

# Physics B.S. with Computational Concentration

## Physics B.S. with Computational Concentration Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see the Eight-Semester Degree Policy (<http://catalog.uark.edu/undergraduatecatalog/academicregulations/eightsemesterdegreecompletionpolicy>) in the Academic Regulations chapter for university requirements of the program as well as Fulbright College requirements.

Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area. Students should consult their advisers.

First Year	Units	
	Fall	Spring
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013)	3	
MATH 2554 Calculus I (ACTS Equivalency = MATH 2405) <sup>1</sup>	4	
University/State Core Fine Arts or Humanities requirement	3	
PHYS 2054 University Physics I (ACTS Equivalency = PHYS 2034) <sup>1</sup>	4	
General Electives (as desired)	2-3	
ENGL 1023 Composition II (ACTS Equivalency = ENGL 1023)		3
PHYS 2074 University Physics II (ACTS Equivalency = PHYS 2044 Lecture) <sup>1</sup>		4
MATH 2564 Calculus II (ACTS Equivalency = MATH 2505) <sup>1</sup>		4
University/State Core US History requirement or General Elective		3
Year Total:	16	14

Second Year	Units	
	Fall	Spring
PHYS 2094 University Physics III <sup>1</sup>	4	
MATH 2574 Calculus III (ACTS Equivalency = MATH 2603) <sup>1</sup>	4	
General Elective or University/State Core US History requirement (as needed)	3	
CSCE 2004 Programming Foundations I (Highly recommended in order to satisfy prerequisite for upper-level CSCE courses.)	4	
PHYS 3613 Modern Physics <sup>1,2</sup>		3
MATH 2584 Elementary Differential Equations <sup>1,2</sup>		4

CSCE 2014 Programming Foundations II (Highly recommended in order to satisfy prerequisite for upper-level CSCE courses.)		4
University/State Core Social Science requirement		3
Year Total:	15	14

Third Year	Units	
	Fall	Spring
PHYS 3113 Analytical Mechanics <sup>2</sup>	3	
Advanced Level Elective	3	
MATH 3083 Linear Algebra	3	
University/State Core Social Science requirement	3	
General Electives	3	
PHYS 3453 Electromagnetic Theory I <sup>1,2</sup>		3
Select one of the following:		3
CSCE course		
Advanced Level Electives		
PHYS/ASTR Group A <sup>3</sup>		
PHYS/ASTR Group A or Advanced Level Electives <sup>1,2,3</sup>		3
University/State Core Social Science requirement		3
General Elective		4
Year Total:	15	16

Fourth Year	Units	
	Fall	Spring
Select one of the following:	3	
CSCE 4133 Algorithms (recommended; else other upper-level PHYS, ASTR, CSCE, or MATH course selected with advisor's approval)		
PHYS/ASTR Group A or Advanced Level Electives <sup>3</sup>		
PHYS/ASTR Group A or Advanced Level Electives <sup>1,2</sup>	4	
PHYS 4073 Introduction to Quantum Mechanics <sup>1,2,3</sup>		3
University/state core humanities or fine arts requirement (as needed)		3
General Electives		3
Select one of the following:		4
PHYS/ASTR Group A <sup>1,2,3</sup>		
3000+ Level Fulbright College Elective (if needed) <sup>1,2,3</sup>		
Advanced Level Electives <sup>3</sup>		
PHYS 4991 Physics Senior Seminar <sup>1,2,3</sup>		1
Advanced Level Electives <sup>1</sup>		9
Year Total:	16	14

Total Units in Sequence: 120

<sup>1</sup> Meets 40-hour advanced credit hour requirement. See College Academic Regulations.

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<sup>2</sup> Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations.

<sup>3</sup> Nine hours of upper division computer science or mathematics courses can count toward the physics major.

Group A: Any PHYS or ASTR classes numbered 3000 or above.

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