



Preparing people to lead extraordinary lives

Undergraduate Academic Requirements Outlines

Please select a term:

2019-20 Catalog ▼

Submit Term

If no catalog year is selected, the default term will be the current academic year.

View Academic Requirements by College or School

Majors in the Undergraduate College of Arts and Sciences Program ▼

See Choices

Undergraduate College of Arts & Sciences

Physics and Computer Science BS (PCSC-BS) ▼

View Requirements

PHYSICS WITH COMPUTER SCIENCE MAJOR PCSC-BS | UGRD 1196 | Fall 2019 |

PCSC-BS: PHYSICS WITH COMPUTER SCIENCE MAJOR

Minimum Units: 76

* A minimum grade of C- must be earned to satisfy a course requirement and a 2.0 minimum overall GPA is required for each major or minor. Final confirmation of degree requirements is subject to department, school, and university approval.

REQUIRED PHYSICS

34 Units

Course	Course Description	Units
Required Physics		
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 303	Electronics I	3.00
PHYS 303L	Electronics Laboratory	1.00
PHYS 310	Optics	3.00
PHYS 310L	Optics Lab	1.00
PHYS 314	Theoretical Mechanics I	3.00
PHYS 328	Thermal Phys & Stat Mechanics	3.00
PHYS 351	Electricity and Magnetism I	3.00

REQUIRED MATHEMATICS

15 Units

Course	Course Description	Units
Required Mathematics		
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

REQUIRED COMPUTER SCIENCE

12 Units

Course	Course Description	Units
Required Computer Science		
COMP 264	Introduction to Computer Systems	3.00
COMP 271	Data Structures: Algorithms and Applications	3.00
COMP 313	Intermediate Object-Oriented Development	3.00
COMP 363	Design and Analysis Computer Algorithms	3.00

COMPUTER SCIENCE CHOICE 1

3 Units

Course	Course Description	Units
Computer Science Choice 1		
COMP 163	Discrete Structures	3.00
MATH 201	Introduction to Discrete Mathematics & Number Theory	3.00

COMPUTER SCIENCE CHOICE 3

3 Units

Course	Course Description	Units
Computer Science Choice 3		
COMP 170	Introduction to Object-Oriented Programming	3.00
COMP 215	Object Oriented Programming with Mathematics	3.00

300-LEVEL COMP ELECTIVES OR EQUIVALENT

9 Units

Course	Course Description	Units
300-Level COMP Electives or Equivalent		
BIOL 388	Bioinformatics	3.00
BIOL 392	Metagenomics	3.00
COMP 3##	Any 300-Level COMP Courses	0.00
MATH 309	Numerical Methods	3.00
MATH 328	Algebraic Coding Theory	3.00
MATH 331	Cryptography	3.00
PHYS 366	Microcomputer Des & Interfac	3.00
STAT 321	Computational Aspects of Modeling and Simulation	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.