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 ____________________________
   AEROSPACE ENGINEERING - Mechanics and Materials

2. Course prefix, number and complete title of course: MEMA 601 - Theory of Elasticity

Attach a brief supporting statement for changes made to items 3a thru 3d, and 5 below.

3. Change requested
   a) Prerequisite(s): From ____________________________ To ____________________________
   b) Withdrawal (reason) ____________________________
   c) Cross-list with ____________________________
      AERO 605 - Theory of Elasticity
      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;
      complete proposed course title and proposed course description in items 4 and 5.
   e) Change in credit/contact hours. Complete item 6b. Underscore change(s). Attach a course syllabus.

4. Complete current course title and current course description: Theory of Elasticity. Analysis of stress and strain in
   two and three dimensions, equilibrium and compatibility equations, strain energy methods; torsion of
   noncircular sections; flexure; axially symmetric problems.

5. Complete proposed course title and proposed course description (not to exceed 50 words): SAME

6. a) As currently in course inventory:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course #</th>
<th>Title (excluding punctuation)</th>
</tr>
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<tbody>
<tr>
<td>MEMA</td>
<td>601</td>
<td>THEORY OF ELASTICITY</td>
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<th>Lect.</th>
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<th>SCH</th>
<th>Subject Matter Content Code</th>
<th>Admin. Unit</th>
<th>FICE Code</th>
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b) Change to:

<table>
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<td>THEORY OF ELASTICITY</td>
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<th>SCH</th>
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<th>Admin. Unit</th>
<th>Acad. Year</th>
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</tbody>
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Approval recommended by:

Head of Department ____________________________ Date ____________________________
Head of Department (if cross-listed course) ____________________________ Date ____________________________

Chair, College Review Committee ____________________________ Date ____________________________
Dean of College ____________________________ Date ____________________________

Submitted to Coordinating Board by:

Dean of College ____________________________ Date ____________________________

Director of Academic Support Services ____________________________ Date ____________________________

Questions regarding this form should be directed to Sandra Williams at 845-8836.
OAR/AS – 04/07

1 of 3 B40
MEMA 601/AERO 605
Theory of Elasticity
Fall 2007

Instructor: Dr. A.A. Benzerza  
Office: 736C H.R. Bright Building  
Tel: 845-1602
Office Hours: To be discussed  
E-mail: benzerza@aero.tamu.edu
Spring 2008 Time: TBA, Location: TBA
Course Description Review of stress and strain concepts, virtual work and constitutive equations; Derivation of field equations; Analysis and solution of two- and three-dimensional field problems. Advanced elasticity problems.

Prerequisite Students should have a senior or graduate standing in engineering or equivalent.

Course Evaluation
(i) homeworks (40%)
(ii) Mid-Term Exam (30%)
(iii) Final Examination: 30%

Additional References will be given later.

Course Topics

1. Introduction and Basics  3 hours
2. Constitution of materials  3 hours
3. Review of “Strength of Materials”  3 hours
4. Two-dimensional field problems (Cartesian coordinates)  6 hours
5. Two-dimensional field problems (polar coordinates)  6 hours
6. Three-dimensional problems in elasticity (elements)  3 hours
7. Torsion of beams  6 hours
8. Bending with transverse shear  6 hours
9. Axisymmetric deformations  3 hours
10. Advanced elasticity: Hertzian contact, dislocations.  3 hours

Total  42
Americans with Disabilities Act
The Americans with Disabilities Act (ADA) is a federal antidiscrimination 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 the Department of Student Life, Services for Students with Disabilities in Room B118 Cain Hall, or call 845-1637.

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As commonly defined, plagiarism consists of passing off as one's own the ideas, work, writings, etc., that belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated. If you have questions regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules [http://student-rules.tamu.edu/], under the section "Scholastic Dishonesty."