

# NATURAL SCIENCES AREA MAJOR

The Natural Sciences Area major allows students to combine appropriate upper-level courses in two different areas of natural science. Students may bridge biology and chemistry, chemistry and physics, or some other combination as long as the curriculum forms a coherent whole. The major prepares students for careers in medicine, dentistry, or veterinary science, if the introductory courses chosen by the student include those prescribed for admission to these professional schools.

Students selecting the Natural Sciences Area major can also go on to graduate study in natural science, though they may have to take some remedial work in graduate school, if their undergraduate program does not include courses usually required by a traditional major in a particular subject.

## Requirements for a B.A. Degree

Also see Requirements of a Bachelor's Degree (<http://e-catalog.jhu.edu/undergrad-students/academic-policies/requirements-for-a-bachelors-degree>).

Requirements of the natural sciences area major are:

### Science and Math Core Courses

AS.110.106 or AS.110.108	Calculus I (Biology and Social Sciences) Calculus I	4
AS.110.107 or AS.110.109 or AS.110.113	Calculus II (For Biological and Social Science) Calculus II (For Physical Sciences and Engineering) Honors Single Variable Calculus	4
AS.030.101 & AS.030.105	Introductory Chemistry I and Introductory Chemistry Laboratory I	4
AS.030.102 & AS.030.106 or AS.030.103	Introductory Chemistry II and Introductory Chemistry Laboratory II Applied Chemical Equilibrium and Reactivity w/lab	4
AS.171.101 or AS.171.103 or AS.171.107	General Physics:Physical Science Major I General Physics I for Biological Science Majors General Physics for Physical Sciences Majors (AL)	4
AS.173.111	General Physics Laboratory I	1
AS.171.102 or AS.171.104 or AS.171.108	General Physics: Physical Science Major II General Physics/Biology Majors II General Physics for Physical Science Majors (AL)	4
AS.173.112	General Physics Laboratory II	1

### Science Electives

Natural science or quantitative credits at any level *	20
At least five courses of upper level natural science electives at the 300- or 400-level in at most 2 departments **	15

### Humanities and Social Science Electives \*\*\*

Humanities or social science credits at any level ****	12
At least four courses of humanities or social science electives at the 300- or 400-level in at most 2 departments *****	12

\* While students typically take these credits at the 100- or 200-level, 300- or 400-level N or Q credits not used to fulfill the upper level science elective credits may be used.

\*\* Laboratory, research, internship, independent study, and summer courses outside JHU may not be used. Permission to count courses from more than two departments is often granted if the material involved constitutes a coherent program (for example, biochemistry courses from Biology, Biophysics and Chemistry). No more than two (2) courses and no more than six (6) credits may be taken in appropriate areas of engineering, mathematics, applied math and statistics, or (N)-coded psychology.

\*\*\* At least 9 credits must be in the humanities and at least 9 credits must be in the social sciences.

\*\*\*\* While students typically take these credits at the 100- or 200-level, 300- or 400-level H or S credits not used to fulfill the upper level humanities or social science electives may be used.

\*\*\*\*\* These courses must be JHU courses. Summer courses outside JHU, intersession, research, internship, independent study, Bloomberg School of Public Health, Carey Business School, and the School of Education courses are not allowed

## Minimum GPA Standards

Students must maintain an overall grade point average of 2.0 in their major. Satisfactory/unsatisfactory graded courses may not count towards major requirements.