ECE 8019 (Approved): Advanced Topics in Electromagnetics and Optics

Course Description
Topics are chosen to prepare graduate students for research and application in current problems in electromagnetics and optics.

Transcript Abbreviation: Adv Top EM Opt
Grading Plan: Letter Grade
Course Deliveries: Classroom
Course Levels: Graduate
Student Ranks: Doctoral
Course Offerings: Spring
Flex Scheduled Course: Never
Course Frequency: Odd Years
Course Length: 14 Week
Credits: 3.0
Repeatable: Yes
Maximum Repeatable Credits: 9.0
Total Completions Allowed: 3
Allow Multiple Enrollments in Term: No
Time Distribution: 3.0 hr Lec
Expected out-of-class hours per week: 6.0
Graded Component: Lecture
Credit by Examination: No
Admission Condition: No
Off Campus: Never
Campus Locations: Columbus
Prerequisites and Co-requisites: Prereq: 6010 (719).
Exclusions:
Cross-Listings:

Course Rationale: Existing course.

The course is required for this unit's degrees, majors, and/or minors: No
The course is a GEC: No
The course is an elective (for this or other units) or is a service course for other units: Yes

Subject/CIP Code: 14.1001
Subsidy Level: Doctoral Course

General Information

| Repeatable for different titled topics only. |

Course Goals

Prepare graduate students for research and application in current problems in electromagnetics and optics

Course Topics
### ABET-EAC Criterion 3 Outcomes

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<tr>
<th>Course Contribution</th>
<th>College Outcome</th>
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<td>***</td>
<td>a. An ability to apply knowledge of mathematics, science, and engineering.</td>
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<td>b. An ability to design and conduct experiments, as well as to analyze and interpret data.</td>
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<td>c. An ability to design a system, component, or process to meet desired needs.</td>
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<td>d. An ability to function on multi-disciplinary teams.</td>
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<td>e. An ability to identify, formulate, and solve engineering problems.</td>
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<td>f. An understanding of professional and ethical responsibility.</td>
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<td>g. An ability to communicate effectively.</td>
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<td>h. The broad education necessary to understand the impact of engineering solutions in a global and societal context.</td>
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<td>i. A recognition of the need for, and an ability to engage in life-long learning.</td>
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<td>j. A knowledge of contemporary issues.</td>
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<td>k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.</td>
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### Additional Notes or Comments

Updated prereqs, goals and topics to match university format 3/20/12

**Prepared by:** Betty Lise Anderson