

CNSM Academic Advising Center

College of Natural Sciences and Mathematics California State University Long Beach www.csulb.edu/cnsm/advising

BACHELOR OF SCIENCE IN PHYSICS FOUR YEAR DEGREE WORKSHEET 2017-2018 Catalog

This degree worksheet is intended to help you develop a balanced course schedule while completing your degree within 4 years. The same sequence of courses (with fewer courses each semester) is also recommended for students completing their degree in 5 or 6 years. This worksheet is not intended to replace academic advising with your assigned advisor. Students should consult with their assigned advisor to determine the appropriate sequence of required courses and electives based on their academic goals.

CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification.

Year 1

Semester	Course #	Course Title (Units)	Prerequisites	Notes
1	MATH 122	Calculus I (4)	MATH 111, 113	
	PHYS 151	Mechanics and Heat (4)	Corequisite: MATH 122	
	GE (area A1)	Written Communication (3)		
	GE (area C,D,E)	Other Exploration (3)		
	NSCI 190A	Experience Success Program 1 (1)		Fall only
2	MATH 123	Calculus II (4)	MATH 122	
	PHYS 152	Electricity and Magnetism (4)	PHYS 151, Pre/Corequisite: MATH 123	
	GE (area A2)	Oral Communication (3)		
	GE (area A3)	Critical Thinking (3)		
	Elective	Elective (1)		

Year 2

Semester	Course #	Course Title (Units)	Prerequisites	Notes
3	MATH 224	Calculus III (4)	MATH 123	
	PHYS 254	Applied Modern Physics (3)	PHYS 152, Pre/Corequisite: MATH 224	
	PHYS 255	Laboratory on Modern Physics (1)	Pre/Corequisite: PHYS 254	
	GE (area C,D,E)	Other Exploration (3)		
	GE (area C,D,E)	Other Exploration (3)		
	Elective	Elective (1)		
4	MATH 247	Introduction to Linear Algebra (3)	MATH 123	
	PHYS 360	Physics with Symbolic Algebra Software (3)	PHYS 254. Corequisite: MATH 247	
	PHYS 380	Electronics (4)	PHYS 152	Spring only
	GE (area C,D,E)	Other Exploration (3)		
	Elective	Elective (#)		

Year 3

Semester	Course #	Course Title (Units)	Prerequisites	Notes
5	MATH 364A	Ordinary Differential Equations I (3)	MATH 224. <i>Pre/Corequisite:</i> MATH 247	
	PHYS 310	Analytic Mechanics (3)	PHYS 151. Corequisite: MATH 364A	Fall only
	PHYS 320	Thermodynamics (3)	PHYS 152 and 254	Fall only
	GE (area C,D,E)	Other Exploration (3)		
	Elective	Elective (3)		

Semester	Course #	Course Title (Units)	Prerequisites	Notes
6	PHYS 340A	Electricity and Magnetism I (3)	PHYS 152 and 310, <i>Pre/Corequisite:</i> MATH 364A or 370A	Spring only
	PHYS 350	Modern Physics (3)	PHYS 310 and MATH 370A or 364A	Spring only
	BIOL 200;	General Biology (4);	GE Foundation Requirements;	
	OR	OR	OR	
	BIOL 211;	Evolution & Diversity (4);	Corequisite: CHEM 111A;	
	OR	OR	OR	
	CHEM 111A	General Chemistry (5)	Passing CPT score	
	GE Capstone (area F)	General Education & Foundation (3)	GE Written Comm. (A1), GE Critical Thinking (A3), and GE Oral Comm. (A2) and MATH 122 (B2)	
	Upper Division Elective	Math (3)		

Year 4

Semester	Course #	Course Title (Units)	Prerequisites	Notes
7	PHYS 340B	Electricity and Magnetism II (3)	PHYS 340A	Fall only
	PHYS 450	Quantum Physics (3)	PHYS 310, 340A, and 350	Fall only
	GE (area B1a)	Life Science (3-4)		needed if BIOL 200 or 211 not taken
	GE Capstone (area F)	General Education & Foundation (3)	GE Written Comm. (A1), GE Critical Thinking (A3), and GE Oral Comm. (A2) and MATH 122 (B2)	
	GE (area C,D,E)	Other Exploration (3)		
8	Upper Division Elective	Physics (3)		
	Upper Division Elective	Physics (3)		
	Upper Division Elective	Physics Laboratory Course (3)		
	GE Capstone (area F)	General Education & Foundation (3)	GE Written Comm. (A1), GE Critical Thinking (A3), and GE Oral Comm. (A2) and MATH 122 (B2)	
	GE (area C,D,E)	Other Exploration (3)		
	Elective	Elective (1)		