



SACRAMENTO
STATE

Course Change Proposal Form A



Academic Group (College): Engineering and Computer Science	Academic Organization (Department): Mechanical Engineering	Date: 3/10/09
Type of Course Proposal: New <input checked="" type="checkbox"/> Change <input type="checkbox"/> Deletion <input type="checkbox"/>	Department Chair: Susan L. Holl	Submitted by: Kenneth Sprott
Does this course fulfill a requirement for single-subject or multiple subject credential students? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	For Catalog Copy: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CCE (Extension): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Semester Effective: Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> , 20_09__

This course replaces experimental course Subject Area (prefix) and Catalog Nbr (course number):	
If changing an existing course, should new version be considered a repeat of the original version? If so, the same Course ID will be maintained. If not, a new Course ID will be assigned. Note: In PeopleSoft terminology, the Course ID is the unique system identifier, not the Catalog Nbr.	Yes <input type="checkbox"/> No <input type="checkbox"/>

Change from:

Subject Area (prefix) & Catalog Nbr (course no.):	Title:	Units:
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Change to:

Subject Area (prefix) & Catalog Nbr (course no.): ME 116	Title: Machinery Design I	Units: 2
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JUSTIFICATION:

This is a new course part of a two course sequence which will replace ME 118 and ME 119 in the Mechanical Engineering Curriculum. The course content is designed to cover the essential elements of mechanical design and eliminate redundancies in the current course content.

NEW COURSE DESCRIPTION: (Not to exceed 80 words, and language should conform to catalog copy. See <http://www.csus.edu/um anual/acad.htm> - Guidelines for Catalog Course Description)

Introduction to basic design methodology for mechanical systems and devices. Detail design of machine components; application of analytical methods in the design of complex machines. Failure mode analysis, theories of failure, yield, fracture, deflection, and fatigue analysis of machine elements. Design of common machine elements such as bearings and shafts.

Note:

Prerequisite: ENGR 6, ME 37, ENGR 112; ENGR 112 may be taken concurrently
Enforced at Registration: Yes No
Corequisite:
Enforced at Registration: Yes No
Graded: Letter Credit/No Credit **Instructor Approval Required?** Yes No
Course Classification (e.g., lecture, lab, seminar, discussion): lecture **Title for CMS (not more than 30 characters):** MACHINERY DESIGN I
Cross Listed? Yes No **If yes, do they meet together and fulfill the same requirement, and what is the other course.**

How Many Times Can This Course be Taken for Credit? 1

Can the course be taken for Credit more than once during the same term? Yes No

FOR NEW COURSE PROPOSALS OR SUBSTANTIVE CHANGES ONLY:

Description of the Expected Learning Outcomes: Describe outcomes using the following format: "Students will be able to: 1), 2), etc." See the example at <http://www.csus.edu/acaf/example.htm>

- The student will be able to:
1. Describe the basic steps of the mechanical design process.
 2. Calculate the allowable loads and stresses based on applied forces and a factor of safety.
 3. Calculate stress in machine components and pressure vessels given the applied loads.
 4. Calculate the deflection of machine components under an applied load.
 5. Predict failure in machine components using both static failure theories and fatigue analysis.
 6. Size and select journal and rolling element bearings for machine applications.
 7. Design and size shafts for machine applications

**Attach a list of the required/recommended course readings and activities [Note: it is understood that these are updated and modified as needed by the instructor(s).] This attachment should be forwarded only to your Dean's office, not Academic Affairs.

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above:

Homework, examinations.

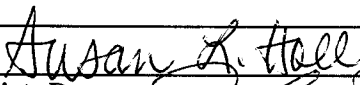
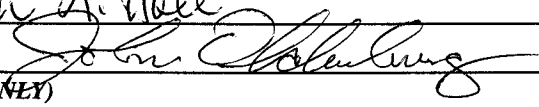
For whom is this course being developed?
 Majors in the Dept Majors of other Depts ___ Minors in the Dept ___ General Education ___ Other ___
 Is this course required in a degree program (major, minor, graduate degree, certificate)? Yes No ___
 If yes, identify program(s): Mechanical Engineering

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer facilities, faculty, etc.)? Yes ___ No
 If yes, attach a description of resources needed and verify that resources are available.

Indicate which department or programs will be affected by the proposed course (if any). _____

The Department Chair's signature below indicates that affected programs have been sent a copy of this proposal form.

Approvals: If proposed change, new course or deletion is approved, sign and date below. If not approved, forward without signing to the next reviewing authority, and attach an explanatory memorandum to the original copy.

Signatures:	Date
Department Chair: 	4/24/09
College Dean or Associate Dean: 	4/29/09
CPSP (for school personnel courses ONLY)	
Associate Vice President and Dean for Academic Programs	

Distribution: Academic Affairs (original), Department Chair and College Dean. Dean's office to send original after approval to Academic Affairs, at mail zip 6016. An electronic copy must also be sent.