# Course Change Proposal

**Form A**

<table>
<thead>
<tr>
<th>Academic Group (College):</th>
<th>Academic Organization (Department):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering and Computer Science</td>
<td>Civil Engineering</td>
<td>9/9/11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Course Proposal:</th>
<th>Department Chair:</th>
<th>Submitted by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>New __ Change <em>x</em> Deletion __</td>
<td>Ramzi Mahmood</td>
<td>John Johnston</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Does this course fulfill a requirement for single-subject or multiple subject credential students?</th>
<th>For Catalog Copy:</th>
<th>Semester Effective:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes ___ No <em>x</em>_</td>
<td>Yes <em>x</em> No ___</td>
<td>Fall ___ Spring <em>x</em>, 2012</td>
</tr>
</tbody>
</table>

This course replaces experimental course Subject Area (prefix) and Catalog Nbr (course number):

<table>
<thead>
<tr>
<th>Subject Area (prefix) &amp; Catalog Nbr (course no.):</th>
<th>Title:</th>
<th>Units:</th>
</tr>
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<tbody>
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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.

<table>
<thead>
<tr>
<th>Subject Area (prefix) &amp; Catalog Nbr (course no.):</th>
<th>Title:</th>
<th>Units:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE 170</td>
<td>Principles of Environmental Engineering</td>
<td>4</td>
</tr>
</tbody>
</table>

## JUSTIFICATION:

This is a minor change to the course description, adding the words “Lecture 3 hours; laboratory 3 hours”. This is not a change in class mode; the course currently operates in this fashion. The purpose of this change is to conform to the practice of the CE department to alert students in the course description when a lab is a required part of the course.

## NEW COURSE DESCRIPTION:

(Not to exceed 80 words, and language should conform to catalog copy. See http://www.csus.edu/umanual/acad.htm - Guidelines for Catalog Course Description)

**CE 170. Principles of Environmental Engineering.** Introduction to the principles and practices of environmental quality management. Physical and chemical principles affecting environmental quality. Water and air quality parameters, their importance, and natural processes that affect them. Introduction to treatment processes and waste management. Environmental ethics. Lecture 3 hours; laboratory 3 hours. **Prerequisite:** CE 1A, CE 101, CE 146, ENGR 115, and GWAR certification before Fall 09, or WPJ score of 70+, or at least a C- in ENGL 109M/W; CE 146 may be taken concurrently. **Graded:** Graded Student. **Units:** 4.0

<table>
<thead>
<tr>
<th>Note:</th>
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<tbody>
<tr>
<td>Prerequisite: CE 1A, CE 101, CE 146, ENGR 115, and GWAR certification before Fall 09, or WPJ score of 70+, or at least a C- in ENGL 109M/W; CE 146 may be taken concurrently. <strong>Enforced at Registration:</strong> Yes <em>x</em> No ___</td>
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<table>
<thead>
<tr>
<th>Corequisite:</th>
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<tr>
<td><strong>Enforced at Registration:</strong> Yes ___ No ___</td>
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<table>
<thead>
<tr>
<th>Graded: Letter <em>x</em> Credit/No Credit</th>
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<tbody>
<tr>
<td><strong>Instructor Approval Required?</strong> Yes ___ No <em>x</em>_</td>
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<table>
<thead>
<tr>
<th>Course Classification (e.g., lecture, lab, seminar, discussion):</th>
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<tbody>
<tr>
<td><strong>Title for CMS (not more than 30 characters)</strong></td>
</tr>
<tr>
<td><strong>Principles of Envr Engr</strong></td>
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<tr>
<th>Cross Listed?</th>
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<tr>
<td>Yes ___ No <em>x</em>_</td>
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<tr>
<th>If yes, do they meet together and fulfill the same requirement, and what is the other course.</th>
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<tbody>
<tr>
<td><strong>How Many Times Can This Course be Taken for Credit?</strong> 1</td>
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</table>

<table>
<thead>
<tr>
<th>Can the course be taken for Credit more than once during the same term?</th>
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</thead>
<tbody>
<tr>
<td>Yes ___ No <em>x</em>_</td>
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</table>
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

**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:

**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): Civil 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.

**Accessibility:** Following course approval, and prior to the start of the semester in which the new or revised course will be taught for the first time, an accessibility checklist [available at http://www.csus.edu/accessibility/checklist.html] shall be completed and submitted to the appropriate Dean’s office. An accessible syllabus shall also be made available online, preferably prior to the start of that semester’s open registration period.

**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:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Department Chair:</td>
<td>9/13/2011</td>
</tr>
<tr>
<td>College Dean or Associate Dean:</td>
<td>9/19/11</td>
</tr>
<tr>
<td>CPSP (for school personnel courses ONLY)</td>
<td></td>
</tr>
<tr>
<td>Associate Vice President and Dean for Academic Programs</td>
<td></td>
</tr>
</tbody>
</table>

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.

5/20/2010
Principles of Environmental Engineering
CE 170: Section 01
Course Syllabus

Fall 2011
Dr. E.E. Dammel
Fall 2011
Office: RVR 4030
Tues. Thurs. 9:00 AM to 10:15 AM
Hours: M: 1 – 3 PM, TTh: 11 AM – Noon
RVR 1010
Phone: 278-6983

Prerequisites:

Communication: While enrolled in CE 170, you must have a
SACLINK account. Course materials will be distributed via
WebCT. Students are responsible for downloading and becoming
fully knowledgeable of the materials before they are needed.

Specific: CE 101 and ENGR 115, CE 146 with a grade of C- or
higher; passing score on Graduation Writing Assessment
Requirement (GWAR). CE 146 may be taken concurrently.

General: It is assumed that you will be able to use material from
all lower-division classes without review (e.g., solving linear
separable differential equations including the application of
boundary conditions).

Text and Materials:
Mines, R.O. and L.W Lackey, Introduction to Environmental
material, especially for the lab, will be posted on SacCT.

Course Grading:

Homework: 5%
Labs: 20%
Exams: 75%

First Exam 20%
Second Exam 20%
Third Exam 20%
Final Exam 15%

Grading Note: To pass the class, you must meet both of the following
requirements:
1. Achieve weighted average score of ≥ 55% for all exams.
2. Achieve a score of ≥ 55% for course work.
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E-Mail: dammele@ecs.csus.edu

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<td>Labs</td>
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<td>Exams</td>
<td>75%</td>
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- First Exam
- Second Exam
- Third Exam
- Final Exam

Grading Note:
To pass the class, you must meet both of the following
requirements:
1. Achieve weighted average score of ≥ 55% for all exams.
2. Achieve a score of ≥ 55% for course work.
Basis for Assigning Course Grades:

Basis for final course grades: A >85%; B 76-85%; C 66-75%; D 55-65%; and F < 55%. Plus and minus grades will depend on the instructor’s evaluation of factors such as completeness of homework and labs, attendance, and exam score trends.

Course Policies:

1. University guidelines on academic integrity will be enforced in their entirety. It is the student’s responsibility to be familiar with academic integrity guidelines. Using homework and lab write-ups from previous semesters to assist in your homework and lab write-up preparation is considered a violation of academic integrity.

2. Mid-term exam questions will directly address the detailed, specific learning objectives presented in each class and laboratory period. Material illustrating those objectives from lecture, reading, laboratories, and homework are all available for exams. The final exam will be comprehensive over the entire semester.

3. Exams will be closed-notes and closed-book. All necessary basic equations will be provided. You will not be allowed to keep your exams. When mid-term exams have been graded, they will be returned for review in class. You must return the exam to the instructor when instructed to do so. Failure to do so will result in a grade of zero on that exam. You are encouraged to review your exams in the instructor’s office.

4. Per Civil Engineering Policy:
   “The only calculators that will be allowed for all quizzes and exams are:

   - **Casio**: All fx-115 models; any Casio calculator with fx-115 in its model name is allowed.
   - **Hewlett Packard**: The HP 33s and HP 35s models are allowed. No other Hewlett Packard models are allowed.
   - **Texas Instruments**: All TI-30X and TI-36X models are allowed; any Texas Instruments calculator with TI-30X or TI-36X in its model name is allowed.”

5. Generally, homework will be assigned in class weekly and will be due one week later. No late homework will be accepted except under extreme circumstances and at the instructor’s discretion. Acceptable homework must be neat and laid out in a logical manner. You are encouraged to work in groups on homework as a forum to exchange ideas. However, the final product must be an individual effort. Homework assignments identical to each other will all be marked zero. This policy includes component parts such as graphs produced using a computer.

6. Laboratory attendance is mandatory. You will be allowed one unexcused absence during the semester (not advised though). After that, each unexcused absence will result in a 5% reduction of the overall course grade. Laboratory procedures will be e-mailed to each member of the class prior to the lab. Students are responsible for carefully reviewing materials prior to the lab.

7. The instructor will assign laboratory partners.
8. Professional behavior is required of all class participants during all aspects of the course. That includes, but is not limited to:

- Decorum in the lecture hall and laboratory. Conversations and horseplay that disrupt the learning of others will not be tolerated. Cell phones are to be either turned off in class.
- On time arrival is expected at all lecture and laboratory sessions.
- Quality of submitted materials. Homework and laboratory write-ups are expected to have a logical layout, neat appearance, and professional quality. Work is to be checked and writing carefully edited. Any computer printouts are expected to use a laser printer. Work not meeting these professional standards will be given a grade of zero.

Course Description:

*Principles of Environmental Engineering* is a survey of important fundamental knowledge associated with environmental aspects of society and its infrastructure. As this is a survey course, the number of individual different topics covered is large. Those individual topics fall within the management of water, land, and air quality for society's benefit.

Course Audience:

1. The primary course audience is future civil engineers who, although not directly involved with environmental engineering, will have to address environmental issues in the course of their work (about 70 – 85% of the class).

2. The secondary course audience is future environmental engineers (about 15 – 30% of the class).

Course Mission:

The mission of *Principles of Environmental Engineering* is to begin the preparation all of the Bachelor of Science in Civil Engineering graduates of California State University, Sacramento for the environmental challenges most will face in their careers. To meet these challenges, civil engineers must have working knowledge of water, soil, and air quality issues, and how legislation influences civil engineering from an environmental prospective. We will be working to acquire this knowledge during the class.
Course Learning Objectives:

Course learning for CE 170 are that by the end of the semester, you will be able to:

1. Explain pertinent quality measures of water and air including importance for public health and environmental quality.

2. Explain pertinent physical, chemical, and biological processes that affect water and air quality. Apply those concepts to natural and engineered systems.

3. Apply the materials balance method and ideal reactor theory to the solution of environmental problems.

4. Explain critical legislation employed in environmental quality management.

5. Explain how environmental issues relate to the practice of civil engineering.

Suggestions for a Successful Experience in CE 170:

The secret to success is hard work throughout the semester and active participation in all aspects of the course. Learn by doing.

1. Course time commitment: In line with the age-old rule-of-thumb about the time required to be successful in a college course, it is assumed that each week you are putting in three hours outside of class for each hour in class. It is in your best interest to plan your schedule accordingly at the beginning of the semester.

2. Class components: The components of the class are lecture, text reading, homework, and laboratories. All of these components are fair game for exams and every effort will be made to include all in a comprehensive fashion.

3. Study suggestions for the lecture: In addition to attending all lectures and being an active participant, it is suggested that after each lecture you recopy your own notes to increase their meaningfulness. Additionally, if something is noted to be unclear while recopying your notes, seek help sooner rather than later.

4. Study suggestions for text reading: Complete reading assignments before each class starts and not all at once before an exam. The text is not a novel. To learn the material, take notes as you are reading, work out example problems, and as with lecture material, seek out help as sooner rather than later.

5. Study suggestions for homework: With each and every assignment, be sure you can independently work each problem correctly and on your own. Exams are an individual exercise.

6. Study suggestions for laboratory: Be an active participant in the performance and write-up of all labs. Be able to do all the work yourself.