



UNIVERSITY OF WASHINGTON

CREATING AND CHANGING UNDERGRADUATE ACADEMIC PROGRAMS

2-18-15

FEB 23 2015
OFFICE USE ONLY
Control #
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After college/school/campus review, send a signed original and 1 copy to the Curriculum Office/FCAS, Box 355850.

For information about when and how to use this form: <http://depts.washington.edu/uwcr/1503instructions.pdf>

College/Campus Arts & Sciences	Department/Unit Physics	Date 2/18/15
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New Programs

Leading to a Bachelor of ___ in ___ degree.

Leading to a Bachelor of ___ degree with a major in ___.

Leading to a ___ Option within the existing major in ___.

Leading to a minor in ___.

Changes to Existing Programs

New Admission Requirements for the Major in ___ within the Bachelor of ___.

Revised Admission Requirements for the Major in ___ within the Bachelor of ___.

Revised Program Requirements for the Major in ___ within the Bachelor of ___.

Revised Requirements for the Option in Applied Physics within the major in Physics.

Revised Requirements for the Minor in ___.

Other Changes

Change name of program from ___ to ___.

Change delivery method or location of program.

New or Revised Continuation Policy for ___.

New Honors Requirements for ___.

Eliminate program in ___.

Proposed Effective Date: **Quarter:** Autumn Winter Spring Summer **Year: 20 15**

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EXPLANATION OF AND RATIONALE FOR PROPOSED CHANGE

For new program, please include any relevant supporting documentation such as student learning outcomes, projected enrollments, letters of support and departmental handouts. (Use additional pages if necessary).

Physics 226, Particles and Symmetries, is currently required of all physics majors. Prior to the creation of options within the physics major in Autumn 2011, Physics 226 was not required, but was rather an option where students could take either Phys 226 or Phys 324. Phys 226 covers special relativity and the physics of sub-atomic particles. Many students in the Applied Physics option are planning on a more engineering-related career, and the physics electives quantum mechanics (Phys 324), classical mechanics (Phys 329) or electromagnetic radiation (Phys 323) cover material more relevant to their goals. Phys 324 is also a pre-requisite for other upper-division electives that these students may wish to take. We thus propose that students in the Applied Track be able to choose from a menu of courses that includes Phys 226 rather than be required to take one specific class.

Old Requirement: Phys 226
 New Requirement: Choose one from {Phys 226, Phys 323, Phys 324, Phys 329}

OTHER DEPARTMENTS AFFECTED

List all departments/units/ or co-accredited programs affected by your new program or changes to your existing program and acquire the signature of the chair/director of each department/unit listed. Attach additional page(s) if necessary. *See online instructions.

Department/Unit: NONE	Chair/Program Director:	Date:
Department/Unit:	Chair/Program Director	Date:

CATALOG COPY

Catalog Copy as currently written. Include only sections/paragraphs that would be changed if your request is approved. Please cross out or otherwise highlight any deletions.

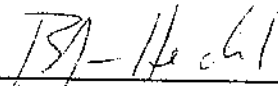

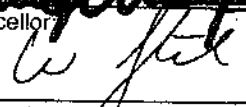
1. *Physics core courses (40 credits):* PHYS 121, PHYS 122, PHYS 123, PHYS 224, PHYS 225, ~~PHYS 226~~, PHYS 227, PHYS 294, PHYS 321, PHYS 322, PHYS 334
3. b. *Applied Physics Option (31-35 credits):*
 - i. PHYS 231 and AMATH 301 (7-credits)

PROPOSED CATALOG COPY

Reflecting requested changes (Include exact wording as you wish it to be shown in the printed catalog. Please underline or otherwise highlight any additions. If needed, attach a separate, expanded version of the changes that might appear in department publications). **Please note:** all copy will be edited to reflect uniform style in the General Catalog.

1. *Physics core courses (37 credits):* PHYS 121, PHYS 122, PHYS 123, PHYS 224, PHYS 225, PHYS 227, PHYS 294, PHYS 321, PHYS 322, PHYS 334
3. b. *Applied Physics Option (34-39 credits):*
 - i. PHYS 231; one course from PHYS 226, PHYS 323, PHYS 324, PHYS 329; and AMATH 301 (10-11 credits)

APPROVALS

Chair/Program Director:		Date:	2/18/15
College/School/Campus Curriculum Committee:		Date:	2/19/15
Dean/Vice-Chancellor:		Date:	2/19/15
Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:		Date:	

POST TRI-CAMPUS APPROVAL (when needed)

Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:		Date:	
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SUMMARY

Physics 226, Particles and Symmetries, is currently required of all physics majors. Prior to the creation of options within the physics major in Autumn 2011, Physics 226 was not required, but was rather an option where students could take either Phys 226 or Phys 324. Physics 226 covers special relativity and the physics of sub-atomic particles. Many students in our Applied Physics and Biophysics Options have trouble relating these topics to their career goals, and would be better served by one of our upper-division electives. We thus propose to replace the requirement of Physics 226 with a choice from a menu of courses that includes Physics 226. Thus, any student planning their schedule under the old rules will still be able to graduate in their choice of option; they may, however, substitute a 300-level elective from a menu for this class. [Note: Physics 324 is already required for the Biophysics Option, and is a pre-requisite for Physics 325, hence the difference between the menus for the Applied Physics and Biophysics Options.] We chose not to change the Comprehensive Physics and Teaching Preparation options, since an understanding of relativity and sub-atomic particles is important for people who plan careers either teaching or researching in physics. This change was approved by departmental faculty vote on 04 Feb 2015.

Major Requirements Proposed Changes

- 1 *Physics core courses* (~~40~~ **37** credits): PHYS 121, PHYS 122, PHYS 123, PHYS 224, PHYS 225, ~~PHYS 226~~, PHYS 227, PHYS 294, PHYS 321, PHYS 322, PHYS 334
- a *Comprehensive Physics Option* (~~35-40~~ **38-43** credits):
 - i ~~17~~ **20-22** credits from **PHYS 226**; PHYS 228; PHYS 324; minimum three courses from PHYS 323, PHYS 325, PHYS 328, PHYS 329, ASTR 321, or ASTR 322
- b *Applied Physics Option* (~~31-35~~ **34-39** credits):
 - i PHYS 231; **one course from PHYS 226, PHYS 323, PHYS 324, PHYS 329;** and AMATH 301 (~~7~~ **10-11** credits)
- c *Biophysics Option* (~~48-52~~ **51-56** credits):
 - i PHYS 228; PHYS 324; PHYS 328; PHYS 429; **one course from PHYS 226, PHYS 323, PHYS 325, PHYS 329** (~~14~~ **17-18** credits)
- d *Teacher Preparation Option* (~~35-39~~ **38-42** credits):
 - i ~~11-12~~ **14-15** credits from **PHYS 226**; PHYS 228; PHYS 324; one course from PHYS 323, PHYS 328, PHYS 329