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Undergraduate Academic Requirements Outlines

Please select a term:

2021-22 Catalog ▾

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Majors in the Undergraduate College of Arts and Sciences Program ▾

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Undergraduate College of Arts & Sciences

Biophysics BS (BPHY-BS) ▾

View Requirements

BIOPHYSICS MAJOR BPHY-BS | UGRD 1216 | Fall 2021 |

BPHY-BS: BIOPHYSICS MAJOR

Minimum Units: 77

* A minimum grade of C- must be earned to satisfy a course requirement and a 2.0 minimum overall GPA is required for each

PHYSICS: REQUIRED COURSES

23 Units

Course	Course Description	Units
Physics: Required Courses * Students must complete all of the courses listed below		
PHYS 125	General Physics I Lec/Dis	4.00
PHYS 125L	General Physics Laboratory I	1.00
PHYS 126	General Physics II Lec/Dis	3.00
PHYS 126F	Freshman Projects	1.00
PHYS 126L	General Physics Laboratory II	1.00
PHYS 235	Modern Physics	3.00
PHYS 235L	Modern Physics Laboratory	1.00
PHYS 301	Mathematical Methods in Physics	3.00
PHYS 314	Theoretical Mechanics I	3.00
PHYS 351	Electricity and Magnetism I	3.00

PHYSICS: ELECTIVE COURSE

3 Units

Course	Course Description	Units
Physics: Elective Course * Students must complete one (1) of the courses listed below		
PHYS 310	Optics	3.00
PHYS 328	Thermal Phys & Stat Mechanics	3.00
PHYS 361	Quantum Mechanics I	3.00

BIOLOGY

10 Units

Course	Course Description	Units
Biology * Students must complete all of the courses listed below		
BIOL 101	General Biology I	3.00
BIOL 111	General Biology I Lab	1.00
BIOL 251	Cell Biology	3.00
BIOL 282	Genetics	3.00

BIOPHYSICS ELECTIVE OPTIONS

7 Units

Course	Course Description	Units
Biophysics Elective Options * Students must complete 7 credit hours to fulfill this requirement * Students may receive degree credit for only one of the following: BIOL 102, COMP 170, or COMP 180 * Students may only count 1 credit hour of PHYS 391 toward the degree		
BIOL 102	General Biology II	3.00
BIOL 112	General Biology II Lab	1.00
BIOL 252	Cell Biology Laboratory	1.00
BIOL 283	Genetics Laboratory	1.00
BIOL 366	Cell Physiol & Biochem	3.00
BIOL 366L	Cell Physiology & Biochemistry Lab	2.00

BIOL 387	Genomics	3.00
BIOL 388	Bioinformatics	3.00
BIOL 390	Molecular Biology Laboratory	4.00
COMP 170	Introduction to Object-Oriented Programming	3.00
COMP 180	Computing and Data Analysis for the Sciences	3.00
PHYS 310L	Optics Lab	1.00
PHYS 391	Research	1.00 - 12.00
GENERAL CHEMISTRY A: LECTURE, DISCUSSION & LAB		4 Units
Course	Course Description	Units
CHEM 101/111		
CHEM 101	General Chemistry A Lecture/Discussion	3.00
CHEM 111	General Chemistry Lab A	1.00
GENERAL CHEMISTRY B: LECTURE, DISCUSSION & LAB		4 Units
Course	Course Description	Units
CHEM 102/112 (CHEM 106 may be substituted)_		
CHEM 102	General Chemistry B Lecture/Discussion	3.00
CHEM 112	General Chemistry Lab B	1.00
ORGANIC CHEMISTRY A: LECTURE, DISCUSSION & LAB		4 Units
Course	Course Description	Units
CHEM 223/225 (CHEM 221 may be substituted)		
CHEM 223	Organic Chemistry A Lect & Disc	3.00
CHEM 225	Organic Chemistry Lab A	1.00
ORGANIC CHEMISTRY B: LECTURE, DISCUSSION & LAB		4 Units
Course	Course Description	Units
CHEM 224/226 (CHEM 222 may be substituted)		
CHEM 224	Organic Chem B Lec/Disc	3.00
CHEM 226	Organic Chemistry Lab B	1.00
MATHEMATICS		15 Units
Course	Course Description	Units
Mathematics * Students must complete all of the courses listed below		
MATH 161	Calculus I	4.00
MATH 162	Calculus II	4.00
MATH 263	Multivariable Calculus	4.00
MATH 264	Ordinary Differential Equations	3.00
BIOPHYSICS CAPSTONE		3 Units
Course	Course Description	Units
Biophysics Capstone		
PHYS 371	Biophysics	3.00

This Academic Requirements Outline lists the approved courses for the plan of study during the indicated Catalog Year and is intended for use by prospective students. A current Loyola student's requirements are based on when the major or minor was officially declared, and may differ from what is shown here. Loyola students should refer to My Academic Requirements in LOCUS for their individualized lists of approved courses. Final confirmation of all degree requirements is subject to department, school, and university approval.