

## Office of Academic Advising

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# Physics Major (B.S.)



Course No. and Title	Completed	In Progress	To be Done
<b>Physics and Astronomy Courses</b>			
Year 1:			
171.105 Classical Mechanics I	_____	_____	_____
173.115 Classical Mechanics Laboratory	_____	_____	_____
171.106 Electricity and Magnetism I	_____	_____	_____
173.116 Electricity and Magnetism Laboratory I	_____	_____	_____
<i>*Note: 171.101-102 or 171.103-104 with their labs are acceptable in place of 171.105-106, 115-116</i>			
Year 2:			
171.201 Special Relativity and Waves (fall term)	_____	_____	_____
<b>OR</b>			
171.309/209 Wave Phenomena w/ Biophysical Application (fall term)	_____	_____	_____
<b>AND</b>			
171.207 Special Relativity (fall term)	_____	_____	_____
172.203 Contemporary Physics Seminar (fall term)	_____	_____	_____
171.202 Modern Physics (spring term)	_____	_____	_____
<b>OR</b>			
171.310/210 Biological Physics (spring term)	_____	_____	_____
171.204 Classical Mechanics II (spring term)	_____	_____	_____
Years 3 and 4:			
171.301 Electromagnetic Theory II (fall term, year 3)	_____	_____	_____
171.303 Quantum Mechanics I (fall term, year 3)	_____	_____	_____
171.304 Quantum Mechanics II	_____	_____	_____
<b>OR</b>			
171.312 Statistical Physics and Thermodynamics	_____	_____	_____
173.308 Advanced Physics Laboratory	_____	_____	_____

Course No. and Title	Completed	In Progress	To be Done
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**Mathematics Courses**

*\*\*Note: Majors are advised to complete Calculus I, Calculus II, Calculus III, Differential Equations, and Linear Algebra in that order. It is strongly suggested that students be registered for or have completed Differential Equations by the fall of sophomore year\*\**

110.108 Calculus I	_____	_____	_____
110.109/113 Calculus II	_____	_____	_____
110.202/211 Calculus III	_____	_____	_____
110.302 Differential Equations with Applications	_____	_____	_____
110.201/212 Linear Algebra	_____	_____	_____

**Electives**

Five (5) additional courses (at least 3 credits each) at the 200-600 level in the following departments: Physics and Astronomy, Biology, Biophysics, Chemistry, Cognitive Science, Earth and Planetary Sciences, Mathematics, and/or the School of Engineering (excluding courses listed as 500.xxx, 660.xxx, 551.xxx and 661.xxx). These courses must constitute a coherent and rigorous program of study approved by the Departmental Advisor and Director of Undergraduate Studies. At least four (4) of these courses must be taken in a single department in the Krieger School of Arts and Sciences or within a single department or program in the Whiting School of Engineering. One (1) semester of research may be used as one elective.

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**Other Departmental Requirements:**

A grade of C- or higher is required for a course to be counted towards major requirements. This includes required math courses. An exception for a single course taken in the year before graduation may be granted by the Director of Undergraduate Studies when there are extenuating circumstances.

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**Recommendations**

An additional two semesters of mathematics are recommended, either 110.405-406 or 110.311 and one other. It is recommended that Physics majors become proficient in a computer programming language, either independently or through course work. Students are encouraged to broaden their background by taking introductory courses in other natural science or engineering disciplines, such as Introductory Chemistry (030.101-102).

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## Honors in Your Major

To graduate with honors in your major, you must complete an HONORS CLEARANCE CHECKLIST by April 1<sup>st</sup> in the year you expect to graduate in May. Most commonly, this means by April 1<sup>st</sup> of your senior year. Failure to submit this checklist by this date will mean that you will not receive honors in your major. You cannot complete the checklist before February 1<sup>st</sup> of the same year. Please note that these requirements are not related to "General University Honors." General University Honors are automatically assigned to all students who graduate with a 3.5 or higher.

To receive Honors in Physics, you must have met the following criteria:

- Have a GPA in your major requirements of a 3.5 or higher.

To notify us that you are eligible for honors, you must:

1. Obtain an honors checklist by either downloading it from [www.advising.jhu.edu](http://www.advising.jhu.edu) or by picking one up in the Office of Academic Advising.
  2. Complete the checklist after February 1<sup>st</sup> of your senior year and take it to the Director of Undergraduate Studies.
  3. Return the signed checklist to the Office of Academic Advising by April 1<sup>st</sup>. You do not need to make an appointment to return the checklist, but it must be signed by the correct representative from your department or it will not be processed.
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