TO:    The Faculty of the College of Engineering

FROM:  School of Electrical and Computer Engineering of the College of Engineering

RE:    New Graduate Course, ECE 69200 Introduction to Graduate Research

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

**ECE 69200  Introduction to Graduate Research**
Sem. 1,2, and 3 Research, Cr. 1-3.
Prerequisite by Topic:  Graduate Standing

**Description:** Research-related activities supervised by an ECE faculty member to introduce newly admitted ECE graduate students to the methods and culture of doing research. Possible activities might include, but are not limited to, participation in group research meetings, association with an advanced graduate student, and individualized reading or project work. A description of the activity, approved by the faculty supervisor, must be filed with the ECE Graduate Office.

**Reason:** This course is intended strictly for newly admitted graduate students. Its purpose is to provide these students with an early opportunity to learn about methods and culture of research.

Michael R. Melloch, Associate Head
School of Electrical and Computer Engineering

Approved for the faculty of the Schools of Engineering by the Engineering Curriculum Committee

ECC Minutes 8/11/15
Chairman ECC

Date 8/11/15
Purdue University
Request for Addition, Expiration, or Revision of a Graduate Course
(50000-60000 Level)

Department: Electrical and Computer Engineering
Effective Session: Spring 2016

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

- New course with supporting documents (complete proposal form)
- Add existing course offered at another campus
- Expiration of a course
- Change in course number
- Change in course title
- Change in course credit type
- Change in course attributes
- Change in instructional hours
- Change in course description
- Change in course requisites
- Change in semesters offered
- Transfer from one department to another

Proposed:

<table>
<thead>
<tr>
<th>Subject Abbreviation</th>
<th>ECE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Number</td>
<td>69200</td>
</tr>
<tr>
<td>Long Title</td>
<td>Introduction to Graduate Research</td>
</tr>
<tr>
<td>Short Title</td>
<td>Introduction to Graduate Research</td>
</tr>
</tbody>
</table>

Existing:

<table>
<thead>
<tr>
<th>Subject Abbreviation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Number</td>
<td></td>
</tr>
<tr>
<td>Long Title</td>
<td></td>
</tr>
<tr>
<td>Short Title</td>
<td></td>
</tr>
</tbody>
</table>

Terms Offered:

- Check all that apply
- Fall
- Spring
- Summer

Campus(ES) Involved:

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

Credit Type:

1. Fixed Credit: Cr. Hrs.
2. Variable Credit Range:
   - Minimum Cr. Hrs: ___
   - Maximum Cr. Hrs: ___
3. Equivalent Credit: Yes [ ] No [ ]
4. Thesis Credit: Yes [ ] No [ ]

Schedule Type:

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Recitation</th>
<th>Presentation</th>
<th>Laboratory</th>
<th>Lab Prep</th>
<th>Studio</th>
<th>Distance</th>
<th>Clinic</th>
<th>Experiential</th>
<th>Research</th>
<th>Ind. Study</th>
<th>Pract/Observe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Course Attributes:

- Pass/Not Pass Only
- Satisfactory/Unsatisfactory Only [ ]
- Repeatable [ ]
- Maximum Repeatable Credit: ___
- Credit by Examination
- Fees [ ] Core [ ] Lab [ ] Rate Request [ ]
- Off Campus Experience

Course Description (Include Requisites/Restrictions):

Research-related activities supervised by an ECE faculty member to introduce newly admitted ECE graduate students to the methods and culture of doing research. Possible activities might include, but are not limited to, participation in group research meetings, association with an advanced graduate student, and individualized reading or project work. A description of the activity, approved by the faculty supervisor, must be filed with the ECE Graduate Office.

Course Learning Outcomes:


Calumet Department Head: Date
Calumet School Dean: Date
Calumet Director of Graduate Studies: Date

Fort Wayne Department Head: Date
Fort Wayne School Dean: Date
Fort Wayne Director of Graduate Studies: Date

Indianapolis Department Head: Date
Indianapolis School Dean: Date
IUPUI Associate Dean for Graduate Education: Date

North Central Department Head: Date
North Central School Dean: Date
North Central Director of Graduate Studies: Date

West Lafayette Department Head: Date
West Lafayette College/School Dean: Date
West Lafayette Registrar: Date

Date Approved by Graduate Council: Date

Graduate Area Committee Convener: Date
Graduate Dean: Date
Graduate Council Secretary: Date

Office of the Registrar
Supporting Document to the Form 40G
for a New Graduate Course

To: Purdue University Graduate Council
From: Faculty Member: ECE Graduate Committee

Department: Electrical and Computer Engineering
Campus: West Lafayette

Date:

Subject: Proposal for New Graduate Course

Contact for information if questions arise:
Name: Matt Golden
Phone: 494-3374
Email: goldenm@purdue.edu
Address: EE Building, Room 135

Course Subject Abbreviation and Number: ECE 69200

Course Title: Introduction to Graduate Research

Course Description:
Research-related activities supervised by an ECE faculty member to introduce newly admitted ECE graduate students to the methods and culture of doing research. Possible activities might include, but are not limited to, participation in group research meetings, association with an advanced graduate student, and individualized reading or project work. A description of the activity, approved by the faculty supervisor, must be filed with the ECE Graduate Office.

Semesters Offered:
For the benefit of graduate student plan of study development, how frequently will this prototype be offered? Which semesters?
Each Semester

A. Justification for the Course:
Provide a complete and detailed explanation of the need for the course (e.g., in the preparation of students, in providing new knowledge/training in one or more topics, in meeting degree requirements, etc.), how the course contributes to existing majors and/or concentrations, and how the course relates to other graduate courses offered by the department, other departments, or interdisciplinary programs.

Justify the level of the proposed graduate course (500- or 600-level) including statements on, but not limited to: (1) the target audience, including the anticipated number of undergraduate and graduate students who will enroll in the course; and (2) the rigor of the course.

- This course is intended strictly for newly admitted graduate students. Its purpose is to provide these students with an early opportunity to learn about methods and culture of research.

Use the following criteria:

Graduate Council policy requires that courses at the 50000 level in the Purdue system should be taught at the graduate level and meet four criteria: a) the use of primary literature in conjunction with advanced secondary sources (i.e., advanced textbooks); b) assessments that demonstrate synthesis of concepts and ideas by students; c) demonstrations that topics are current, and; d) components that emphasize research approaches/methods or discovery efforts in the course content area (reading the research, critiquing articles, proposing research, performing research). Such courses should be taught so that undergraduate students are expected to rise to the level of graduate work and be assessed in the same manner as the graduate students.

- Anticipated enrollment
  - Undergraduate: 0
  - Graduate: 50-75

B. Learning Outcomes and Method of Evaluation or Assessment:

ECE Graduate Learning Outcomes:

a. Knowledge and Scholarship (thesis/non-thesis)
b. Communication (thesis/non-thesis)
c. Critical Thinking (thesis/non-thesis)
d. Ethical and Responsible Research (thesis) or Professional and Ethical Responsibility (non-thesis)

- List Learning Objectives for this course and map each Learning Objective to one or more of the ECE Learning Outcomes (a-d, listed above):
• Methods of Instruction
  
  • Research

• Will/can this course be offered via Distance Learning?
  
  • No.

• Grading Criteria

  Grading criteria (select from checklist); include a statement describing the criteria that will be used to assess students and how the final grade will be determined. Add and delete rows as needed.
  
  • Research
  
  ▶ Describe the criteria that will be used to assess students and how the final grade will be determined:

C. Prerequisite(s):

  List prerequisites and/or experiences/background required. If no prerequisites are indicated, provide an explanation for their absence. Add bullets as needed.

  • Graduate Standing and Consent of Instructor

D. Course Instructor(s):

  Provide the name, rank, and department/program affiliation of the instructor(s). Is the instructor currently a member of the Graduate Faculty? (If the answer is no, indicate when it is expected that a request will be submitted.) Add rows as needed.

<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>Dept.</th>
<th>Graduate Faculty or expected date</th>
</tr>
</thead>
<tbody>
<tr>
<td>All ECE Faculty</td>
<td>Assistant Professor, Associate Professor, Professor</td>
<td>ECEN</td>
<td>Yes</td>
</tr>
</tbody>
</table>

E. Course Outline:

  Provide an outline of topics to be covered and indicate the relative amount of time
or emphasis devoted to each topic. If laboratory of field experiences are used to supplement a lecture course, explain the value of the experience(s) to enhance the quality of the course and student learning. For special topics courses, include a sample outline of a course that would be offered under the proposed course. (This information must be listed and may be copied from syllabus).

F. Reading List (including course text):

A primary reading list or bibliography should be limited to material the students will be required to read in order to successfully complete the course. It should not be a compilation of general reference material.

A secondary reading list or bibliography should include material students may use as background information.

- Primary Reading List
- Secondary Reading List

G. Library Resources

Describe any library resources that are currently available or the resources needed to support this proposed course.

- None.

H. Course Syllabus

(While not a necessary component of this supporting document, an example of a course syllabus is available, for information, by clicking on the link below, which goes to the Graduate School’s Policies and Procedures Manual for Administering Graduate Student Program. See Appendix K.