BACHELOR OF ARTS (BA) DEGREE WITH A MAJOR IN PHYSICS

Program Learning Outcomes for the BA Degree with a Major in Physics

Upon completing the BA degree with a major in Physics, students will have:

1. Acquired and be able to demonstrate a solid foundation of knowledge in physics.

Requirements for the BA Degree with a Major in Physics

For general university requirements, see Graduation Requirements (ga.rice.edu/undergraduate-students/academic-policies-procedures/graduation-requirements). Students pursuing the BA degree with a major in Physics must complete:

• A minimum of 47 credit hours to satisfy major requirements.
• A minimum of 120 credit hours to satisfy degree requirements.
• A minimum of 60 credit hours outside of major requirements.
• A minimum of 14 credit hours taken at the 300-level or above.

The courses listed below satisfy the requirements for this major. In certain instances, courses not on this official list may be substituted upon approval of the department’s undergraduate committee for input into Degree Works by the major’s official certifier. Students and their academic advisors should identify and clearly document the courses to be taken.

Summary

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td></td>
<td>Total Credit Hours Required for the Major in Physics</td>
<td>47</td>
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<tr>
<td></td>
<td>Total Credit Hours Required for the BA Degree with a Major in Physics</td>
<td>120</td>
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Degree Requirements

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Required Courses

Select 1 from the following:

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<tr>
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<tbody>
<tr>
<td>PHYS 101 MECHANICS (WITH LAB) &amp; PHYS 103 and MECHANICS DISCUSSION</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>PHYS 111 HONORS MECHANICS (WITH LAB)</td>
<td>3</td>
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Select 1 from the following:

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<tr>
<td>PHYS 102 ELECTRICITY &amp; MAGNETISM (WITH LAB) &amp; PHYS 104 and ELECTRICITY AND MAGNETISM DISCUSSION</td>
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<tr>
<td>PHYS 112 HONORS ELECTRICITY &amp; MAGNETISM (WITH LAB)</td>
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<td></td>
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<tr>
<td>PHYS 201 WAVES, LIGHT, AND HEAT</td>
<td>3</td>
<td></td>
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<tr>
<td>PHYS 202 MODERN PHYSICS</td>
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PHYS 231 ELEMENTARY PHYSICS LAB | 1 |
PHYS 301 INTERMEDIATE MECHANICS | 4 |
PHYS 302 INTERMEDIATE ELECTRODYNAMICS | 4 |
PHYS 311 INTRODUCTION TO QUANTUM PHYSICS | 3 |
PHYS 425 STATISTICAL & THERMAL PHYSICS | 3 |
Select 1 additional departmental (PHYS) or (ASTR) course at the 400-level or above. |
MATH 101 SINGLE VARIABLE CALCULUS I | 3 |
MATH 102 SINGLE VARIABLE CALCULUS II | 3 |
MATH 211 ORDINARY DIFFERENTIAL EQUATIONS AND LINEAR ALGEBRA |
or MATH 221 HONORS CALCULUS III |
MATH 212 MULTIVARIABLE CALCULUS |
or MATH 222 HONORS CALCULUS IV |
Select 1 from the following: |
CAAM 210 INTRODUCTION TO ENGINEERING COMPUTATION | 3 |

1 MATH (Mathematics) or CAAM (Computational and Applied Mathematics) course at the 300-level or above.

Total Credit Hours Required for the Major in Physics | 47 |
Additional Credit Hours to Complete BA Degree Requirements | 13 |
University Graduation Requirements (ga.rice.edu/undergraduate-students/academic-policies-procedures/graduation-requirements) | 60 |

Total Credit Hours | 120

Footnotes and Additional Information

* Includes coursework completed as distribution credit, FWIS, LPAP, upper-level, residency (hours taken at Rice), 60 hours outside of the major (if applicable), and any additional academic program requirements. The "hours outside of the major" requirement may include all of the above university requirements.

Policies for the BA Degree with a Major in Physics

Transfer Credit

For Rice University’s policy regarding transfer credit, see Transfer Credit (ga.rice.edu/undergraduate-students/academic-policies-procedures/transfer-credit). Some departments and programs have additional restrictions on transfer credit. The Office of Academic Advising maintains the university’s official list of transfer credit advisors on their website: http://oaa.rice.edu. Students are encouraged to meet with their academic program’s transfer credit advisor when considering transfer credit possibilities.

Departmental Transfer Credit Guidelines

Students pursuing the major in Physics should be aware of the following departmental transfer credit guidelines:

• Requests for transfer credit will be considered by the program director (and/or the program’s official transfer credit advisor) on an individual case-by-case basis.

For additional information, please see the Physics and Astronomy website: http://physics.rice.edu/
Opportunities for the BA Degree with a Major in Physics

Academic Honors

The university recognizes academic excellence achieved over an undergraduate's academic history at Rice. For information on university honors, please see Latin Honors (ga.rice.edu/undergraduate-students/honors-distinctions/university) (summa cum laude, magna cum laude, and cum laude) and Distinction in Research and Creative Work (ga.rice.edu/undergraduate-students/honors-distinctions/university). Some departments have department-specific Honors awards or designations.

Research in the Department of Physics and Astronomy

The Physics and Astronomy Department encourages undergraduate participation in research, both within the department and through extramural programs. For current opportunities, please visit the Department's website and click on the Undergraduate Study link, at: http://www.physics.rice.edu/.

For additional information, please see the Physics and Astronomy website: http://physics.rice.edu/