NEW COURSE PROPOSAL

PROGRAM AREAS _____ BIOLOGICAL AND PHYSICAL SCIENCES

1. Catalog Description of the Course. [Include the course prefix, number, full title, and units. Provide a course narrative including prerequisites and corequisites. If any of the following apply, include in the description: Repeatability (May be repeated to a maximum of ___ units); time distribution (Lecture ___ hours, laboratory ___ hours); non-traditional grading system (Graded CR/NC, ABC/NC). Follow accepted catalog format.]

PHYS 494. INDEPENDENT RESEARCH (1-3)
Variable hours per week.
Prerequisites: Senior standing and consent of research advisor.
Contracted laboratory and/or library research in selected areas within physics conducted under the supervision of a faculty member. All students are required to present their projects at the Senior Colloquium.

2. Mode of Instruction.

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Units</th>
<th>Hours per Unit</th>
<th>Benchmark Enrollment</th>
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<tbody>
<tr>
<td>Seminar</td>
<td>______</td>
<td>______</td>
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<tr>
<td>Laboratory</td>
<td>______</td>
<td>______</td>
<td>______</td>
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<tr>
<td>Activity</td>
<td><em>1-3</em>____</td>
<td>2_____</td>
<td>______</td>
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</table>

3. Justification and Learning Objectives for the Course. (Indicate whether required or elective, and whether it meets University Writing, and/or Language requirements) [Use as much space as necessary]

The course fosters the student’s initiative, organizational ability, motivation to learn and (in the case of a laboratory component) practical skills.

Students who successfully complete this course shall have:
• Complied with the terms of the mutually agreed-upon contract.
• Gained experience of research involving skills in applied physics.
• Demonstrated an ability to identify, analyze and report on a selected research area within applied physics.

This course is not designed to satisfy the University Writing or Language requirements.

4. Is this a General Education Course

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>If Yes, indicate GE category:</td>
<td></td>
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<tr>
<td>A (English Language, Communication, Critical Thinking)</td>
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<td>B (Mathematics &amp; Sciences)</td>
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<tr>
<td>C (Fine Arts, Literature, Languages &amp; Cultures)</td>
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<td>D (Social Perspectives)</td>
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<tr>
<td>E (Human Psychological and Physiological Perspectives)</td>
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5. **Course Content in Outline Form.** *Be as brief as possible, but use as much space as necessary*

   Supervised project in the field of applied physics. Content will vary by student. Presentation at the Senior Colloquium.

6. **References.** *Provide 3 - 5 references on which this course is based and/or support it.*

   Appropriate reference material shall be identified by the student and the faculty mentor.

7. **List Faculty Qualified to Teach This Course.**

   Physics Faculty

8. **Frequency.**
   a. Projected semesters to be offered: Fall **X**  Spring  _X_  Summer _____

9. **New Resources Required.**

   None

10. **Consultation.**
    Attach consultation sheet from all program areas, Library, and others (if necessary)

11. If this new course will alter any degree, credential, certificate, or minor in your program, attach a program modification.

   _______Geoff Dougherty_________________ 1/8/03
   Proposer of Course ___________________________ Date

   NEWCRSFR 9/30/02