



Preparing people to lead extraordinary lives

Undergraduate Academic Requirements Outlines

Please select a term:

2021-22 Catalog

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

Undergraduate College of Arts & Sciences

Physics and Computer Science BS (PCSC-BS)

PHYSICS WITH COMPUTER SCIENCE MAJOR PCSC-BS UGRD 1216 Fall 2021		
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 351	Electricity and Magnetism I	3.00
PHYS 361	Quantum Mechanics 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 141	Introduction to Computing Tools and Techniques	3.00
COMP 170	Introduction to Object-Oriented Programming	3.00
COMP 264	Introduction to Computer Systems	3.00
COMP 271	Data Structures I	3.00
COMP 272	Data Structures II	3.00
DISCRETE MATHEMATICS CHOICE		3 Units
Course	Course Description	Units

Discrete Mathematics Choice		
COMP 163	Discrete Structures	3.00
MATH 201	Introduction to Discrete Mathematics & Number Theory	3.00
COMPUTER SCIENCE CHOICE		3 Units
Course	Course Description	Units
Computer Science Choice		
COMP 313	Intermediate Object-Oriented Development	3.00
COMP 363	Design and Analysis Computer Algorithms	3.00
300-LEVEL COMP ELECTIVES OR EQUIVALENT		6 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 328	Thermal Phys & Stat Mechanics	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.