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.
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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, Ouweneel-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
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<tr>
<th>COURSE NUMBER: ME 691</th>
<th>COURSE TITLE: Mechanical Engineering Graduate Seminar</th>
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<tr>
<td>REQUIRED COURSE OR ELECTIVE COURSE: Required</td>
<td>TERMS OFFERED: Fall</td>
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<tr>
<td>TEXTBOOK/REQUIRED MATERIAL: None</td>
<td>PRE-REQUISITIES: Graduate standing, MS or PhD student in Mechanical Engineering</td>
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<td>COORDINATING FACULTY: A. K. Bajaj</td>
<td>COURSE OUTCOMES:</td>
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<td>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.</td>
<td>1. Develop an understanding of the field of Mechanical Engineering in its widest possible applications.</td>
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<td>ASSESSMENTS TOOLS:</td>
<td>2. Develop an appreciation of the various interdisciplinary research efforts being pursued where Mechanical Engineering has the potential to provide leadership.</td>
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<tr>
<td>1. Attendance</td>
<td>RELATED ME PROGRAM OUTCOMES: N/A</td>
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<tr>
<td>2. Every student is required to attend at least ten of the seminars of the fourteen scheduled during a semester.</td>
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<td>3. Some substitution of seminars in the series by high-level technical seminars across campus is permitted.</td>
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<td>PROFESSIONAL COMPONENT:</td>
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<td>1. Engineering Topics: Engineering Science – 0 credits (100%)</td>
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<td>COMPUTER USAGE: None</td>
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<td>COURSE STRUCTURE/SCHEDULE:</td>
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<tr>
<td>1. Lecture - 1 day per week at 50 minutes</td>
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<tr>
<td>PREPARED BY: A. K. Bajaj</td>
<td>DATE: October 10, 2007</td>
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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

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 efforts 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:

  | ☐ Exams and Quizzes | ☐ Papers and Projects |
  | ☐ Homework         | ☐ Laboratory Exercises |
  | ☒ Attendance and Class Participation | ☐ Extra Credit Policies |

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

  ○ Method of Instruction:

  | ☒ Lecture                     | ☐ Recitation                |
  | ☐ Presentation               | ☐ Laboratory                |
  | ☐ Lab Prep                   | ☐ Studio                    |
  | ☐ Distance                  | ☐ Clinic                    |
  | ☐ Experimental              | ☐ Research                  |
  | ☐ Ind. Study                | ☐ Pract/Observe             |
  | ☐ 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.