

# BACHELOR OF SCIENCE IN PHYSICS

## Major Requirements Worksheet

2014-2015 Catalog

Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

The Bachelor of Science degree is designed for students interested in immediate employment in industry or wishing to continue on to a Master's or Ph.D. degree in physics or a related field.

*NOTE: This checklist is not intended to replace advising from the major department. Students should consult with the major advisor to determine the appropriate sequence of courses. This checklist is to inform students of major requirements and course prerequisites only. CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification. Pre-Physics majors must complete their GE Foundation courses, and the highlighted areas below all with a "C" or better and a cumulative GPA of 2.25, by 60 units to be considered for the major.*

Semester	Grade	Course #	Course Title	Prerequisites
		BIOL 200	General Biology (4) <b>OR</b>	GE Foundation requirements
		BIOL 211	Evolution and Diversity (4)	<i>Pre/Corequisite:</i> CHEM 111A
		CHEM 111A	General Chemistry I (5)	A passing score on the CPT <i>Corequisite</i> MATH 109 or higher
		CHEM 111B	General Chemistry II (5)	CHEM 111A* and MATH 113* or 115* or 117* or 119A* or 122*
		<b>MATH 122</b>	<b>Calculus I (4)</b>	Appropriate MDPT placement or MATH 111* and 113*
		<b>MATH 123</b>	<b>Calculus II (4)</b>	MATH 122*
		MATH 224*	Calculus III (4)	MATH 123* or 222*
		MATH 247*	Introduction to Linear Algebra (3)	MATH 123 or MATH 222
		<b>PHYS 151</b>	<b>Mechanics and Heat (4)</b>	<i>Pre/Corequisite:</i> MATH 122
		PHYS 152	Electricity and Magnetism (4)	PHYS 151; <i>Pre/Corequisite:</i> MATH 123
		PHYS 254*	Applied Modern Physics (3)	PHYS 152 or EE 210; <i>Pre/Corequisite:</i> MATH 224
		PHYS 255*	Laboratory on Modern Physics (1)	PHYS 254

### UPPER DIVISION COURSES (See major faculty advisor)

**Take ALL of the following courses:** (Must achieve a grade of "C" or better in each required course.)

		PHYS 310	Analytic Mechanics (3)	PHYS 151. <i>Corequisite:</i> MATH 364A or 370A
		PHYS 320	Thermodynamics (3)	PHYS 152. <i>Pre/Corequisite:</i> PHYS 254
		PHYS 340A	Electricity and Magnetism I (3)	PHYS 152, 310. <i>Pre/Corequisite:</i> MATH 370A or 363A
		PHYS 340B	Electricity and Magnetism II (3)	PHYS 340A
		PHYS 350	Modern Physics (3)	PHYS 310; MATH 370A or 364A
		PHYS 360	Physics with Symbolic Algebra Software (3)	PHYS 254. <i>Pre/Corequisite:</i> MATH 247
		PHYS 380	Electronics (4)	PHYS 152
		PHYS 450	Quantum Physics I (3)	PHYS 310, 340A, 350
		PHYS 445 or PHYS 446 or PHYS 476 or PHYS 480	Physics Laboratory Course (3)**	Check catalog for Prerequisites

\*Grade of "C" or better

\*\*See catalog for more details

Updated 05/23/14 LB

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**Take ALL of the following:**

		ENGL 317	Technical Writing (3)	GE Foundation requirements, upper-division standing, and a previous composition course**
		MATH 364A	Ordinary Differential Equations I (3)	MATH 222 or 224 and <i>Pre/Corequisite: MATH 247</i>
		MATH ____	Mathematics Upper-Division Course**	Check catalog for Prerequisites

**Select 8 units of Upper-Division Physics Courses:**


\*Grade of "C" or better

\*\*See catalog for more details