# Program Proposal

**Form B**

<table>
<thead>
<tr>
<th>Academic Group (College):</th>
<th>Date of Submission to College Dean:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering &amp; Computer Science</td>
<td>3/12/2009</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Academic Organization (Department):</th>
<th>Requested Effective: Fall_2009__, Spring___, 20___</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Engineering</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Department Chair:</th>
<th>Contact if not Department Chair:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susan L. Holl</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title of the Program (Please be specific; indicate minor, undergraduate or graduate degree, etc.):</th>
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<tbody>
<tr>
<td>Bachelor of Science Program in Mechanical Engineering</td>
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</table>

## Type of Program Proposal:

- **X** Modification in Existing Program:
  - **X** Substantive Change
  - **__** Non-Substantive Change
  - **__** Deletion of Existing Program

- **____** New Programs
  - **____** Initiation (Projection) of New Program on to Master Plan
  - **____** New Degree Programs
    - **____** Regular Process
    - **____** Fast Track Process
    - **____** Pilot Process
  - **____** New Minor, Concentration, Option, Specialization, Emphasis
  - **____** New Certificate Program

**PLEASE NOTE:** Form B is to be used only as a Cover Form. Additional information is requested for each of the above as noted in the corresponding procedure in the Policies and Procedures for Initiation, Modification, Review and Approval of Courses and Academic Programs found at [http://www.csus.edu/umanual/acad.htm](http://www.csus.edu/umanual/acad.htm)

Briefly describe the program proposal (new or change) and provide a justification.

All engineering programs in the system have been asked to reduce the number of units required to earn the baccalaureate degree. With the proposed changes to the major requirements the B.S. program in Mechanical Engineering will reduce from 137 units to 129. With these changes we will offer our students a first rate core education and be able to tailor our elective offerings to provide the flexibility needed to adapt to changes in the local economy. The program will remain ABET accredited.

The changes do not affect any department outside of the College, and only the Civil Engineering Department within the College (the replacement of one course normally taught by Civil Engineering). Civil Engineering is aware of and supportive of our proposed changes.

There will be no additional fiscal or space resources required.

**Approvals:**

<table>
<thead>
<tr>
<th>Department Chair:</th>
<th>Date:</th>
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<tbody>
<tr>
<td>Susan L. Holl</td>
<td>4/24/09</td>
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<table>
<thead>
<tr>
<th>College Dean:</th>
<th>Date:</th>
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</thead>
<tbody>
<tr>
<td>约翰·艾伦·赫伯格</td>
<td>4/29/09</td>
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<table>
<thead>
<tr>
<th>University Committee:</th>
<th>Date:</th>
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<tr>
<th>Associate Vice President and Dean for Academic Affairs:</th>
<th>Date:</th>
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</table>

09/10/2008
Proposed Changes to the B.S. Program in Mechanical Engineering:

Itemized list of changes:

1. Delete from lower division required courses: ME 75
2. Replace ME 175 (3 units) with new course, ME 105 (3 units)
3. Replace E 115 (2 units) with new course, ME 108 (2 units)
4. Replace ME 118 (3 units) with new course, ME 116 (2 units)
5. Replace ME 119 (3 units) with new course, ME 117 (2 units)
6. Delete from upper division required courses: ME 125 (2 units)
7. Replace ME 127 (3 units) with new course, ME 128 (3 units)
8. Delete ME 115 (3 units) as a required course
9. Add ME 172 (3 units) as a required course
10. Require all students to take ME 171 rather than a choice of ME 171 or ME 114
11. Reduce the number of units in ME 180 from 4 to 3
12. Reduce the number of units in ME 191 from 3 to 2

<table>
<thead>
<tr>
<th>NEW PROGRAM</th>
<th>OLD PROGRAM</th>
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<tbody>
<tr>
<td><strong>A. Required Lower Division Courses</strong></td>
<td><strong>A. Required Lower Division Courses</strong></td>
</tr>
<tr>
<td>(43 units)</td>
<td>(45 units)</td>
</tr>
<tr>
<td>Chem 1A (5 units)</td>
<td>Chem 1A (5 units)</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>General Chemistry</td>
</tr>
<tr>
<td>Math 30 (4 units)</td>
<td>Math 30 (4 units)</td>
</tr>
<tr>
<td>Calculus I</td>
<td>Calculus I</td>
</tr>
<tr>
<td>Math 31 (4 units)</td>
<td>Math 31 (4 units)</td>
</tr>
<tr>
<td>Calculus II</td>
<td>Calculus II</td>
</tr>
<tr>
<td>Math 32 (4 units)</td>
<td>Math 32 (4 units)</td>
</tr>
<tr>
<td>Calculus III</td>
<td>Calculus III</td>
</tr>
<tr>
<td>Math 45 (3 units)</td>
<td>Math 45 (3 units)</td>
</tr>
<tr>
<td>Phys 11A (4 units)</td>
<td>Phys 11A (4 units)</td>
</tr>
<tr>
<td>General Physics: Mechanics</td>
<td>General Physics: Mechanics</td>
</tr>
<tr>
<td>Phys 11C (4 units)</td>
<td>Phys 11C (4 units)</td>
</tr>
<tr>
<td>General Physics: Elec, Mag, Modern</td>
<td>General Physics: Elec, Mag, Modern</td>
</tr>
<tr>
<td>Engr 6 (3 units)</td>
<td>Engr 6 (3 units)</td>
</tr>
<tr>
<td>Engin Graphics &amp; CAD</td>
<td>Engin Graphics &amp; CAD</td>
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<tr>
<td>Engr 17 (3 units)</td>
<td>Engr 17 (3 units)</td>
</tr>
<tr>
<td>Intro Circuit Analysis</td>
<td>Intro Circuit Analysis</td>
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<tr>
<td>Engr 30 (3 units)</td>
<td>Engr 30 (3 units)</td>
</tr>
</tbody>
</table>
Analytic Mechanics: Statics
Engr 45 (3 units)
Engineering Materials
ME 37 (3 units)
Manufacturing Processes

B. Required Upper Division Courses
(44 units)
Engr 110 (3 units)
Analytic Mechanics: Dynamics
Engr 112 (3 units)
Mechanics of Materials

Engr 124 (3 units)
Thermodynamics
Engr 132 (3 units)
Fluid Mechanics
ME 105 (3 units)
Intro to Technical Problem Solving
ME 108 (2 units)
Professional Topics for Mech Eng

ME 116 (2 units)
Machinery Design I
ME 117 (2 units)
Machinery Design II

ME 126 (3 units)
Heat Transfer

ME 128 (3 units)
Thermal-Fluid Systems

Analytic Mechanics: Statics
Engr 45 (3 units)
Engineering Materials
ME 37 (3 units)
Manufacturing Processes
ME 75 (2 units)
Intro. Comp. Aided Engineering

B. Required Upper Division Courses
(50 units)
Engr 110 (3 units)
Analytic Mechanics: Dynamics
Engr 112 (3 units)
Mechanics of Materials
Engr 115 (2 units)
Statistics for Engineers
Engr 124 (3 units)
Thermodynamics
Engr 132 (3 units)
Fluid Mechanics

ME 115 (3 units)
Dynamics of Machinery

ME 118 (3 units)
Product Design I
ME 119 (3 units)
Product Design II
ME 125 (2 units)
Mech. Engin. Measurements
ME 126 (3 units)
Heat Transfer
ME 127 (3 units)
Intermediate Thermodynamics
ME 138 (3 units)
Concurrent Product & Process Design
ME 171 (3 units)
Comp. Modeling & Desgn Dyn Syst.
ME 172 (3 units)
Conrol System Design

ME 180 (3 units)
ME 190 (3 units)
Project Engineering I
ME 191 (2 units)
Project Engineering II

C. Additional Upper Division Requirements
   (6 units)
   Two ME electives

ME 138 (3 units)
Concurrent Product & Process Design
ME 171 or ME 114 (3 units)
Comp. Modeling & Desgn Dyn Syst.

ME 175 (3 units)
Comp. App. in Mech. Engin.
ME 180 (4 units)
ME 190 (3 units)
Project Engineering I
ME 190 (3 units)
Project Engineering II

C. Additional Upper Division Requirements
   (6 units)
   Two ME electives

Revised and approved by the Department of Mechanical Engineering 3/6/2009