li>C. Staff compass</li> <li>D. Reddi-mapper</li> </ol> </li> </ol> <p><b>Introduction to Forest Surveying (Content Continued)</b></p> <ol style="list-style-type: none"> <li>5. Measurement of vertical distance</li> </ol>	

<sup>1</sup> Prerequisite or co-requisite course need to be validated at the CCC level in accordance with Title 5 regulations; co-requisites for CCCs are the linked courses that must be taken at the same time as the primary or target course.

<sup>2</sup> Advisories or recommended preparation will not require validation but are recommendations to be considered by the student prior to enrolling.

- A. Terminology
- B. Aneroid barometer
- C. Abney
- D. Clinometer
- E. Differential leveling

6. Mapping

- A. Types of maps
- B. Preparation of maps from field notes
- C. Reading, interpreting and using contour maps

Laboratory Activities: Individual Laboratory Activities are designed to support course objectives.

Methods of Evaluation: Lecture  
 Comprehensive Quizzes and Exams  
 Written Critical Thinking Scenarios  
 Problem Analysis and Solution  
 Research and Term Papers

Methods of Evaluation: Laboratory  
 Laboratory Skill Validation by Observation  
 Laboratory Reports  
 Laboratory Research Projects and Reports  
 Laboratory Skill Practicum Exams

Typical Textbooks, Manuals, or Other Support Materials

Surveying, McCormac, Jack. 1999. 4<sup>th</sup> edition, Prentice-Hall  
Elementary Forest Surveying and Mapping. Wilson, R.L.  
 1999. Ballantine Books.

**Statewide Articulation: CPSLO-FNR 247, articulated to other universities as specific equivalent by individual community colleges, additional statewide course equivalency articulation currently underway, also currently transfers as lower division elective**

FDRG Lead Signature:

Date:

Mark E. Bender, PhD CSU Stanislaus

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**Internal Tracking Number**