PHYSICS, B.S.

The Physics Major is a firm basis for a career in medicine, law, business, sales, engineering, teaching, computing, biophysics, environmental science, or physics.

Students who elect physics as a major must complete specific courses no later than the end of their sophomore year. Any student who desires to major in physics should contact the head of the department as soon as possible so a proper schedule can be planned.

Overall Requirements

- 120 credit hours, to include at least 36 credits at or above the 300 course level
- Minimum of 36 credits in Physics courses above the 100 level.
- Students must have at least a 2.0 GPA for the required Physics and Mathematics courses.

Degree Program Requirements

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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</table>

University Requirements (https://catalog.uncg.edu/academic-regulations-policies/undergraduate-requirements/undergraduate-degrees-and-degree-requirements/)

General Education Requirements (MAC) (https://catalog.uncg.edu/academic-regulations-policies/undergraduate-requirements/general-education-program/#generaleducationcorerequirementstext)

College of Arts and Sciences Additional Requirements (CIC) (https://catalog.uncg.edu/arts-sciences/#additionalundergraduaterequirementstext)

Main Requirements

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Core Courses

- PHY 291 General Physics I with Calculus
- PHY 292 General Physics II with Calculus
- PHY 311 Intro to Experimental Methods
- PHY 321 Introduction to Modern Physics
- PHY 323 Mechanics
- PHY 325 Electricity and Magnetism I
- PHY 327 Thermal Physics
- PHY 351 Intro to Computational Physics
- PHY 401 Physics Senior Seminar

Additional Requirements

Select 9 credit hours of PHY courses at the 400 level.

Related Area Requirements

- CHE 111 General Chemistry I
- CHE 114 General Chemistry II
- CHE 112 and General Chemistry I Laboratory
- CHE 115 and General Chemistry II Laboratory
- CSC 120 Introduction to Computer Programming for Non-Majors
- MAT 390 Ordinary Differential Equations

Select one of the following Calculus Sequences: 12

**Sequence 1**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>MAT 191</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MAT 292</td>
<td>Calculus II</td>
</tr>
<tr>
<td>MAT 293</td>
<td>Calculus III</td>
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<tr>
<td>MAT 394</td>
<td>Calculus IV</td>
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</tbody>
</table>

**Sequence 2**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>MAT 196</td>
<td>Calculus A</td>
</tr>
<tr>
<td>MAT 296</td>
<td>Calculus B</td>
</tr>
<tr>
<td>MAT 396</td>
<td>Calculus C</td>
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</tbody>
</table>

Optional Concentration

The optional concentration as detailed following the major requirements may be added, but is not required.

- Physics Major with Comprehensive Science High School Teaching Licensure

Electives

Electives sufficient to complete the 120 credit hours required for degree.

**Physics Major with Comprehensive Science High School Teaching Licensure Concentration Requirements**

The Comprehensive Science High School Licensure (PHYS) program provides a strong background in physics as well as licensure for high school physics teaching. In addition, successful completion of this program qualifies candidates to teach other high school science subjects as well.

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Additional Requirements for Teacher Licensure

- BIO 111 Principles of Biology I
- BIO 112 Principles of Biology II
- GES 103 Introduction to Earth Science

Select one of the following:

- GES 111 Physical Geology
- GES 205 Environmental Change: Its Nature and Impact
- GES 319 Weather and Climate
- GES 314 Physical Geography: Landscape Processes

Required

- TED 435 Literacy in the Content Area
- ERM 401 Assessment I: Accountability in Our Nation's Schools
- ERM 402 Assessment II: Standardized Tests
- ERM 403 Assessment III: Classroom Assessment
- ERM 404 Child and Adolescent Development and Learning
- SES 401 Understanding and Teaching Students with Disabilities in Inclusive Settings
- TED 403 Teaching Multilingual Learners with Diverse Abilities
- TED 445 Human Diversity, Teaching, and Learning
- TED 459 Teaching Practices and Curriculum in Science
- TED 465 Student Teaching: Secondary School
- TED 466 Student Teaching Seminar
Recommended

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>LIS 120</td>
<td>Introduction to Instructional Technology for Education</td>
</tr>
<tr>
<td></td>
<td>Settings (strongly recommended)</td>
</tr>
</tbody>
</table>

* The courses listed must be taken in a specified sequence, terminating in student teaching in the spring semester of the senior year. See online Secondary Education Handbook for more information.
† Counts toward GEC GNS requirement.
‡ Counts toward GEC GMT requirement.