Bachelor of Science in Physics – Pre-Health Care Concentration

A Suggested Sequence of Required Courses (2016-2017 Catalog)

### Freshman Year

<table>
<thead>
<tr>
<th>Fall</th>
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<tr>
<td>Foreign Language 1401/1412 (see reverse)</td>
<td>Foreign Language 1402/2310 (see reverse)</td>
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<tr>
<td>Lifetime Fitness</td>
<td>ENG 1302 or FAS 1302</td>
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<tr>
<td>BIO 1305 (see reverse)</td>
<td>BIO 1306 (see reverse)</td>
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<td>BIO 1105 (see reverse)</td>
<td>BIO 1106 (see reverse)</td>
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<td>Foreign Language 1401/1412 (see reverse)</td>
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<tr>
<td>BIOS 1105 (if eligible)</td>
<td>BIOS 1322 Calculus II</td>
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<tr>
<td>BIOS 1106 (see reverse)</td>
<td>BIOS 1107 (see reverse)</td>
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<tr>
<td>Calculus I (if eligible)</td>
<td>Calculus II</td>
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<tr>
<td>PHY 1420 General Physics I</td>
<td>PHY 1430 General Physics II</td>
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### Sophomore Year

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<td>Foreign Language 2310 (see reverse)</td>
<td>Foreign Language 2320 (see reverse)</td>
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<tr>
<td>CHE 1301/1101 (see reverse)</td>
<td>CHE 1302/1102 (see reverse)</td>
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<tr>
<td>MTH 2311 Linear Algebra</td>
<td>MTH 2321 Calculus III</td>
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<tr>
<td>MTH 2321 Calculus III</td>
<td>MTH 3325 Ordinary Differential Equations</td>
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<tr>
<td>PHY 2135 Basic Electronics Lab</td>
<td>PHY 2190 Introduction to Research</td>
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<tr>
<td>PHY 2350 Modern Physics</td>
<td>PHY 2360 Math and Computational Physics</td>
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### Junior Year

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<tr>
<td>BIO (3000-4000 level; see below)</td>
<td>ENG 3300 (see below)</td>
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<tr>
<td>MTH 3326 Partial Differential Equations</td>
<td>Lifetime Fitness</td>
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<tr>
<td>CHE 3331 Organic Chemistry I</td>
<td>CHE 3238 Organic Chemistry Laboratory</td>
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<td>PHY 3175 Intermediate Physics Lab I</td>
<td>CHE 3332 Organic Chemistry II</td>
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<tr>
<td>PHY 3320 Intermediate Classical Mechanics</td>
<td>PHY 3330 Inter. Electricity &amp; Magnetism</td>
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<tr>
<td>PHY 3372 Intro Quantum Mechanics I</td>
<td>PHY 3373 Intro Quantum Mechanics II</td>
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### Senior Year

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<tr>
<td>PHY 4190 Dissemination of Research Results</td>
<td>BIO (3000-4000 level; see below)</td>
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<tr>
<td>PHY 4340 Statistical &amp; Thermal Physics</td>
<td>PSC 2302</td>
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<td>PHY 4001 Exit Exam</td>
<td>REL 1350</td>
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<tr>
<td>ENG 2301 or ENG 2304/2306/GTX</td>
<td>History/Social Science (see reverse)</td>
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<tr>
<td>History/Social Science (see reverse)</td>
<td>Lifetime Fitness</td>
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<td>14</td>
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All students must graduate with a minimum of 124 hours, 36 of which must be at the 3000/4000 level.

### Notes about major requirements:

- This concentration is designed for students with an interest in medicine, dentistry, or other health related professions, and it satisfies the medical/dental preprofessional program requirements.
- BIO 3000-4000 level electives: Pre-Med/Pre-Dent admissions require that two additional upper-level biology courses be completed beyond the basic 1305-1105 and 1306-1106. CHE 4341 (General Biochemistry) is also recommended.
- English requirement: Freshman Academic Seminars (FAS) may be substituted for ENG 1302. These seminars introduce first year students to the world of academics and the scholarly community through exploration of topics of significant cultural/social importance. Emphasizes critical inquiry and thinking, research, writing, and problem solving. May substitute for a basic requirement on certain degrees only in the College of Arts and Sciences.
- Note: Students majoring in the sciences may take ENG 3300 instead of ENG 1304.
- Prior to taking PHY 4190, students are expected to make substantial progress on a research project. Research typically begins when PHY 2190 is taken in the sophomore year. Students involved in research during their junior year should enroll in PHY 3V95 (Undergraduate Research). In addition, students are strongly encouraged to participate in summer research opportunities.
- Many required courses are offered only one time each year in either the fall semester or the spring semester.
- Check your degree audit often through Bearweb to ensure that you are making timely progress toward your degree.
- For more information, see the undergraduate catalog.

Please see reverse side for important information on general requirements.
Notes about General Requirements:
• Course selection is subject to availability within each semester.
• Please keep in mind that this is only a suggested sequence. Actual sequence will vary according to possible second major, minor, other program of study (including pre-health), and individual circumstances (ex., transfer credit, dual credit, and credit by exam).
• In order to complete your degree, you must fulfill all requirements in your major and general requirements for the Bachelor of Science.
• To complete a double major, you may not count any courses toward both majors.
• For more specific information on general requirements, see your undergraduate catalog.
• Check your degree audit often through Bearweb to ensure that you are making timely progress toward your degree.

History/Social Science (choose 2 courses from the following areas - 6 hours):
- Anthropology, Economics, History, Honors, Philosophy, Political Science, Psychology, Sociology, GEOG 1300, FAS 1303, 1304 or 1305, or 3 courses from FAS 1115, 1125, 1135.
- Check your major to determine if special courses are needed.

Foreign Language:
- **Option A:** One modern language through 2320 level:
  - Arabic, Chinese, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish, and Swahili
- **Option B:** One classical language through 2320 level or two classical through 1302 level:
  - Latin, Greek, Hebrew (If available, Akkadian, Aramaic, Syriac, and/or Ugaritic may be used)
  *Chemistry majors must take a modern foreign language; German or Russian are strongly recommended.

Math & Science: You must complete a minimum of 34 hours of math and science courses. See the undergraduate catalog for a more detailed explanation or refer to your audit for specific science/math courses that may be required by your major.

Fine Arts: None required for this degree.

Biology/Chemistry Prerequisite Policies:
- **Biology:** In order to register for BIO 1305 and 1306 students must have either a satisfactory math score on the ACT or SAT OR have completed MTH 1320 (Pre-Calculus) with a grade of B or better.
- **Chemistry:** In order to register for CHE 1301, students must have either a satisfactory math score on the ACT (24) or SAT (550). If you do not meet one of these requirements, you will be asked to complete the ALEKS (Assessment and Learning in Knowledge Spaces) course and earn 85% mastery or higher.