

Application for a New Course v10

Course ID <i>Subject and Number</i>	ENGR 332
Date APPROVED	
Date DENIED	

I. Systems and Catalog Information Complete each item.

1	Course Developer	Rich Jinkerson
2	Course Teacher	A member of the Engineering & Physics Department faculty
3	Course Title	Mechanics of Materials
4	Course Abbreviation (if title is over 30 characters)	Mechanics of Materials
5	College	College of Arts and Sciences
6	Department	Engineering and Physics
7	Number of Credit Hours	3
8	Is the course Fixed Credit or Variable Credit?	Fixed
9	Is the course repeatable?	No
10	Maximum number of times course may be repeated	Zero
11	Maximum number of hours credit	3
12	Explanation for variable credit	N/A
13a	Course contact hours - LEC	3
13b	Course contact hours - Lab	0
13c	Course contact hours - Practicum	0
13d	Course contact hours - Seminar	0
13e	Course contact hours - Studio	0
13f	Course contact hours - Online	0
13g	Course contact hours - Colloquium	0
13h	Course contact hours - Field Experience	0
13j	Course contact hours - Internship	0
13k	Course contact hours - Research	0
13m	Course contact hours - Workshop	0
13n	Course contact hours - Other (specify)	0
14	Instructor Workload	3
15	Grade Mode (check all appropriate):	☒ Standard ☐ Credit/No Credit (undergrad only)
16	Maximum Enrollment	20
17	Catalog Description (50 words or less)	A study of the internal effects of stresses and strains on solid bodies subjected to external loading.

18	List any prerequisites (course/s, test scores, class standing, major, etc.)	ENGR 220 and MATH 186
19	List any co-requisites	None
20	If the course is cross listed, specify the Course ID(s) MUST have signature in Section V off all Department Chairs	No
21	Does this course have any special student costs? Yes/No <i>Attach a <u>completed</u> "Request to Add or Change Course Fees" form. Describe in section IV-F.</i>	No
22	How often will it be offered? Fall	Offered
23a	How often will it be offered? Spring	Not offered
23b	How often will it be offered? Summer	Not offered
23c	How often will it be offered? Fall	Offered
24	Frequency?	Every Year
25	First semester this course will be offered <i>New courses may not be taught under their approved course ID until they appear in the catalog, therefore, no earlier than the coming fall.</i>	Fall 2015
6	List course/s that should be deleted, include the last semester for course/s being deleted <i>A course cannot be deleted when it is a requirement in a degree plan in any department.</i>	None
27	Is this course required for a degree/s? Yes/No <i>If "Yes," attach a revised degree plan(s) reflecting the placement of the new course.</i>	Yes. Degree plan is unchanged. Engineering is a new program and this course already exists in engineering and physics degree plans (see attached pages of 2014-15 catalog). This application for adding the course to the catalog.
28	Has this course been offered as a Special Topics course? Yes/No <i>If "Yes," specify the Course ID and enrollment for each term it was taught.</i>	Yes. ENGR 340.02– Fall 2014, Total Enrollment 11;
29	List any courses in which content overlaps the proposed course. (Course ID and Name) <i>Attach statement from instructor/dept chair of existing course justifying the new offering in Section IV-D.</i>	None

II. Curriculum

1	Degree Plan Explanation of how this course affects degree requirements.	This course does not affect degree requirements. It is already included in the catalog degree plans for engineering and physics (see attached pp. 61-63, 2014-15 catalog). This application is for adding the
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		course to the catalog, along with the appropriate content information, prerequisites, and other applicable information.
2	Justification State the justification for adding this course to the current curriculum. Represent the need	This course is already a required part of the degree plan. This application for adding the course to the catalog.

III. Course Design

1. Audience and Course Goal

1	Describe the intended audience, including prerequisite skills.	This course is required of all engineering majors and will normally be taken in the third year of the degree program. Prerequisite skills require completion of ENGR 220 and MATH 186 or its equivalent.
2	State the overarching course goal(s) in performance terms.	1) Students will understand the effects of stresses and strains on solid bodies under axial, torsional, and bending loads. 2) Students will understand and Examine shear flow and the effects of combined loadings. 3) Students will recognize and apply basic stress and strain transformations 4) Students will identify and apply methods for design and analysis of beams and shafts 5) Students will solve column design and buckling problems

2. Competencies and Measurements

	Competency	Measurement
1	Calculate the effects of stresses and strains on solid bodies under axial, torsional, and bending loads	Homework; Exams 1 and 2
2	Examine shear flow and the effects of combined loadings	Homework; Exams 2 and 3
3	Recognize and apply basic stress and strain transformations	Homework; Exam 3
4	Identify and apply methods for design and analysis of beams and shafts	Homework; Exams 3 and 4
5	Solve column design and buckling problems	Homework; Exam 4

3. Text and Resources

1. Give the full publication information of the textbook/s and other required resources and outside readings.

Required Text: Mechanics of Materials, 9th Edition, R. C. Hibbeler, Pearson Prentice Hall.
ISBN 978-0133-25442-6

Software: Mastering Engineering, Pearson Prentice Hall; software access provided with the text.

2. For **combined undergraduate/graduate** courses, make two lists:
 - a. full publication information; label **Undergraduate**.
 - b. full publication information; label **Graduate**. Indicate number of pages required.

IV. Supporting Documentation

Supporting documents must accompany proposal prior to preliminary approval by chair and dean.

1	Library — Submit new course application and syllabus to the Director of the Library. Consult with the director and establish a deadline for completion of the library report. Attach the signed copy of the library director's report.
2	Instructional Design — The application and syllabus must be reviewed by the Adams Center. Attach a copy of the Adams Center Review Letter.
3	Degree Plan — The impact of the course must be reviewed by the Director of Curriculum. Attach degree plan signed by the Director of Curriculum.
4	Content Overlap — Include one document for each course you listed in Section I-I. Attach statement from instructor/dept chair of existing course justifying the new offering.
5	Departmental Resources — List the resources that support the course and are available only through the department, if applicable. Attach the list of the holdings and the location/s.
6	Resources — List resources (other than library or departmental resources) that are needed to support this course (computers, lab equipment, other technology, etc.). Attach a complete list of all items and indicate possible sources or estimated cost of each. List the sources of any needed funds.
7	Expenses — List additional expenses needed to implement this course (full-time or part-time faculty, graduate or lab assistants, student employees, travel, special student costs, room renovation, storage facility, etc.). Attach a complete list of all items, the estimated cost of each and the source of the funds.
8	Justification — Attach all documents referred to in Section II-2
9	Syllabus — Attach the syllabus for the course based upon the anticipated first-semester offering.
10	Provide documentation for all additional attachments here

V. Preliminary Approvals

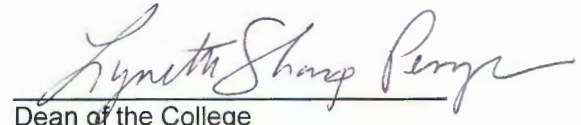
All supporting documentation has been assembled and attached to this application. I believe this course is ready to be presented to appropriate councils. We have a plan to fund this new course.

Primary Department



Department Chair
10/27/14

Date



Dean of the College
11-14-14

Date

Cross-listing Department *Add more lines if multiple departments are cross-listing*

Department Chair

Date

Dean of the College

Date

Cross-listing Department *Add more lines if multiple departments are cross-listing*

Department Chair

Date

Dean of the College

Date

VI. Approvals *Place all approvals on one page.*

A. Course ID: ENGR 332

Course Title: Mechanics of Materials

1. College Academic Council Action: (for all courses)

Note: Insert additional lines for College Academic Council action for each college involved in cross-listed courses.

Approved ☒ Denied ☐ *[Signature]* 11-14-14
College Dean or Director Date

Approved ☒ Denied ☐ *[Signature]* 2/10/15
College Dean or Director Date

2. Graduate Council Action: (for graduate level courses)

Approved ☐ Denied ☐ _____
Dean of Graduate School Date

3. University Undergraduate Academic Council Action:

For undergraduate level courses only

Approved ☐ Denied ☐ _____
Associate Provost Date

4. University General Education Council Action: (when applicable)

Approved ☐ Denied ☐ _____
Provost or designee Date

5. University Budget Committee Action: (when applicable)

When applicable – see New Course Application Instructions

Approved ☐ Denied ☐ _____
Chair, University Budget Committee Date

6. Academic Provost Action: (for all courses)

Approved ☐ Denied ☐ _____
Provost Date

7. President of the University Action: (for all courses)

Approved ☐ Denied ☐ _____
President Date

Attach notes, comments, or conditions from appropriate councils: