



**BACHELOR OF SCIENCE IN PHYSICS
OPTION IN MATERIALS SCIENCE
FOUR YEAR DEGREE WORKSHEET
2019-2020 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. Please note that your Major Specific Requirements (MSRs) are **bolded** in the document and are also listed as an “MSR” in the notes column. These courses must be completed in order to declare your major. **All students must have a GPA of 2.25 or higher in the STEM MSR suite.**

Pre-Physics first-time freshmen must complete MATH 123 or higher **within one year of matriculation**. Some students may need to take courses during Summer Session to meet these requirements. Students who have not met the requirements by the required semester must either declare another major or meet with an Academic Advisor to determine if the student's performance in the courses merits an additional semester to complete.

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 (area B4)	Calculus I (4)	Appropriate placement, MATH 111 and either 112B or 113	MSR
	PHYS 151	Mechanics and Heat (4)	<i>Pre/Corequisite: MATH 122, 123, or 224</i>	MSR
	GE (area A2)	Written Communication (3)		MSR
	GE (area C,D,E)	Other Exploration (3)		
	NSCI 190A	Experience Success Program 1 (1)		Fall only
2	MATH 123 (area B4)	Calculus II (4)	MATH 122	MSR
	PHYS 152	Electricity and Magnetism (4)	PHYS 151, Pre/Corequisite: MATH 123	MSR
	GE (area A1)	Oral Communication (3)		MSR
	GE (area A3)	Critical Thinking (3)		MSR
	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, <i>Corequisite:</i> MATH 224	
	PHYS 255	Laboratory on Modern Physics (1)	<i>Pre/Corequisite:</i> 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, <i>Corequisite:</i> MATH 247	
	PHYS 380	Electronics (4)	PHYS 152 and 255	Spring only
	GE (area C,D,E)	Other Exploration (3)		
	Elective	Elective (1)		

Year 3

Semester	Course #	Course Title (Units)	Prerequisites	Notes
5	MATH 364A	Ordinary Differential Equations I (3)	MATH 224 and <i>Pre/Corequisite:</i> 247	
	PHYS 310	Analytic Mechanics (3)	PHYS 151, <i>Corequisite:</i> MATH 364A or 370A or 247	Fall only
	PHYS 320	Thermodynamics (3)	PHYS 152, <i>Pre/Corequisite:</i> PHYS 254	Fall only
	GE (area C,D,E)	Other Exploration (3)		
	Elective	Elective (3)		
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 254, <i>Pre/Corequisite:</i> MATH 370A or 364A	Spring only
	CHEM 111A	General Chemistry (5)	CPT score of 24 or higher, <i>Pre/Corequisite:</i> MATH 112B or higher	
	GE (area C,D,E)	Other Exploration (3)		
	Upper Division Elective	Math (3)		

Year 4

Semester	Course #	Course Title (Units)	Prerequisites	Notes
7	PHYS 340B	Electricity and Magnetism II (3)	PHYS 340A, MATH 364A or 370A	Fall only
	PHYS 450	Quantum Physics (3)	PHYS 340A and 350	Fall only
	GE (area B2)	Life Science (3-4)		B2NL is okay
	PHYS 385	Materials Science (3)	CHEM 111A or 112A, PHYS 152, CHEM 111B or 112B or PHYS 320	Recommend CHEM 111B
	GE Upper Division (area B-UD, C-UD, D-UD)	Upper Division (3)	GE Foundation	
8	Upper Division Elective	Physics (3)		
	GE (area C,D,E)	Other Exploration (3)		
	PHYS 385L	Materials Science Lab (2)	CHEM 111A or 112A, PHYS 152, CHEM 111B or 112B or PHYS 320	
	GE Upper Division (area B-UD, C-UD, D-UD)	Upper Division (3)	GE Foundation	
	GE Upper Division (area B-UD, C-UD, D-UD)	Upper Division (3)	GE Foundation	
	PHYS 385C	Materials Science Colloquium (1)	CHEM 111A and PHYS 152 and either CHEM 111B or PHYS 320	