



ANTELOPE VALLEY COLLEGE
Academic Affairs
Course Outline of Record

Academic Affairs Only

<input type="checkbox"/>	New Course
<input type="checkbox"/>	Effective Date (for articulation)
<input checked="" type="checkbox"/>	COR Revision 5/13/2010
<input type="checkbox"/>	Pre Req/Advisories
<input type="checkbox"/>	Other Changes
<input checked="" type="checkbox"/>	SLOs 5/27/2008

COURSE SUBJECT & NUMBER: ENGR 210 PS

COURSE NAME: *Statics Problem Solving Session

COURSE UNITS: 1 **COURSE HOURS:** 1 hour weekly

COURSE REQUISITES: *(Follow format of similar courses found in the college catalog.)*

COREQUISITE: Concurrent enrollment in ENGR 210.

COURSE DESCRIPTION: *(Write a short paragraph providing an overview of topics covered. Be sure to identify target audience--transfer, major, GE, degree/certificate, etc. If repeatable, state the number of times at end of description as (R#).*

Problem solving session for ENGR 210 which augments the theoretical lecture session with necessary "hands-on" experience.
(CSU, AVC)

COURSE OBJECTIVES: *(Title 5 requires that courses show evidence of critical thinking skills. Use Bloom's taxonomy to formulate concise, performance-based measurable objectives common to all students. Objectives must be closely aligned with course content, assignments, and methods of evaluation)*

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

1. Calculate forces and moments in trusses, frames and moment diagrams using vector and non-vector techniques.

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COURSE CONTENT: *(Enter course content in terms of specific topics or a specific body of knowledge that each instructor must cover. Put topics in outline form with major and minor headings. Each instructor must cover all material listed below.)*

I. Vectors

II. Trusses

III. Frames and machines

IV. Shear and moment diagrams

V. Friction

VI. Moment of inertia

VII. Energy methods

VIII. Belts and hydrostatics

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TYPICAL HOMEWORK ASSIGNMENTS: (Do not include in-class work, quizzes, or tests)
This information is necessary for all credit courses. Assignments should be closely related to course objectives, content, and methods of evaluation. (See sample of a “Model Outline” in the AP&P Standards & Practices Handbook.) Include a range of assignments (minimum of three) from which faculty may choose when designing their syllabus.

1. *Describe nature and frequency of typical reading assignments if applicable; note if any are required:*

Reading may include approximately 15 pages from the textbook per week.

2. *Describe nature and frequency of typical writing assignments if applicable; note if any are required:*

N/A

3. *Describe nature and frequency of typical computational assignments if applicable; note if any are required:*

Mathematical solutions to Statics problems, 2-3 hours twice a week..

4. *Describe other types of homework assignments that students may be asked to complete (oral presentations; special projects; visual/performing arts; etc); note if any are required:*

N/A

For categories 1-4 above, list the estimated hours per week it would take a student to complete assignments. Title 5 (section 55002) requires that each unit must be shown to require three hours of work per week by the student either in or out of class. Homework formula: 3 hours of class work times each unit of credit minus classroom hours equals required homework hours.

Reading Assignments: 3

Writing Assignments: 0

Computational Assignments: 5-6

Other Assignments: 0

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METHODS OF INSTRUCTION: *(Methods must be consistent with content and appropriate to objectives; state in terms of what instructor will be doing in order to present course content to students: for example, lecture, demonstration, present audio/visual materials; facilitate group work, etc. Do not list specific instructional equipment.)*

Demonstrations and individual student and group assistance.

METHODS OF EVALUATION: *(These must be clearly related to course objectives and reflect course content and assignments in order to comply with Title 5 requirements. Describe what instructor will be looking for when evaluating various assignments and tests in order to determine whether students have met course objectives. Grades must be based on demonstrated proficiency in subject matter and determined, where appropriate, by essays, objective and essay tests, research papers or projects, problem solving exercises, or skills' demonstrations.)*

Assignment and test evaluations consist of assessing the methods and accuracy of student solutions to statics problems (Objective 1).

Comprehensive final examination (Objective 1).

Suggested Texts or Other Instructional Materials

(List several when possible; include title, author, publisher, date, and latest edition. If older than five years, provide brief rationale.)

Title: Engineering Mechanics Statics, 12th edition
Author: Hibbeler
Publisher: Pearson Prentice-Hall, 2010