REQUEST FOR NEW COURSE

1. General Information.
   a. Submitted by the College of: Engineering
   b. Department/Division: Electrical and Computer Engineering
   c. Contact person name: YuMing Zhang
      Email: ymzhang@engr.uky.edu
      Phone: 7-6262 Ext. 223
   d. Requested Effective Date: ☑️ Semester following approval OR ☐ Specific Term/Year
       : 

2. Designation and Description of Proposed Course.
   a. Prefix and Number: EE 780
   b. Full Title: Advanced Practice in Electrical and Computer Engineering
   c. Transcript Title (if full title is more than 40 characters): Advanced Practice Electr & Compu Eng
   d. To be Cross-Listed\(^2\) with (Prefix and Number): 
   e. Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours\(^3\)
      for each meeting pattern type.
      ______ Lecture ______ Laboratory\(^1\) ______ Recitation ______ Discussion ______ Indep. Study
      ______ Clinical ______ Colloquium ______ Practicum ______ Research ______ Residency
      ______ Seminar ______ Studio ______ Other – Please explain: 
   f. Identify a grading system: ☑️ Letter (A, B, C, etc.) ☐ Pass/Fail
   g. Number of credits: 1 - 3
   h. Is this course repeatable for additional credit? YES ☑️ NO ☐
      If YES: Maximum number of credit hours: 6
      If YES: Will this course allow multiple registrations during the same semester? YES ☐ NO ☑️
   i. Course Description for Bulletin: Apply advanced training in electrical/computer engineering to solve complex
      practical problems through analysis, design, implementation, experiments, and/or developments subject to approval of
      the course instructor. This course may be repeated for a maximum of 6 credit hours in combination with EE 783.
   j. Prerequisites, if any: 18 hours of graduate courses

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\(^1\) Courses are typically made effective for the semester following approval. No course will be made effective until all approvals
      are received.

\(^2\) The chair of the cross-listing department must sign off on the Signature Routing Log.

\(^3\) In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of
      classroom meeting per week for a semester, exclusive of any laboratory meeting. Laboratory meeting, generally, represents at
      least two hours per week for a semester for one credit hour. (from SR 5.2.1)
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k. Will this course also be offered through Distance Learning? YES ☐ NO ☒

l. Supplementary teaching component, if any: ☐ Community-Based Experience ☐ Service Learning ☐ Both

3. Will this course be taught off campus? YES ☐ NO ☒

4. Frequency of Course Offering.
   a. Course will be offered (check all that apply): ☒ Fall ☒ Spring ☒ Summer
   b. Will the course be offered every year? YES ☒ NO ☐
      If NO, explain: ______

5. Are facilities and personnel necessary for the proposed new course available? YES ☒ NO ☐
   If NO, explain: ______

6. What enrollment (per section per semester) may reasonably be expected? 10

7. Anticipated Student Demand.
   a. Will this course serve students primarily within the degree program? YES ☒ NO ☐
   b. Will it be of interest to a significant number of students outside the degree pgm? YES ☐ NO ☒
      If YES, explain: ______

8. Check the category most applicable to this course:
   ☐ Traditional – Offered in Corresponding Departments at Universities Elsewhere
   ☒ Relatively New – Now Being Widely Established
   ☐ Not Yet Found in Many (or Any) Other Universities

9. Course Relationship to Program(s).
   a. Is this course part of a proposed new program? YES ☐ NO ☒
      If YES, name the proposed new program: ______
   b. Will this course be a new requirement\(^5\) for ANY program? YES ☐ NO ☒
      If YES\(^5\), list affected programs: ______

10. Information to be Placed on Syllabus.
    a. Is the course 400G or 500? YES ☐ NO ☒
       If YES, the differentiation for undergraduate and graduate students must be included in the information required in 10.b. You must include: (i) identification of additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR 3.1.4.)
    b. ☐ The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from 10.a above) are attached.

\(^4\) You must also submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.

\(^5\) In order to change a program, a program change form must also be submitted.
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Signature Routing Log

General Information:

Course Prefix and Number: EE 780
Proposal Contact Person Name: YuMing Zhang
Phone: 76262X223
Email: ymzhang@engr.uky.edu

INSTRUCTIONS:
Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

<table>
<thead>
<tr>
<th>Reviewing Group</th>
<th>Date Approved</th>
<th>Contact Person (name/phone/email)</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE Faculty</td>
<td>1/26/2010</td>
<td>Larry Holloway (3-8303) <a href="mailto:holloway@engr.uky.edu">holloway@engr.uky.edu</a></td>
<td>/ / / W. Holloway</td>
</tr>
<tr>
<td>College of Engineering</td>
<td>3/26/10</td>
<td>Richard J. Sweiard (7-1864) <a href="mailto:sweiand@engr.uky.edu">sweiand@engr.uky.edu</a></td>
<td>/ / / Richard J. Sweiard</td>
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External-to-College Approvals:

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<th>Date Approved</th>
<th>Signature</th>
<th>Approval of Revision</th>
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Comments:

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6 Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.
EE 780 Syllabus
Advanced Practice in Electrical and Computer Engineering

Instructor:
YuMing Zhang
Professor of Electrical Engineering
Dept. of Electrical and Computer Engineering
414P CRMS Building
E-mail: ymzhang@engr.uky.edu

Description: Apply advanced training in electrical/computer engineering to solve complex practical problems through hands-on analysis, design, implementation, experiments, and/or developments subject to approval of the course instructor. This course may be repeated for a maximum of 6 credit hours in combination with EE 783.

Prerequisite: MS and PhD students in electrical engineering and completion of 18 hours of graduate courses.

Course Requirements: The student must submit a 2-page mini proposal with a faculty or industrial sponsor for a project that utilizes advanced training in electrical/computer engineering to resolve complex practical problems through hands-on analysis, design, implementation, experiments, and/or developments for the approval from the instructor. The proposal will include objective, proposed task, and anticipated results. A report will be submitted to document the performed work and achieved results.

Grading: Achievement of anticipated results 60%, innovation/creativity: 20%, report: 20%.

Final Grade: A letter grade will be assigned as following: 90% or higher (A), 80% – 89% (B), 70% – 79% (C), 70% or lower.