Course Change Proposal
Form A

Academic Group (College): Engineering & Computer Science
Academic Organization (Department): Mechanical Engineering

Type of Course Proposal:
New ___ Change ___ Deletion ___

Department Chair: Susan L. Holl
Submitted by: Susan L. Holl

Does this course fulfill a requirement for single-subject or multiple subject credential students? Yes ___ No ___
For Catalog Copy: Yes ___ No ___
CCE (Extension): Yes ___ No ___

Semester Effective: Fall ___ Spring ___, 2011_

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 ___ No ___

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

Change to:
Subject Area (prefix) & Catalog Nbr (course no.): ME 75
Title: ___
Units: ___

JUSTIFICATION:
ME 75 was a required course but is no longer part of the Mechanical Engineering BS curriculum because students come to the program much more computer literate. Essential material is now covered in another required course (ME 105).

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)

Note:
Prerequisite:
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): ___
Title for CMS (not more than 30 characters)
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? ___
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/acl/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?

<table>
<thead>
<tr>
<th>Majors in the Dept</th>
<th>Majors of other Depts</th>
<th>Minors in the Dept</th>
<th>General Education</th>
<th>Other</th>
</tr>
</thead>
</table>

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).

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.

<table>
<thead>
<tr>
<th>Signatures:</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Chair: Susan L. Holl</td>
<td>9/29/2010</td>
</tr>
<tr>
<td>College Dean or Associate Dean:</td>
<td></td>
</tr>
<tr>
<td>CPSP (for school personnel courses ONLY)</td>
<td>10/19/10</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
COURSE TITLE: ME 075  Introduction to Computer Aided Engineering

CATALOG DESCRIPTION: Introduction to the use of computers for engineering, science and mathematical computations. Provides basic computer operation skills, and includes the use of modern interactive symbolic and numerical computation packages as well as an introduction to programming methods for solving problems. The use of graphical visualization tools for output will be emphasized. Sample applications will be drawn from a variety of science and engineering areas. Lecture one hour, laboratory three hours. **Prerequisite:** 2 units.

**PREREQUISITES:**  Math 030 – Calculus I,
Physics 11A – General Physics: Mechanics,
Phys 011A may be taken concurrently.


**GOALS:**
Understanding of logic and its fundamental application to computer programming. Knowledge of MATLAB applications as an engineering tool.

**OBJECTIVES:** By the end of the semester, the student will be able to:

1. understand and apply logic
2. utilize MATLAB for programming
3. utilize MATLAB for engineering problem solutions
4. utilize MATLAB for creating 2-D and 3-D plots

**TOPICS COVERED:**
- Arrays
- Array and matrix operations
- Polynomials
- Controlling input and output
- Using files
- Relational operators
- Logical operators and functions
- Conditional statements
- Loops
- Two-dimensional plotting
- Function discovery
- Three-dimensional plotting
- Cramer’s method
- Simulink

**CLASS/LAB SCHEDULE:**

There are two 30 minute lectures per week.
There are two 75 minute labs per week.
There are five quizzes and a final examination.
PROFESSIONAL COMPONENT:
This is an engineering science course.

RELATIONSHIP OF COURSE TO ME PROGRAM OUTCOMES:

This course is related to the following outcomes:

a. demonstrate a knowledge of the science, mathematics, and engineering principles that are fundamental to thermal and mechanical systems design and manufacturing;

e. identify, analyze, and solve technical problems in the areas of machine design, including solid mechanics and control systems; fluid mechanics, thermodynamics, and heat transfer; materials properties and selection; and manufacturing, using the principles of multivariate calculus and differential equations, including the appropriate use of computer technology;

g. communicate effectively through speaking, writing, and graphics, including the appropriate use of computer software;

COORDINATOR: Susan L. Holl

Date: Fall 2008