

PURDUE UNIVERSITY
REQUEST FOR ADDITION, EXPIRATION,
OR REVISION OF A GRADUATE COURSE
(500-600 LEVEL)

20-09

Graduate Council Doc. No.10-16b

DEPARTMENT Mechanical Engineering EFFECTIVE SESSION Fall 2009 Fall 2011

INSTRUCTIONS: Please check the items below which describe the purpose of this request.

- | | |
|--|--|
| <input checked="" type="checkbox"/> 1. New course with supporting documents (complete proposal form) | <input type="checkbox"/> 7. Change in course attributes |
| <input type="checkbox"/> 2. Add existing course offered at another campus | <input type="checkbox"/> 8. Change in instructional hours |
| <input type="checkbox"/> 3. Expiration of a course | <input type="checkbox"/> 9. Change in course description |
| <input type="checkbox"/> 4. Change in course number | <input type="checkbox"/> 10. Change in course requisites |
| <input type="checkbox"/> 5. Change in course title | <input type="checkbox"/> 11. Change in semesters offered |
| <input type="checkbox"/> 6. Change in course credit/type | <input type="checkbox"/> 12. Transfer from one department to another |

PROPOSED: Subject Abbreviation <u>ME</u> Course Number <u>69100</u> Long Title <u>Mechanical Engineering Graduate Seminar</u> Short Title <u>ME Grad Seminar</u> <small>Abbreviated title will be entered by the Office of the Registrar if omitted. (22 CHARACTERS ONLY)</small>	EXISTING: Subject Abbreviation _____ Course Number _____	TERMS OFFERED Check All That Apply: <input type="checkbox"/> Summer <input checked="" type="checkbox"/> Fall <input type="checkbox"/> Spring CAMPUS(ES) INVOLVED <input type="checkbox"/> Calumet <input type="checkbox"/> N. Central <input type="checkbox"/> Cont Ed <input type="checkbox"/> Tech Statewide <input type="checkbox"/> Ft. Wayne <input checked="" type="checkbox"/> W. Lafayette <input type="checkbox"/> Indianapolis
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CREDIT TYPE 1. Fixed Credit: Cr. Hrs. <u>0</u> 2. Variable Credit Range: Minimum Cr. Hrs. _____ (Check One) To <input type="checkbox"/> Or <input type="checkbox"/> Maximum Cr. Hrs. _____ 3. Equivalent Credit: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 4. Thesis Credit: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	COURSE ATTRIBUTES: Check All That Apply 1. Pass/Not Pass Only <input checked="" type="checkbox"/> 2. Satisfactory/Unsatisfactory Only <input checked="" type="checkbox"/> 3. Repeatable <input type="checkbox"/> Maximum Repeatable Credit: _____ 4. Credit by Examination <input type="checkbox"/> 5. Designator Required <input type="checkbox"/> 6. Special Fees <input type="checkbox"/> 7. Registration Approval Type Department <input type="checkbox"/> Instructor <input type="checkbox"/> 8. Variable Title <input type="checkbox"/> 9. Remedial <input type="checkbox"/> 10. Honors <input type="checkbox"/> 11. Full Time Privilege <input type="checkbox"/> 12. Off Campus Experience <input type="checkbox"/>
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Instructional Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated	Delivery Method (Asyn. Or Syn.)	Delivery Medium (Audio, Internet, Live, Text-Based, Video)
Lecture	50	1	16		Syn	Live
Recitation						
Presentation						
Laboratory						
Lab Prep						
Studio						
Distance						
Clinic						
Experiential						
Research						
Ind. Study						
Pract/Observ						

RECEIVED
 2011 APR - 8 AM 10:39
 OFFICE OF THE REGISTRAR

COURSE DESCRIPTION (INCLUDE REQUISITES):
ME 591 ME Graduate Seminar, Sem. 1, Class 1, cr. 0. Prerequisites: Graduate Standing, MS or Ph.D. student in Mechanical Engineering.

Acquaint graduate students with a broad spectrum of research in various areas of mechanical engineering. Weekly seminars by invitees/researchers from academia, national labs, or industry. Seminar topics provide a mix of subjects, areas and disciplines, and can involve considerable technical depth, a broad overview and/or historical perspectives. Professor Bajaj.

Fort Wayne Department Head _____ Date _____	Fort Wayne School Dean _____ Date _____	Fort Wayne Chancellor _____ Date _____
Indianapolis Department Head _____ Date _____	Indianapolis School Dean _____ Date _____	Undergrad Curriculum Committee _____ Date _____
North Central Department Head _____ Date _____	North Central Chancellor _____ Date _____	APPROVED 11/18/10 Date Approved by Graduate Council _____
West Lafayette Department Head _____ Date _____	West Lafayette College/School Dean _____ Date _____	Graduate Council Secretary _____ Date _____
Graduate Area Committee Convener _____ Date _____	Graduate Dean _____ Date _____	West Lafayette Registrar _____ Date _____

4/14/11

PURDUE UNIVERSITY
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DEPARTMENT Mechanical Engineering EFFECTIVE SESSION Fall 2009

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PROPOSED:

Subject Abbreviation ME EXISTING: Subject Abbreviation _____

Course Number 691 Course Number _____

Long Title Mechanical Engineering Graduate Seminar

Short Title ME Grad Seminar

Abbreviated title will be entered by the Office of the Registrar if omitted. (22 CHARACTERS ONLY)

TERMS OFFERED

Check All That Apply:

Summer Fall Spring

CAMPUS(ES) INVOLVED

Calumet N. Central
 Cont Ed Tech Statewide
 Ft. Wayne W. Lafayette
 Indianapolis

CREDIT TYPE

1. Fixed Credit: Cr. Hrs. 0
2. Variable Credit Range:
 Minimum Cr. Hrs. _____
 (Check One) To Or
 Maximum Cr. Hrs. _____
3. Equivalent Credit: Yes No
4. Thesis Credit: Yes No

COURSE ATTRIBUTES: Check All That Apply

1. Pass/Not Pass Only
2. Satisfactory/Unsatisfactory Only
3. Repeatable
 Maximum Repeatable Credit: _____
4. Credit by Examination
5. Designator Required
6. Special Fees
7. Registration Approval Type
 Department Instructor
8. Variable Title
9. Remedial
10. Honors
11. Full Time Privilege
12. Off Campus Experience

Instructional Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated	Delivery Method (Asyn. Or Syn.)	Delivery Medium (Audio, Internet, Live, Text-Based, Video)
Lecture	50	1	16		Syn	Live
Recitation						
Presentation						
Laboratory						
Lab Prep						
Studio						
Distance						
Clinic						
Experiential						
Research						
Ind. Study						
Pract/Observ						

Cross-Listed Courses

COURSE DESCRIPTION (INCLUDE REQUISITES):

ME 591 ME Graduate Seminar, Sem. 1, Class 1, cr. 0. Prerequisites: Graduate Standing, MS or Ph.D. student in Mechanical Engineering.

Acquaint graduate students with a broad spectrum of research in various areas of mechanical engineering. Weekly seminars by invitees/researchers from academia, national labs, or industry. Seminar topics provide a mix of subjects, areas and disciplines, and can involve considerable technical depth, a broad overview and/or historical perspectives.

Fort Wayne Department Head _____ Date _____	Fort Wayne School Dean _____ Date _____	Fort Wayne Chancellor _____ Date _____
Indianapolis Department Head _____ Date _____	Indianapolis School Dean _____ Date _____	<u>R. Cipra</u> 3/3/2010 Undergrad Curriculum Committee _____ Date _____
North Central Department Head _____ Date _____	North Central Chancellor _____ Date _____	Date Approved by Graduate Council _____
<u>E. Daniel Horlana</u> 2/3/10 West Lafayette Department Head _____ Date _____	<u>Michael J. Dean</u> 5/12/10 West Lafayette College/School Dean _____ Date _____	Graduate Council Secretary _____ Date _____
Graduate Area Committee Convener _____ Date _____	Graduate Dean _____ Date _____	West Lafayette Registrar _____ Date _____

TO: The Engineering Faculty

FROM: The Faculty of the School of Mechanical Engineering

RE: New Course – ME 691 ME Graduate Seminar

The Faculty of the School of Mechanical Engineering has approved the following new course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

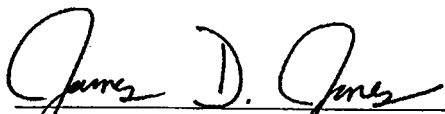
ME 691 ME Graduate Seminar

Sem. 1 , Class 1, cr. 0. Pass/No Pass

Prerequisites: Graduate Standing, MS or Ph.D. student in Mechanical Engineering

Acquaint graduate students with a broad spectrum of research in various areas of mechanical engineering. Weekly seminars by invitees/researchers from academia, national labs, or industry. Seminar topics provide a mix of subjects, areas and disciplines, and can involve considerable technical depth, a broad overview and/or historical perspectives.

Reason: This course has been taught three times on an experimental basis with the following enrollments: fall 2004 – 63 students, fall 2005 - 110 students, fall 2006 – 140 students; and fall 2007 - 163 students. This course provides new graduate students with a broad understanding of the field of Mechanical Engineering and an appreciation of various interdisciplinary research efforts.



James D. Jones, Associate Head/Professor
School of Mechanical Engineering

APPROVED FOR THE FACULTY
OF THE SCHOOLS OF ENGINEERING
BY THE ENGINEERING
CURRICULUM COMMITTEE

ECC Minutes #11

Date 12/14/09

Chairman ECC R. Cipra

ME 691
Mechanical Engineering
Graduate Seminar

Course Outcomes

1. Develop an *understanding of the field of Mechanical Engineering* in its widest possible applications.
2. Develop an appreciation of the various *interdisciplinary research efforts* being pursued where Mechanical Engineering has the potential to provide leadership.

Typical Schedule (15 wks)

1. Introduction, semester schedule – Graduate Chair, School of Mechanical Engineering
2. Prof. Sanford A. Klein, OuweNel-Bascom Professor, Dept of Mechanical Engineering, University of Wisconsin, Madison, August 30, 07
3. Prof. Osman Basaran, Reilly Professor of Fluid Mechanics, School of Chemical Engineering, Purdue University, West Lafayette, September 6, 07
4. Prof. Werner Soedel, Herrick Professor of Engineering, School of Mechanical Engineering, Purdue University, West Lafayette, September 13, 07
5. Prof. Kenneth E. Torrance, Joseph C. Ford Professor, Mechanical and Aerospace Engineering, Cornell University, Ithaca, September 20, 07
6. Prof. Alison Flatau, Department of Aerospace Engineering, University of Maryland, College Park, September 27, 07
7. OLDENBERGER LECTURE: Prof. J. Karl Hedrick, James Marshall Wells Professor, Department of Mechanical Engineering, University of California at Berkeley, Berkeley, October 4, 07
8. HAWKINS LECTURE: Dr. Richard O Buckius, Assistant Director, National Science Foundation Directorate for Engineering, The National Science Foundation, Arlington, October 11, 07
9. Prof. Mark Cutkosky, Department of Mechanical Engineering, Stanford University, Stanford, October 18, 07
10. ADAMS DISTINGUISHED LECTURE: Dr. Mihail C. Roco, The National Science Foundation, Washington, October 25, 07
11. GRADUATE COLLOQUIUM: Prof. Dr.-Ing Dr. Cam Tropea, Chair Professor, TU-Darmstadt, Fachgebiet Strömungslehre und Aerodynamik Petersenstraße, Germany, November 1, 07
12. Dr. Robert Wagner, R&D Staff Member, Fuels, Engines, and Emissions Research Center (FEERC), National Transportation Research Center [NTRC], Oak Ridge National Laboratory, Oak Ridge, November 8, 07
13. Prof. J. N. Reddy, Distinguished Professor and Oscar S. Wyatt Endowed Chair, Department of Mechanical Engineering, Texas A&M University, College Station, November 15, 07

COURSE NUMBER: ME 691		COURSE TITLE: Mechanical Engineering Graduate Seminar	
REQUIRED COURSE OR ELECTIVE COURSE: Required		TERMS OFFERED: Fall	
TEXTBOOK/REQUIRED MATERIAL: None		PRE-REQUISITIES: Graduate standing, MS or PhD student in Mechanical Engineering	
COORDINATING FACULTY: A. K. Bajaj		COURSE OUTCOMES: 1. Develop an <i>understanding of the field of Mechanical Engineering</i> in its widest possible applications. 2. Develop an appreciation of the various <i>interdisciplinary research efforts</i> being pursued where Mechanical Engineering has the potential to provide leadership.	
COURSE DESCRIPTION: Acquaint graduate students with a broad spectrum of research in various areas of mechanical engineering. Weekly seminars by invitees/researchers from academia, national labs, or industry. Seminar topics provide a mix of subjects, areas and disciplines, and can involve considerable technical depth, a broad overview and/or historical perspectives.		RELATED ME PROGRAM OUTCOMES: N/A	
ASSESSMENTS TOOLS: 1. Attendance 2. Every student is required to attend at least ten of the seminars of the fourteen scheduled during a semester. 3. Some substitution of seminars in the series by high-level technical seminars across campus is permitted.			
PROFESSIONAL COMPONENT: 1. Engineering Topics: Engineering Science – 0 credits (100%)			
COMPUTER USAGE: None			
COURSE STRUCTURE/SCHEDULE: 1. Lecture - 1 day per week at 50 minutes			
PREPARED BY: A. K. Bajaj		DATE: October 10, 2007	

Supporting Document for a New Graduate Course

Purdue University Graduate Council

From: Faculty Member: Anil K. Bajaj
Department: Mechanical Engineering
Campus: Mechanical Engineering
Date: 3/16/2010
Subject: Proposal for New Graduate Course-
Documentation Required by the Graduate Council
to Accompany Registrar's Form 40G

For Reviewer's comments only
(Select One)

Choose an item:

Reviewer:

Click here to enter text.

Comments:

Click here to enter text.

Contact for information if questions arise:

Name:

James D. Jones

Phone Number:

494-5691

E-mail:

jonesjd@purdue.edu

Campus Address:

1288 ME / ME room 222

Course Subject Abbreviation and Number:

ME 69100

Course Title:

Mechanical Engineering Graduate Seminar

A. Justification for the Course:

- This course has been taught four times on an experimental basis with the following enrollments: fall 2004 – 63 students, fall 2005 – 110 students, fall 2006 – 140 students, and fall 2007 – 163 students. This course provides new graduate students with a broad understanding of the field of Mechanical Engineering and an appreciation of various interdisciplinary research efforts.
- ME 69100 is a new Mechanical Engineering Graduate Seminar course. As such it is designed exclusively for new graduate students. No undergraduates will be taking this course. Anticipated enrollment will typically be 100-150 graduate students.

B. Learning Outcomes and Methods of Evaluation or Assessment:

- 1) Develop an understanding of the field of Mechanical Engineering in its widest possible applications.
2) Develop an appreciation of the various interdisciplinary research effort being pursued where Mechanical Engineering has the potential to provide leadership.
- 1. Attendance 2. Every student is required to attend at least 10 of the seminars of the fourteen scheduled during a semester. 3. Some substitution of seminars in the series by high-level technical seminars across campus is permitted.

- Engineering Topics: Engineering Science – 0 credits (0%)

- **Criteria:**

<input type="checkbox"/>	Exams and Quizzes	<input type="checkbox"/>	Papers and Projects
<input type="checkbox"/>	Homework	<input type="checkbox"/>	Laboratory Exercises
<input checked="" type="checkbox"/>	Attendance and Class Participation	<input type="checkbox"/>	Extra Credit Policies

- This course is taught by lecture and covers the program outcomes described in the program map.

- **Method of Instruction:**

<input checked="" type="checkbox"/>	Lecture	<input type="checkbox"/>	Recitation
<input type="checkbox"/>	Presentation	<input type="checkbox"/>	Laboratory
<input type="checkbox"/>	Lab Prep	<input type="checkbox"/>	Studio
<input type="checkbox"/>	Distance	<input type="checkbox"/>	Clinic
<input type="checkbox"/>	Experimental	<input type="checkbox"/>	Research
<input type="checkbox"/>	Ind. Study	<input type="checkbox"/>	Pract/Observe
<input type="checkbox"/>	Seminar		

C. Prerequisite(s):

- Graduate standing, MS or PhD student in Mechanical Engineering
- None

D. Course Instructor(s):

- Anil K. Bajaj, Associate Head for Graduate Education & Research and Professor of Mechanical Engineering
- Is the instructor currently a member of the Graduate Faculty? Yes No [Click here to enter text.](#)
(If the answer is no, indicate when it is expected that a request will be submitted.)

E. Course Outline:

- Typical Schedule (15 weeks)

F. Reading List (include course text):

- No textbook required.
- No textbook required.

G. Library Resources:

- No resources needed.

H. Example of a Course Syllabus:

- The course syllabus changes from semester to semester depending on guest speakers. The guest speakers range from industry to faculty from around the country to talk about their research and experiences. The graduate students must attend 10 seminars during the semester and this is tracked by swiping their PUID card at the beginning of the seminar.

