

# BACHELOR OF SCIENCE IN PHYSICS

## Major Requirements Worksheet

2012-2013 Catalog

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

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

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.

Grade	Course #	Course Title	Need to take	Prerequisites
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### Take ALL of the following courses

Physics majors **must** have a "C" average in the major, and must achieve a grade of "C" or better in each required course in the major

	PHYS 151	Mechanics and Heat (4)		MATH 122 Pre/Corequisite
	PHYS 152	Electricity and Magnetism (4)		PHYS 151; Pre/Corequisite: MATH 123
	PHYS 254	Modern Physics and Light (3)		PHYS 152 <i>or</i> EE 210; Pre/Corequisite: MATH 224
	PHYS 255	Laboratory on Light and Modern Physics (1)		Pre/Corequisite: PHYS 254
	CHEM 111A	General Chemistry I (5)		A passing score on the CPT**, <i>and</i> either MATH 113*, or 117*, or 119A*, or 122*. Also 1 year of HS chemistry**
	CHEM 111B	General Chemistry II (5)		CHEM 111A*
	MATH 122	Calculus I (4)		MDPT placement** <i>or</i> MATH 111* <i>and</i> 113*, <i>or</i> MATH 117*
	MATH 123	Calculus II (4)		MATH 122*
	MATH 224	Calculus III (4)		MATH 123* <i>or</i> 222*
	MATH 247	Introduction to Linear Algebra (3)		MATH 123 <i>or</i> 222

### Select ONE of the following

	BIOL 200	General Biology (4)		GE Foundation requirements
	BIOL 211	Evolution and Diversity (4)		CHEM 111A (pre/Corequisite)

### Upper Division (for upper division advising, see your faculty advisor). Take the following courses:

	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 <i>or</i> 224, <i>and</i> Pre/Corequisite: MATH 247
	MATH ____	An additional upper-division math course		Check the catalog for the Prerequisites for the class you choose

### Take ALL of the following courses:

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

Take **ONE** laboratory course chosen from: PHYS 445, 446, 476 and 480. The remaining (*up to 8*) units are to be chosen from any upper-division physics courses.

\*Must receive a "C" or better \*\* See the catalog for more detail