



SACRAMENTO
STATE

Program Proposal Form B



Academic Group (College): Natural Sciences and Mathematics	Date of Submission to College Dean: August 30, 2007
Academic Organization (Department): Physics and Astronomy	Requested Effective: Fall <u>X</u> , Spring __, 2008.
Department Chair: Gary Shoemaker	Contact if not Department Chair: Hossein Partovi
Title of the Program: Physics BA degree	
Type of Program Proposal:	
<input checked="" type="checkbox"/> Modification in Existing Program: ___ Substantive Change <input checked="" type="checkbox"/> Non-Substantive Change ___ Deletion of Existing Program <input type="checkbox"/> New Programs ___ Initiation (Projection) of New Program on to Master Plan ___ New Degree Programs ___ Regular Process ___ Fast Track Process ___ Pilot Process ___ New Minor, Concentration, Option, Specialization, Emphasis ___ New Certificate Program	
PLEASE NOTE: Form B is to be used only as a Cover Form. Additional information is requested for each of the above as noted in the corresponding procedure in the Policies and Procedures for Initiation, Modification, Review and Approval of Courses and Academic Programs found at http://www.csus.edu/acaf/univmanual/index.htm	
Briefly describe the program proposal (new or change) and provide a justification. Adding to the elective course menu a reformulated Physics 156 course (see current Course Change Proposal). The course change proposed provides more in-depth treatment of Hamiltonian/Lagrangian dynamics and Statistical Mechanics. There will be no fiscal impact on other departments and a negligible impact on the Physics department. No unit changes are mandated for the program as a whole or for any subcategories.	
Approvals: Department Chair: <u><i>Gary H. Shoemaker</i></u> Date: <u>9/18/07</u> College Dean: <u><i>Laurel Gifferson</i></u> Date: <u>9/20/07</u> University Committee: _____ Date: _____ Associate Vice President and Dean for Academic Affairs: _____ Date: _____	

Proposed Changes:**Itemize Each Change:**

1. Add PHYS 156 to the list of elective upper division courses required. No changes in unit totals in any subcategory below.

NEW PROGRAM (66 units)	OLD PROGRAM (66 units)
A. Required Lower Division Courses (37 units):	A. Required Lower Division Courses (37 units):
PHYS 011A General Physics: Mechanics (4 units)	PHYS 011A General Physics: Mechanics (4 units)
PHYS 011B General Physics: Heat, Light, Sound (4 units)	PHYS 011B General Physics: Heat, Light, Sound (4 units)
PHYS 011C General Physics: Electricity and Magnetism, Modern Physics (4 units)	PHYS 011C General Physics: Electricity and Magnetism, Modern Physics (4 units)
MATH 030 Calculus I (4 units)	MATH 030 Calculus I (4 units)
MATH 031 Calculus II (4 units)	MATH 031 Calculus II (4 units)
MATH 032 Calculus III (4 units)	MATH 032 Calculus III (4 units)
MATH 045 Differential Equations for Science and Engineering (3 units)	MATH 045 Differential Equations for Science and Engineering (3 units)
CHEM 001A General Chemistry I (5 units)	CHEM 001A General Chemistry I (5 units)
CHEM 001B General Chemistry II (5 units)	CHEM 001B General Chemistry II (5 units)
B. Required Upper Division Courses (23 units)	B. Required Upper Division Courses (23 units)
PHYS 105 Mathematical Methods in Physics (3 units)	PHYS 105 Mathematical Methods in Physics (3 units)
PHYS 106 Introduction to Modern Physics (3 units)	PHYS 106 Introduction to Modern Physics (3 units)
PHYS 110 Classical Mechanics (3 units)	PHYS 110 Classical Mechanics (3 units)
PHYS 115 Electronics and Instrumentation	PHYS 115 Electronics and Instrumentation

<p>(4 units) OR PHYS 145 Optics (3 units)</p> <p>PHYS 124 Thermodynamics and Statistical Mechanics (3 units)</p> <p>PHYS 135 Electricity and Magnetism (3 units)</p> <p>PHYS 175 Advanced Physics Laboratory (2 units)</p> <p>PHYS 191 Senior Project (2 units)</p> <p>C. Elective Upper Division Requirements (6 units)</p> <p>PHYS 116 Advanced Electronics and Instrumentation (3 units)</p> <p>PHYS 130 Acoustics (3 units)</p> <p>PHYS 136 Electrodynamics of Waves, Radiation, and Materials (3 units)</p> <p>PHYS 142 Applied Solid State Physics (3 units)</p> <p>PHYS 150 Quantum Mechanics (3 units)</p> <p>PHYS 151 Advanced Modern Physics (3 units)</p> <p>PHYS 156 Classical and Statistical Mechanics</p> <p>PHYS 196 Experimental Offerings in Physics (1-3 units per semester; 4 unit maximum)</p> <p>PHYS 198 Co-curricular Activities (1-3 units per semester; 4 unit maximum)</p> <p>PHYS 199 Special Problems (1-3 units per semester; 4 unit maximum)</p>	<p>(4 units) OR PHYS 145 Optics (3 units)</p> <p>PHYS 124 Thermodynamics and Statistical Mechanics (3 units)</p> <p>PHYS 135 Electricity and Magnetism (3 units)</p> <p>PHYS 175 Advanced Physics Laboratory (2 units)</p> <p>PHYS 191 Senior Project (2 units)</p> <p>C. Elective Upper Division Requirements (6 units)</p> <p>PHYS 116 Advanced Electronics and Instrumentation (3 units)</p> <p>PHYS 130 Acoustics (3 units)</p> <p>PHYS 136 Electrodynamics of Waves, Radiation, and Materials (3 units)</p> <p>PHYS 142 Applied Solid State Physics (3 units)</p> <p>PHYS 150 Quantum Mechanics (3 units)</p> <p>PHYS 151 Advanced Modern Physics (3 units)</p> <p>+++++</p> <p>PHYS 196 Experimental Offerings in Physics (1-3 units per semester; 4 unit maximum)</p> <p>PHYS 198 Co-curricular Activities (1-3 units per semester; 4 unit maximum)</p> <p>PHYS 199 Special Problems (1-3 units per semester; 4 unit maximum)</p>
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FYI

And whichever of the courses below not previously used to fulfill the upper division requirement:

PHYS 115 Electronics and Instrumentation (4 units) **OR** PHYS 145 Optics (3 units)

And whichever of the courses below not previously used to fulfill the upper division requirement:

PHYS 115 Electronics and Instrumentation (4 units) **OR** PHYS 145 Optics (3 units)