

Discipline: Agriculture	Sub-discipline: Mechanized Agriculture
General Course Title: Tractor Operation	Min. Units: 3 Semester
Proposed Suffix:	
<p>Course Description: This course involves design principles, selection, maintenance, adjustment, and safe operation of wheel and track type tractors used in agriculture and in the construction industry. Laboratory required.</p>	
Required Prerequisites or Co-Requisites ¹	
Advisories/Recommended Preparation ²	
<p>Course Objectives: <i>At the conclusion of this course, the student should be able to:</i></p> <ul style="list-style-type: none"> • Operate wheel and track type tractors safely and properly • Demonstrate ability to communicate and work cooperatively with others • Identify correct tractor parts and their terminology • Understand power generation and transmission systems • Match the tractor and equipment to the job • Perform operator level maintenance and adjustment of tractor systems • Diagnose and repair minor tractor problems 	
<p>Course Content:</p> <ol style="list-style-type: none"> 1. Introduction <ol style="list-style-type: none"> a. History of the tractor engine b. Types of tractors c. Terminology 2. Safety <ol style="list-style-type: none"> a. California division of industrial safety b. Hand Signals c. Starting and stopping d. Hazards e. Transportation 3. Power systems <ol style="list-style-type: none"> a. Engine b. Clutch c. Transmissions d. Final Drives e. Hydraulic f. P.T.O. g. Electrical 4. Controls <ol style="list-style-type: none"> a. Starting and stopping b. Steering c. Hitches d. Hydraulic e. Electric <p>Tractor Operation (Content Continued)</p>	

¹ 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.

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

- 5. Implement
 - a. Attachment
 - b. Adjustments
 - c. Efficiency

- 6. Field operation
 - a. Ballast
 - b. Stability
 - c. Daily maintenance
 - d. Selecting speeds
 - e. Hazardous situations

- 7. Maintenance
 - a. Operators manuals
 - b. Tools
 - c. Supplies
 - d. Inspection, evaluation

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
 Diagnostics and Problem Solving
 Laboratory Skill Practicum
 Certification Exams

Typical Textbooks, Manuals, or Other Support Materials
Tractors, John Deere

Statewide Articulation: CPSLO-BRAE 141, CSUF-MEAG 3, CSUC-AGET 150, UCD-ABT 49, other universities as lower division elective.

FDRG Lead Signature:

Date:

Mark E. Bender, PhD CSU Stanislaus

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Internal Tracking Number