New Course Request

Check Appropriate Boxes: Undergraduate credit ☑ Graduate credit ☐ Professional credit ☐

1. School/Division CLAS
2. Academic Subject Code PHYS
3. Course Number S106 (must be cleared with University Enrollment Services)
4. Instructor H. Scott
5. Course Title Contemporary Physics Seminar
6. First time this course is to be offered (Semester/Year): Spring 2007
7. Credit Hours: Fixed at 1.0 or Variable from ____________ to ____________
8. Is this course to be graded S-F (only)? Yes ☑ No ☐
9. Is variable title approval being requested? Yes ☐ No ☑
10. Course description (not to exceed 50 words) for Bulletin publication: This course provides early exposure to current and exciting topics in physics and related fields at a qualitative level. Sessions include presentations by faculty, advanced students, and visiting scientists.
11. Lecture Contact Hours: Fixed at 1.0 or Variable from ____________ to ____________
12. Non-Lecture Contact Hours: Fixed at 0.0 or Variable from ____________ to ____________
13. Estimated enrollment: 15 of which 0 percent are expected to be graduate students.
14. Frequency of scheduling: Each Semester
15. Justification for new course: Provide early exposure to contemporary physics for students not yet eligible to begin major sequence
16. Are the necessary reading materials currently available in the appropriate library? Yes
17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.
18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant.
19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by:

[Signature]
Department Chairman/Division Director

Date 10/10/06

Approved by:

[Signature]
Assoc. Dean

Date 11/14/06

Dean

Date

Chancellor/Vice-President

Date

University Enrollment Services

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

University Enrollment Services Final—White; Chancellor/Vice-President—Blue; School/Division—Yellow; Department/Division—Pink; University Enrollment Services Advance—White
Indiana University South Bend
Memorandum

To: CLAS Curriculum Committee
From: Jerry Hinnefeld, Chair, Dept. of Physics and Astronomy
Date: October 13, 2006
Subject: PHYS-S106 New Course Request

Attached is a New Course Request for PHYS-S106 Contemporary Physics Seminar, a course designed to provide early exposure to contemporary physics topics for students not yet eligible to begin our series of courses for majors.

The first course in the physics major sequence, PHYS-P221 Physics 1, carries a corequisite of MATH-M215 Calculus I. Only a small fraction of first-semester IUSB students score at a level on the math placement exam that would allow them to take PHYS-P221 in their first semester. Even for students who enter with the intent to major in physics, it is often the second or third semester at IUSB before they are in a position to begin the major sequence. This proposed new course is designed to keep students like this engaged and interested in physics while they strengthen their math skills in preparation for PHYS-P221.

The course should also be attractive to students who are enrolled at the same time in the introductory sequence, PHYS-P221/P222, since the content of this introductory sequence necessarily focuses on mastery of certain fundamental physical ideas (force and motion, work and energy, electric and magnetic fields, etc.) rather than topics from contemporary physics research.

Please feel free to contact me with any questions about this request.
PHYS S106: Freshman Seminar Course (1cr)

Instructor: Physics Faculty

Draft Syllabus: October 6, 2006

Course Description

This course is designed for students with an interest in physics. Our goal is to provide early exposure to current and exciting topics in physics at a qualitative level, rather than delay their introduction until after preliminary coursework in math and physics has been completed. We will begin with an introduction to the physics faculty and their research interests. A seminar format will be used throughout the semester including presentations, readings and documentary videos with subsequent discussion.

Meeting Time

One day per week for one hour and fifteen minutes (TBD)

Requirements

Students will write abstracts following each major discussion topic or outside reading assignment. Attendance and participation will be required.

Grading

The designation of Pass of Fail will be determined based on satisfactory attendance, participation and submission of writing assignments.
## Preliminary Topic List

<table>
<thead>
<tr>
<th>WEEK</th>
<th>FACULTY MEMBER(S)</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hinnefeld, Levine, Lynker, Schimmrigk and Scott</td>
<td>Faculty Introductions</td>
</tr>
<tr>
<td>2</td>
<td>Hinnefeld and Lynker</td>
<td>Degree Requirements and Schedule Planning</td>
</tr>
<tr>
<td>3</td>
<td>Scott</td>
<td>Experimental Work at National Labs</td>
</tr>
<tr>
<td>4</td>
<td>Levine</td>
<td>Collaborative Research (Neutrinos and Dark Matter)</td>
</tr>
<tr>
<td>5</td>
<td>Schimmrigk</td>
<td>Current Topics in Theoretical Physics</td>
</tr>
<tr>
<td>6</td>
<td>Scott and Lynker</td>
<td>The Elegant Universe (Video)</td>
</tr>
<tr>
<td>7</td>
<td>Schimmrigk and Lynker</td>
<td>String Theory</td>
</tr>
<tr>
<td>8</td>
<td>Hinnefeld and Levine</td>
<td>Detector Design</td>
</tr>
<tr>
<td>9</td>
<td>Hinnefeld</td>
<td>Current Topics in Nuclear Physics</td>
</tr>
<tr>
<td>10</td>
<td>Scott</td>
<td>Introduction to SPS and NSF REU Programs</td>
</tr>
<tr>
<td>11</td>
<td>Levine</td>
<td>Applied Physics</td>
</tr>
<tr>
<td>12</td>
<td>Various</td>
<td>Student Research Projects</td>
</tr>
<tr>
<td>13</td>
<td>Various</td>
<td>Life After Receiving an IUSB Physics Degree</td>
</tr>
<tr>
<td>14</td>
<td>Various</td>
<td>Professional Research Presentations</td>
</tr>
<tr>
<td>15</td>
<td>Various</td>
<td>Professional Research Presentations</td>
</tr>
<tr>
<td>16</td>
<td>Hinnefeld, Levine, Lynker, Schimmrigk and Scott</td>
<td>Semester Recap and Future Outlook</td>
</tr>
</tbody>
</table>