



# Academic Affairs - Course Proposal Form

CALIFORNIA STATE UNIVERSITY, SACRAMENTO

<b>Academic Unit:</b> DEPARTMENT OF CIVIL ENGINEERING		<b>Department Chair:</b> DR. RAMZI MAHMOOD	
<b>Type of Course Proposal:</b> New <input checked="" type="checkbox"/> Change <input type="checkbox"/> Deletion <input type="checkbox"/>		<b>Date:</b> APRIL 14, 2006	
<b>Does this course fulfill a requirement for single-subject or multiple subject credential students?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		<b>For Catalog Copy:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>CCE:</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
		<b>Semester Effective:</b> Fall <input type="checkbox"/> Spring <input checked="" type="checkbox"/> 2007	
<b>Prefix &amp;No.</b> ENGR 105	<b>Title:</b> SUSTAINABLE DESIGN AND CONSTRUCTION		<b>Units:</b> 3

Change to:

<b>Prefix &amp;No.</b>	<b>Title:</b>	<b>Units:</b>
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### JUSTIFICATION:

**This is a new class that is being introduced due to the relevancy of the topic and the interest of students.** In their roles as future professionals, students in Civil Engineering and Construction Management are uniquely positioned to prevent and/or solve many problems related to sustainability in the built environment (cities, infrastructure, buildings, products, landscapes, and public spaces.) In addition, as citizens and future users of engineered facilities, the general student body has an interest in sustainability issues and deserves an opportunity to learn more about them. Consequently, this class will be proposed as a General Education course. No other courses at Sacramento State specifically address this topic.

### NEW COURSE DESCRIPTION: (Not to exceed 80 words, and language should conform to catalog copy.)

See <http://www.csus.edu/acaf/univmanual/crspsl.htm> - Guidelines for Catalog Course Description

Strategies, analysis methods, and processes of environmentally conscious planning, design, construction, operation, deconstruction, and assessment of engineered facilities. Course presents a systematic framework for problem solving, decision making, design, and construction using the principles of sustainability as guiding objectives. Tools, and techniques for gathering information, generating, analyzing, and evaluating alternatives, and developing implementation strategies are presented and demonstrated.

<b>Note:</b>	
<b>Prerequisite:</b> Upper Division standing or instructor's approval	
<b>Corequisite:</b>	
<b>CAN (California Articulation Number):</b> N/A	
<b>Graded:</b> Letter <input checked="" type="checkbox"/> Credit/No Credit <input type="checkbox"/>	<b>Instructor Approval?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<b>Course Classification:</b> C4	<b>Title for SIS+ (not more than 25 characters)</b> SUSTAINABLE DESIGN & CONST.
<b>Cross Listed?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>If yes, with what course:</b>
<b>How Many Times Can This Course be Taken for Credit?</b> 1	

# 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/acad/example.htm>

- After completing this course, students will be able to:**
1. Define sustainability and explain its importance
  2. Identify a range of feasible and contextually appropriate actions for improving the sustainability of a built facility through multiple phases of its life cycle
  3. Evaluate these actions in terms of their relative performance according to traditional qualitative and quantitative criteria such as cost, time, and quality
  4. Compare these actions in terms of their relative impacts on the facility’s sustainability, according to qualitative and quantitative criteria such as contextual compatibility and response, resource base impact, eco-system impact, and human satisfaction
  5. Design a recommended course of action to increase the sustainability of the facility, and plan its implementation
  6. Support and justify any recommendations with convincing evidence and well-organized synthesis and analysis of existing data, information, knowledge, and experience, delivered professionally

\*\*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:

**Written assignments, oral presentations, project, two midterms, and final examination**  
**These activities will complement selected concepts covered in the course. They will provide an opportunity to develop skills for working alone or in a team context, and also, to strengthen professional, and written and oral communication skills.**

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):

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). Civil Engineering

*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**

<b>Department Chair:</b>	
<b>College Dean or Associate Dean:</b>	
CPSP (for school personnel courses ONLY)	
<b>Director of Curriculum, Assessment &amp; Accreditation (for the Vice President for Academic Affairs)</b>	

**Distribution:** Academic Affairs (original and two copies) Department Chair and College Dean. A copy of this form should be e-mailed, along with the hard copies, as an attachment to [wylie@csus.edu](mailto:wylie@csus.edu) by the Dean's office after it is approved at that level.