



Bachelor of Science

APPLIED PHYSICS: Technology Emphasis

Advisement Form 2009-2010

Name _____ ID _____

Physics Curriculum	Un.	Instit.	Course	Units	Grade	Term	Prerequisites, GE & Comments
Lower Division Requirements (31 – 32 Units)							
MATH 150 Calculus I	4						Prereq: Passing score on Calculus Placement Exam or MATH 105; GE: B3
MATH 151 Calculus II	4						Prereq: MATH 150
MATH 230 Logic and Mathematical Reasoning	3						GE: A3, B3
MATH 240 Linear Algebra	3						Prereq: MATH 151
MATH 250 Calculus III	3						Prereq: MATH 151 with C or better
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
COMP 105 Computer Programming Introduction (or)	3						GE: B4
COMP 150 Object-Oriented Programming	4						Prereq: Programming experience; GE: B4
Upper Division Requirements (46-47 Units)							
Major Core Courses (37 units)							
MATH 350 Differential Equations and Dynamical Systems	3						Prereq: MATH 250 (may be taken concurrently)
PHYS 304 Electromagnetism	4						Prereq: PHYS 101 or 201, & MATH 151
PHYS 306 Modern Physics	3						Prereq: PHYS 101 or 201, & MATH 151
PHYS 310 Electronics	4						Prereq: PHYS 101 or 201
PHYS/PAMU 335 Physics of Music	3						GE: B1, C1, INTD
PHYS/ENGL 338 Science and Conscience	3						GE: B1, C2, INTD
PHYS/COMP/MATH 345 Digital Imaging Processing	3						Prereq: Consent of instructor; GE: B1, B4, INTD
PHYS 406 Solid State Physics	3						Prereq: PHYS 306
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
Select 3 units (any combination) from the following:							
PHYS 492 Internship	3						Prereq: Upper division standing & consent of instructor; Graded or CR/NC
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

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Electives in the Major (9-10 Units) <i>Select three courses from the following:</i>							
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 301 Classical Mechanics#	3						Prereq: PHYS 201 & MATH 350
PHYS 305 Thermal and Statistical Physics#	3						Prereq: PHYS 201 & MATH 350
PHYS 401 Quantum Mechanics#	3						Prereq: PHYS 306 & MATH 350
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
PHYS 492 Internship <i>(If not taken as a required course)</i>	3						Prereq: Upper division standing & consent of instructor; Graded or CR/NC
PHYS 494* Independent Research <i>(If not taken as a required course)</i>	1-3						Prereq: Senior standing & consent of instructor
PHYS 497* Directed Studies <i>(If not taken as a required course)</i>	1-3						Prereq: Senior standing & program approval

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

Courses offered to students interested in taking the GRE exam for graduate school

Additional University Graduation Requirements

9 Units Upper Division Interdisciplinary GE at CSUCI (courses numbered 330-349 or 430-449)	
Course 1 (in major) <u>PHYS 335</u>	Course 2 (in major) <u>PHYS 338</u>
Course 3 _____ (outside major)	
American Institutions Requirements: US History _____ (Choose from HIST 270, 271, 272, 275 or 350)	State and Local Gov't _____ (Choose POLS 150)
<i>Students must receive a grade of C or better in the Language and Multicultural Requirements</i>	
Language Requirement: GE C3a _____ (one semester of college level language)	
Multicultural Requirement: GE C3b _____	
<i>Minimum total units to graduate: 120 of which 40 must be upper division. Please see catalog for a complete list of graduation requirements.</i>	
Advisor _____	Date Completed: _____
Advisor Comments: _____	
