Applied Physics, B.S.

Academic Plans

Four-Year Graduation Plan

The following checkpoints list the minimum requirements students must complete by certain semesters in order to stay on the University's Four-Year Graduation Plan. Courses in the major are those required to complete the major; they may be offered by departments other than the major department.

Before the third semester begins: calculus II and physics II.

Before the fifth semester begins: physics III-IV, introduction to linear algebra, calculus III, one more course in the major, and up to four courses in another science or engineering department.

Before the seventh semester begins: two to four more courses in the major, up to three other science or engineering courses, and at least 90 s.h. earned toward the degree.

Before the eighth semester begins: two or three more courses in the major or other science or engineering courses and all or part of an academic year research experience or a summer research experience or internship as approved by the applied physics coordinator.

During the eighth semester: enrollment in all remaining coursework in the major, all remaining CLAS Core courses, and a sufficient number of semester hours to graduate.

Sample Plan of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

Applied Physics, B.S.

Medical Physics Concentration

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Semester</td>
<td>GE CLAS Core: Sustainability a</td>
<td>0</td>
</tr>
<tr>
<td>First Year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall</td>
<td>PHYS:1701</td>
<td>Physics I</td>
</tr>
<tr>
<td></td>
<td>CHEM:1110</td>
<td>Principles of Chemistry I b</td>
</tr>
<tr>
<td></td>
<td>MATH:1850</td>
<td>Calculus I c</td>
</tr>
<tr>
<td></td>
<td>ENGL:1200 or RHET:1030</td>
<td>The Interpretation of Literature or Rhetoric</td>
</tr>
<tr>
<td></td>
<td>CSI:1600</td>
<td>Success at Iowa</td>
</tr>
<tr>
<td>Spring</td>
<td>PHYS:1702</td>
<td>Physics II</td>
</tr>
<tr>
<td></td>
<td>CHEM:1120</td>
<td>Principles of Chemistry II</td>
</tr>
<tr>
<td></td>
<td>MATH:1860</td>
<td>Calculus II</td>
</tr>
<tr>
<td></td>
<td>ENGL:1200 or RHET:1030</td>
<td>The Interpretation of Literature or Rhetoric</td>
</tr>
</tbody>
</table>

Second Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PHYS:2703</td>
<td>Physics III</td>
</tr>
<tr>
<td></td>
<td>BIOL:1411</td>
<td>Foundations of Biology</td>
</tr>
<tr>
<td></td>
<td>MATH:2700</td>
<td>Introduction to Linear Algebra</td>
</tr>
<tr>
<td></td>
<td>GE CLAS Core: World Languages First Level Proficiency or elective course d</td>
<td>4 - 5</td>
</tr>
<tr>
<td>Spring</td>
<td>PHYS:2704</td>
<td>Physics IV</td>
</tr>
<tr>
<td></td>
<td>BIOL:1412</td>
<td>Diversity of Form and Function</td>
</tr>
<tr>
<td></td>
<td>MATH:2850</td>
<td>Calculus III</td>
</tr>
<tr>
<td></td>
<td>GE CLAS Core: World Languages Second Level Proficiency or elective course d</td>
<td>4 - 5</td>
</tr>
</tbody>
</table>

Third Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PHYS:3741</td>
<td>Introduction to Quantum Mechanics I</td>
</tr>
<tr>
<td></td>
<td>PHYS:3811</td>
<td>Electricity and Magnetism I</td>
</tr>
<tr>
<td></td>
<td>CHEM:2210</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td></td>
<td>GE CLAS Core: Diversity and Inclusion e</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GE CLAS Core: World Languages Second Level Proficiency or elective course e</td>
<td>4 - 5</td>
</tr>
</tbody>
</table>

Summer

Internship: industrial internship or research practicum 3

Fourth Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PHYS:3756</td>
<td>Intermediate Laboratory</td>
</tr>
<tr>
<td></td>
<td>CHEM:2410</td>
<td>Organic Chemistry Laboratory</td>
</tr>
<tr>
<td></td>
<td>Major: biology course numbered 2000 or above f</td>
<td>3 - 4</td>
</tr>
<tr>
<td></td>
<td>GE CLAS Core: Historical Perspectives e</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GE CLAS Core: Literary, Visual, and Performing Arts e</td>
<td>3</td>
</tr>
</tbody>
</table>

Spring

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BIOS:4120 or STAT:3510 Introduction to Biostatistics or Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>Major: biology course numbered 2000 or above f</td>
<td>3 - 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Major: medical concentration select one course g</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GE CLAS Core: International and Global Issues e</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GE CLAS Core: Social Sciences e</td>
<td>3</td>
</tr>
</tbody>
</table>
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)

<table>
<thead>
<tr>
<th>Hours</th>
<th>15-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Hours</td>
<td>129-138</td>
</tr>
</tbody>
</table>

a Sustainability must be completed by choosing a course that has been approved for Sustainability AND for one of these General Education areas: Natural Sciences; Quantitative and Formal Reasoning; Social Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Culture.

b Enrollment in chemistry courses requires completion of a placement exam.

c Enrollment in math courses requires completion of a placement exam.

d Students who have completed four years of a single language in high school have satisfied the GE CLAS Core World Languages requirement. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course.

e GE CLAS Core courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.

f Students in this concentration are required to complete two biology courses (BIOL) numbered 2000 or above (6-8 s.h.)

g Choose from PHYS:3730, PHYS:3742, PHYS:3812, PHYS:4750, or PHYS:4905.

h Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Graduation Services.