



# Bachelor of Science

## APPLIED PHYSICS: Physical Sciences Emphasis

**Advisement Form 2009-2010**

Name \_\_\_\_\_ ID \_\_\_\_\_

Physics Curriculum	Un.	Instit.	Course	Units	Grade	Term	Prerequisites, GE & Comments
<b>Lower Division Requirements (32-33 Units)</b>							
CHEM 105 Introduction to Chemistry	3						Prereq: Passing score on the ELM; GE: B1
MATH 150 Calculus I	4						Prereq: Passing score on the Calculus Placement Exam or MATH 105; GE: B3
MATH 151 Calculus II	4						Prereq: MATH 150
PHYS 106 Applied Physics and Modern Society	3						GE: B1
PHYS 200 General Physics I	4						Prereq: MATH 150; GE: B1
PHYS 201 General Physics II	4						Prereq: PHYS 200; GE: B1
PHYS/ART 208 Physics of Art and Visual Perception <i>(or)</i> PHSC 170 Foundations in Physical Science <i>(Required for teachers)</i>	3 4						GE: B1, C1  GE: B1
BIOL 100 Exploring the Living World <i>(or)</i> BIOL 170 Foundations of Life Science <i>(required for teachers)</i>	4						GE: B2
COMP 102 Web Development <i>(or)</i> COMP 105 Computer Programming Introduction	3						Prereq: COMP 101 or consent of instructor; GE: B4 GE: B4; <u>Note</u> : Not open to students who have completed COMP 150
<b>Upper Division Requirements (30 Units)</b>							
MGT 325 Entrepreneurial Management	3						
PHYS 304 Electromagnetism	4						Prereq: PHYS 101 or 201, & MATH 151
PHYS 306 Modern Physics	3						Prereq: PHYS 101 or 201, & MATH 151
PHYS/PAMU 335 Physics of Music	3						GE: B1, C1, INTD
PHYS/ENGL 338 Science and Conscience	3						GE: B1, C2, INTD
PHYS/CHEM 344 Energy and Society	3						GE: B1, INTD
PHYS/BIOL/HLTH 434 Introduction to Biomedical Imaging	4						Prereq: BIOL 210 or PHYS 200; GE: B1, E, INTD
PHYS 448 Team-Based Research	3						Prereq: Upper division standing; GE: B1, INTD
PHYS 499 Senior Colloquium	1						Prereq: Senior standing; Repeatable

	Un.	Instit.	Course	Units	Grade	Term	Prerequisites, GE & Comments
<b>Select 3 units (any combination) from the following:</b>							
PHYS 492 Internship (Required for teachers)	3						Prereq: Upper division standing & consent of instructor; Graded or CR/NC; Repeatable
PHYS 494 Independent Research	1-3						Prereq: Senior standing & consent of instructor; Repeatable
PHYS 497 Directed Studies	1-3						Prereq: Senior standing & program approval; Repeatable
<b>Electives in the Major (15-16 units) Chosen with advisor's approval</b>							
EDUC 330 Introduction to Secondary Schooling (recommended for teachers)	3						GE: D, INTD
MATH 240 Linear Algebra	3						Prereq: MATH 151
MATH 250 Calculus III	3						Prereq: MATH 151 with a grade of C or better
MATH 350 Differential Equations and Dynamical Systems	3						Prereq: MATH 250 (may be taken concurrently)
MATH 352 Probability and Statistics	3						Prereq: MATH 151
MATH 448 Scientific Computing	3						Prereq: MATH 151 & 350 or COMP 151; GE: B3, B4, INTD
MATH 450 Partial Differential Equations and Mathematical Physics	3						Prereq: MATH 350 or consent of instructor
MATH 451 Complex Analysis	3						Prereq: MATH 240, & 250
PHYS 310 Electronics	4						Prereq: PHYS 101 or 201
PHYS/COMP/MATH 345 Digital Imaging Processing	3						Prereq: Consent of instructor; GE: B1, B4, INTD
PHYS/PA 436 Physics of the Performing Arts	3						Prereq: PA 202; GE: B1, INTD
PHYS/COMP/MATH 445 Image Analysis and Pattern Recognition	3						Prereq: PHYS/COMP/MATH 345 or consent of instructor; GE: B1, B4 & INTD
PHYS/BIOL 464 Medical Instrumentation	4						Prereq: PHYS/BIOL/HLTH 434
PHYS 490 Topics in Physics	3						Prereq: Upper division standing & consent of instructor; Repeatable
PHYS 492 Internship (If not taken as a required course)	3						Prereq: Upper division standing & consent of instructor; Graded or CR/NC; Repeatable
PHYS 494* Independent Research (If not taken as a required course)	1-3						Prereq: Senior standing & consent of instructor; Repeatable
PHYS 497* Directed Studies (If not taken as a required course)	1-3						Prereq: Senior standing & program approval; Repeatable

\*Cannot exceed a total of three units, when added to units taken within the upper division requirement

**Additional University Graduation Requirements**

**9 Units Upper Division Interdisciplinary GE at CSUCI (courses numbered 330-349 or 430-449)**

Course 1 (in major) PHYS 335 Course 2 (in major) PHYS 338 Course 3 \_\_\_\_\_  
(outside major)

**American Institutions Requirements:** US History \_\_\_\_\_ State and Local Gov't \_\_\_\_\_  
(Choose from HIST 270, 271, 272, 275 or 350) (Choose POLS 150)

*Students must receive a grade of C or better in the Language and Multicultural Requirements*

**Language Requirement:** GE C3a \_\_\_\_\_  
(one semester of college level language)

**Multicultural Requirement:** GE C3b \_\_\_\_\_

*Minimum total units to graduate: 120 of which 40 must be upper division. Please see catalog for a complete list of graduation requirements.*

Advisor \_\_\_\_\_ Date Completed: \_\_\_\_\_

Advisor Comments: \_\_\_\_\_

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