# Texas A&M University

## Departmental Request for a Change in Course

**Undergraduate • Graduate • Professional**
- Submit original form and attachments

### 1. This request is submitted by the Department of [Mechanical Engineering]
### 2. Course prefix, number and complete title of course: [MEEN 601: Advanced Machine Design]

### 3. Change requested
   - a. Prerequisite(s): From: ___________________________ To: ___________________________
   - b. Withdrawal (reason): _____________________________
   - c. Cross-list with: _____________________________

   **Cross-listed courses require the signature of both department heads.**

   d. Change in course title and description. Enter complete current course title and current course description in item 4; enter proposed course title and proposed course description in item 5.

   e. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 6. **Attach a course syllabus.**

### 4. Complete current course title and current catalog course description: [MEEN 601: Advanced Machine Design]

   Design methodology, functional design, innovation, parameter analysis, design for reliability, manufacturability and strength; design project. Prerequisite: MEEN 402 or equivalent

   ***Please change one word in the course title. Change Machine to Product.***

   **Cross-listed courses require the signature of both department heads.**

### 5. Complete proposed course title and proposed catalog course description (not to exceed 50 words): [MEEN 601: Advanced Product Design]

   Design methodology, functional design, innovation, parameter analysis, design for reliability, manufacturability and strength; design project. Prerequisite: MEEN 402 or equivalent

### 6. a. As currently in course inventory:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course #</th>
<th>Title (excluding punctuation)</th>
<th>Lect.</th>
<th>Lab</th>
<th>SCH</th>
<th>CIP and Fund Code</th>
<th>Admin. Unit</th>
<th>FICE Code</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEEN</td>
<td>601</td>
<td>ADVANCED MACHINE DESIGN</td>
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   b. Change to:

<table>
<thead>
<tr>
<th>Prefix</th>
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<th>Title (excluding punctuation)</th>
<th>Lect.</th>
<th>Lab</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MEEN</td>
<td>601</td>
<td>ADVANCED PRODUCT DESIGN</td>
<td>030</td>
<td>031</td>
<td>1</td>
<td>4 19 01 00 06 19 20 11 00 36 32</td>
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</table>

   **Approval recommended by:**

   Department Head – Type Name & Sign

   [Signature]

   Date: 7/20/09

   Chair College Review Committee

   [Signature]

   Date: 7/21/09

   Dean of College

   [Signature]

   Date: 7/21/09

   **Submitted to Coordinating Board by:**

   [Signature]

   Date:

   Effective Date:

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Questions regarding this form should be directed to Sandra Williams at 845-8201 or [sandra.williams@tamu.edu](mailto:sandra.williams@tamu.edu).

Curricular Services – 12/08
Syllabus Fall 2009: MEEN 601- Advanced Machine (Product) Design

T TH 02:20PM-03:35 PM ENPH 205

<table>
<thead>
<tr>
<th>Instructor: Dr. Linsey</th>
<th>Phone: (979)845-1521 (office), (979)571-1109 (cell)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email: <a href="mailto:jlinsey@tamu.edu">jlinsey@tamu.edu</a></td>
<td>Office Hours: TBD</td>
</tr>
</tbody>
</table>

**Description:** Design methodology, functional design, innovation, parameter analysis, design for reliability, manufacturability and strength; design project.

This course is a project based course focusing on product innovation and design. Topics will include idea generation and design-by-analogy techniques, innovative problem solving for both product design and for research problems, Design for X techniques (Design for Manufacturing, Reliability, etc.), functional design, effort-flow analysis, TIPS / TRIZ (Theory of Inventive Problem Solving), and prototyping techniques. Course goals include increasing student's ability to find innovative solutions to problems, and improving design and analysis skills.

Prerequisite: MEEN 402 or equivalent.


**Grading**

- Homework 10%
- Project Progress Report 1 15%
- Project Progress Report 2 (Midterm) 20%
- Final report and prototype (proof-of-concept) 35%
- Final Exam: TBA 20%

**Team Participation Grades (for team projects only):** Grades for individual students may be adjusted up or down to account for differences in performance of individual members of a design team, based on peer evaluations and evaluation by the instructor.

**Class Website:** [http://elearning.tamu.edu/](http://elearning.tamu.edu/)

**Homework and Reports:** All reports and most homework must be submitted electronically and in hard copy. No late homework or reports will be accepted unless it is a university excused absence or prior permission is obtained from the instructor at least forty-eight hours in advance for homework or one week for a report. Discussion of homework and reports is encouraged, but each student must turn in their own work.

Final Exam: TBA. The final must be taken at this time. There is no alternative time.
Course Objectives

- To increase students' engineering innovation and creativity skill. Increase student's ability to find innovative solutions to problems.
- To improve product design and analysis skills.
- To develop a product from identifying an opportunity for innovation to proof-of-concept models.
- To develop the ability to evaluate a design method.
- To be able to collect and understand customer needs in order to identify quantitative design requirements.
- Students will be able to accurately apply the design methods listed on the course schedule to novel design situations and redesign problems.
- Students will be able to identify appropriate design methods for a given engineering design situation.

Grading Scale:

A ≥90; B ≥80; C ≥70; D ≥60; F < 60

Re-grade Requests: All re-grade requests or grade protests must be submitted in writing with explanation of why the grade should be adjusted. Give explanation for why the assigned scores are incorrect. Each area of protest must be explained for consideration.

Research Participation

Through the course of the semester, there may be one or more opportunities for you and your fellow students to participate as subjects in a research study to develop better methods of educating engineering students, or to better understand the design process. You participation, while greatly appreciated, is not mandatory. Furthermore, the activities may take place during class time. Information regarding the studies will be distributed at appropriate times during the course. Alternative assignments to earn extra credit will be available.

Absences: Work missed due to absences will only be excused for University-approved activities in accordance with Texas A&M University Student Rules (see http://studentrules.tamu.edu/rule7.htm). Specific arrangements for make-up work in such instances will be handled on a case-by-case basis. In accordance with recent changes to Rule 7, please be aware that in this class any "injury or illness that is too severe or contagious for the student to attend class" will require "a medical confirmation note from his or her medical provider" even if the absence is for less than 3 days (see 7.1.6.2 Injury or illness less than three days.).

Americans with Disabilities Act (ADA) Policy Statement
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118 or call 845-1637. For additional information visit http://disability.tamu.edu

**Academic Integrity Statement Aggie Honor Code:** "An Aggie does not lie, cheat, or steal, or tolerate those who do."

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the Texas A&M University community from the requirements or the processes of the Honor System. For additional information please visit: www.tamu.edu/aggiehonor/

On all course work, assignments, and examinations at Texas A&M University, the following Honor Pledge shall be preprinted and signed by the student:

"On my honor, as an Aggie, I have neither given nor received unauthorized aid on this academic work."