

California State University Channel Islands

Program Update For Minor Program Updates Only

Program updates must be submitted by October 15, 2013 and finalized by the end of the fall semester for the next catalog production.

Date (Change if modified and update the file name with the new date): **8-26-1310.15.13**

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Program Area: **Applied Physics: Technology Emphasis, B.S.**

Semester/Year first affected: FALL 2014

Instructions: Please use this Program Update form for minor changes to existing programs. **Highlight all changes in YELLOW.** Appropriate updates for this form include faculty or address changes, additions of approved electives, minor editing for clarity, and other minor updates. Any change to program requirements, units, outcomes, emphases or options, or other programmatic concerns require the standard two column Program Modification form, available at the Curriculum website.

CURRENTLY APPROVED PROGRAM WITH CHANGES TRACKED

Paste the latest approved version of your entire program in the below the line and before the Summary of Changes before you begin (If you are unsure about which version is the most recent, contact Kathy Musashi). If the form does not preset to the tracked changes mode, turn on tracked changes using Word Tools before making the necessary edits. Please set the view to ORIGINAL SHOWING MARKUP.

SUMMARY OF CHANGES (Mark applicable change box below)

- ☒ Adding elective courses : **Physics 410**
☐ Updating faculty or addresses
☐ Minor editing for clarity
☐ Other, Please briefly explain

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Applied Physics: Technology Emphasis, B.S.

120 units

Summary of Units:

Lower Division Major Requirements
Upper Division Major Requirements

32
36

Upper Division Major Electives Requirement	10
Additional General Education and other Graduation Requirements	42
Total Units	120

Lower Division Requirements - 32 units

- [COMP 150 - Object-Oriented Programming](#) **Units: 4 ***
- [MATH 150 - Calculus I](#) **Units: 4 ***
- [MATH 151 - Calculus II](#) **Units: 4**
- [MATH 230 - Logic and Mathematical Reasoning \(Cross-listed as PHIL 230\)](#) **Units: 3 ***
- [MATH 240 - Linear Algebra](#) **Units: 3**
- [MATH 250 - Calculus III](#) **Units: 3**
- [PHYS 106 - Applied Physics and Modern Society](#) **Units: 3 ***
- [PHYS 200 - General Physics I](#) **Units: 4 ***
- [PHYS 201 - General Physics II](#) **Units: 4 ***

Upper Division Requirements - 36 units

- [MATH 350 - Differential Equations and Dynamical Systems](#) **Units: 3**
- [PHYS 301 - Classical Mechanics](#) **Units: 3**
- [PHYS 304 - Electromagnetism](#) **Units: 4**
- [PHYS 305 - Thermal and Statistical Physics](#) **Units: 3**
- [PHYS 306 - Modern Physics](#) **Units: 3**
- [PHYS 310 - Electronics](#) **Units: 4**
- [PHYS 338 - Science and Conscience \(Cross-listed as ENGL 338\)](#) **Units: 3 ***

- [PHYS 345 - Digital Image Processing \(Cross-listed as MATH 345, COMP 345\)](#) Units: 3 *
- [PHYS 400 - Quantum Physics](#) Units: 3
- [PHYS 448 - Team Based Research](#) Units: 3
- [PHYS 499 - Senior Colloquium](#) Units: 1
- and

Select 3 units from the following (any combination):

- [PHYS 492 - Internship](#) Units: 3
- [PHYS 494 - Independent Research](#) Units: 1-3
- [PHYS 497 - Directed Studies](#) Units: 1-3

Electives in the Major - 10-11 units

Select 10-11 units from the following:

- [MATH 352 - Probability and Statistics](#) Units: 3
- [MATH 448 - Scientific Computing](#) Units: 3
- [MATH 450 - Partial Differential Equations and Mathematical Physics](#) Units: 3
- [MATH 451 - Complex Analysis](#) Units: 3
- [PHYS 335 - The Physics of Music \(Cross-listed as PAMU 335\)](#) Units: 3 *
- [PHYS 401 - Quantum Mechanics](#) Units: 3 †
- [PHYS 406 - Solid State Physics](#) Units: 3
- **[PHYS 410 - Introduction to Electro-Optics](#) Units: 4**

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- [PHYS 434 - Introduction to Biomedical Imaging \(Cross-listed as BIOL 434, HLTH 434\)](#) **Units: 4** *
- [PHYS 445 - Image Analysis and Pattern Recognition \(Cross-listed as COMP 445, MATH 445\)](#) **Units: 3** *
- [PHYS 464 - Medical Instrumentation \(Cross-listed as BIOL 464\)](#) **Units: 4**
- [PHYS 490 - Topics in Physics](#) **Units: 3**
- [PHYS 492 - Internship](#) **Units: 3** (if not taken as a required course)
- [PHYS 494 - Independent Research](#) **Units: 1-3** †
- [PHYS 497 - Directed Studies](#) **Units: 1-3** †

Required Supporting and Other GE Courses - 42 units

American Institutions Requirement	6
Other Courses in GE Categories A-E	27
Electives in Any Discipline	9

Note(s):

† Cannot exceed a total of **3** units, when added to units taken within the upper division requirements

‡ Recommended for students proceeding to graduate school.

* May be double-counted toward GE Requirements

Clint D. Harper, Ph.D.	10/15/13
Proposer of Program Modification	Date

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APPROVAL SHEET

Program: **Applied Physics**

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If your course has a General Education Component or involves Center affiliation, the Center will also sign off during the approval process.

Multiple Chair fields are available for cross-listed courses.

The CI program review process includes a report from the respective department/program on its progress toward accessibility requirement compliance. By signing below, I acknowledge the importance of incorporating accessibility in course design.

Program Chair		
	Signature	Date

Curriculum Chair		
	Signature	Date

AVP		
	Signature	Date