## SIU Southern Illinois University

## **B.S. Physics: Computational Physics**

2020-2021 Major Map for First Time College Student

Course and Title	Sem. Hours	Min. Grade	Course and Title	Sem. Hours	Min. Grade
YEAR ONE – Semester 1			YEAR ONE – Semester 2		
PHYS 100, Undergraduate Seminar	1.0		PHYS 205A/255A, Univ Physics w/Lab	4.0	С
MATH 150, Calculus I	4.0	С	PHYS 206A, Problem Solv for PHYS 205A	1.0	C
ENGL 101, Composition I	3.0	C	MATH 221, Intro to Linear Algebra	3.0	C
UNIV 101, Saluki Success	1.0		MATH 250, Calculus II	4.0	С
CHEM 200/201/202, Intro Chem Princ w/Lab	5.0		ENGL 102, Composition II	3.0	С
UCC Human Health	2.0				
	16.0			15.0	
YEAR TWO – Semester 1			YEAR TWO – Semester 2		
PHYS 205B/255B, Univ Physics w/Lab	4.0	С	PHYS 305/355, Modern Physics w/Lab	4.0	С
PHYS 206B, Problem Solv for PHYS 205B	1.0	С	PHYS 310, Classical Mechanics	3.0	С
PHYS 301, Theoretical Methods in Physics	3.0	С	MATH 305, Intro Differential Equations	3.0	С
MATH 251, Calculus III	3.0	С	CMST 101, Intro Oral Communication	3.0	
COS Biological Science	3.0		Supportive Skills Course <sup>1</sup>	3.0	
	14.0			16.0	
YEAR THREE – Semester 1			YEAR THREE – Semester 2		
PHYS 320, Electricity & Magnetism I	3.0	С	PHYS 420, Electricity & Magnetism II	3.0	
CS 202, Intro to Computer Science	4.0	С	PHYS 430, Quantum Mechanics I	3.0	С
MATH Course <sup>2</sup>	3.0		CS 215, Discrete Mathematics	4.0	
UCC Social Science	3.0		COS Biological Science	3.0	
			UCC Social Science	3.0	
	13.0			16.0	
YEAR FOUR – Semester 1			YEAR FOUR – Semester 2		
PHYS 440, Applications of Quantum Mechanics	3.0		PHYS 476C, Intro Computational Physics	3.0	
PHYS 445, Thermodynamics & Stat Mechanics	3.0		Physics Elective <sup>3</sup>	3.0	
CS 220, Programming with Data Structures	4.0		Physics Elective <sup>3</sup>	2.0	
UCC Humanities	3.0		UCC Humanities	3.0	
UCC Fine Arts	3.0		UCC Multicultural	3.0	
	16.0			14.0	

Total Hours: 120

Academic policies as well as degree and major-specific requirements can be found at *catalog.siu.edu*. All students are encouraged to meet with the academic advisor on a regular basis to ensure timely progress to degree.

University Core Curriculum (UCC) is satisfied with the transfer of an Associate of Art or Science (AA or AS) degree or the completion of the Illinois Articulation Initiative-General Education Core Curriculum (IAI-GECC) from an Illinois community college.

<sup>1</sup>Select from: CS 201, CS 280, CS 300, ENGL 290, ENGL 291, ENGL 391, MATH 282, MATH 483 or 1 or 2 semesters of a foreign language <sup>2</sup>Select 1 course from: MATH 405, MATH 406, MATH 407, MATH 409, MATH 450, MATH 455 or MATH 475 <sup>3</sup>Select from: PHYS 390, PHYS 424, PHYS 425, PHYS 428, PHYS 431, PHYS 432, PHYS 458, PHYS 470, PHYS 476, PHYS 490, CS 475, CS 476