Program Change Request

Date Submitted: 09/23/16 1:02 pm

Viewing: **PHYSBS-CMPT : Physics Computational Concentration**

Last approved: 05/17/16 2:27 pm

Last edit: 09/23/16 1:02 pm

Changes proposed by: ddraper

In Workflow

1. **ARSC Dean Initial**
2. **Director of Program Assessment and Review**
3. **Registrar Initial**
4. **PHYS Chair**
5. **ARSC Curriculum Committee**
6. **ARSC Dean**
7. **Global Campus**
8. **Provost Review**
9. **University Course and Program Committee**
10. Faculty Senate
11. Provost Final
12. Provost's Office--Notification of Approval
13. Registrar Final
14. Catalog Editor Final

Approval Path

1. 09/24/16 2:23 pm jdurdik: Approved for ARSC Dean Initial
2. 09/27/16 2:42 pm agriffin: Approved for Director of Program Assessment and Review
3. 10/03/16 6:23 pm lkulcza: Approved for Registrar Initial
4. 10/04/16 1:45 pm jgeabana: Approved for PHYS Chair
5. 10/10/16 5:03 pm fspiegel: Approved for ARSC Curriculum Committee
6. 10/10/16 6:45 pm jdurdik: Approved for

ARSC Dean
7. 10/11/16 4:40 pm pritchey: Approved for Global Campus
8. 10/13/16 5:15 pm tmartin: Approved for Provost Review

History

1. Aug 27, 2014 by crsleaf1
2. Aug 27, 2014 by crsleaf1
3. Jun 10, 2015 by calison
4. May 17, 2016 by lkulcza

Catalog Pages Using this Program	Physics B.S. with Computational Concentration Physics (PHYS)

Submitter:	User ID: crsleaf1 Phone: **5916** ~~575-6731~~
Academic Level	Undergraduate
Select a reason for the proposed change:	Making Minor Changes to an Existing Degree (e.g. changing 15 or fewer hours, changing admission/graduation requirements, adding Focused Study)
Program Status	Active
Academic Unit	Major/Field of Study

Are you adding, changing or deleting a concentration? No

Action	Proposed Code	Proposed Name

Are you adding, changing or deleting a track? No

Action	Proposed Code	Proposed Name

Are you adding, changing or deleting a focused study? No

Action	Proposed Code	Proposed Name

Effective Catalog Year	Fall **2017** ~~2016~~
College, School, Division	Fulbright College of Arts and Sciences (ARSC)

Department Code	Department of Physics (PHYS)
Program Code	PHYSBS-CMPT
Degree	Bachelor of Science
CIP Code	40.0801 - Physics, General.
Program Title	Physics Computational Concentration
Method of Delivery	On Campus
Is this program interdisciplinary or use courses from another College?	No
Does this change the total hours needed to complete the program?	No

Program Requirements, Description and 8-Semester Plan

Computational Concentration

PHYS 3113	Analytical Mechanics (Fa)	3
13 semester hours numbered 3000 and above in physics, astronomy, advanced computer science, or mathematics chosen with the adviser's permission.		13
Total Hours		16

Physics B.S. with Computational Concentration

Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see the Eight-Semester Degree Policy in the Academic Regulations chapter for university requirements of the program as well as Fulbright College requirements.

Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area. Students should consult their advisers.

First Year	**Units**
	Fall Spring
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013) (Sp, Su, Fa)	3
MATH 2554 Calculus I (ACTS Equivalency = MATH 2405) (Sp, Su, Fa)[1]	4

University/State Core Fine Arts or Humanities requirement	3	
PHYS 2054 University Physics I (ACTS Equivalency = PHYS 2034) (Sp, Su, Fa)[1]	4	
General Electives (as desired)	2-3	
ENGL 1023 Composition II (ACTS Equivalency = ENGL 1023) (Sp, Su, Fa)		3
PHYS 2074 University Physics II (ACTS Equivalency = PHYS 2044 Lecture) (Sp, Su, Fa)[1]		4
MATH 2564 Calculus II (ACTS Equivalency = MATH 2505) (Sp, Su, Fa)[1]		4
University/State Core US History requirement or General Elective		3
Year Total:	16	14

Second Year	**Units**	
	Fall	**Spring**
PHYS 2094 University Physics III (Fa)[1]	4	
MATH 2574 Calculus III (ACTS Equivalency = MATH 2603) (Sp, Su, Fa)[1]	4	
General Elective or University/State Core US History requirement (as needed)	3	
CSCE 2004 Programming Foundations I (Sp, Fa) (Highly recommended in order to satisfy prerequisite for upper-level CSCE courses.)	4	
PHYS 3613 Modern Physics (Sp, Su, Fa)[1,2]		3
MATH 2584 Elementary Differential Equations (Sp, Su, Fa)[1,2]		4
CSCE 2014 Programming Foundations II (Sp, Fa) (Highly recommended in order to satisfy prerequisite for upper-level CSCE courses.)		4
University/State Core Social Science requirement		3
Year Total:	15	14

Third Year	**Units**	
	Fall	**Spring**
PHYS 3113 Analytical Mechanics (Fa)[2]	3	
~~MATH 4423 Introduction to Partial Differential Equations (Sp, Su, Fa)[2]~~	~~3~~	-
Advanced Level Elective	3	
MATH 3083 Linear Algebra (Sp, Su, Fa)	**3**	
University/State Core Social Science requirement	3	
General Electives	3	
PHYS 3414 Electromagnetic Theory (Sp)[1,2]		4
Select one of the following:		3
CSCE course Advanced Level Electives PHYS/ASTR Group A[3]		
PHYS/ASTR Group A or Advanced Level Electives[1,2,3]		3
University/State Core Social Science requirement		3
General Elective		3
Year Total:	15	16

Fourth Year	**Units**	
	Fall	**Spring**
Select one of the following:	3	

CSCE 4133 Algorithms (Fa) (recommended; else other upper-level PHYS, ASTR, CSCE, or MATH course selected with advisor's approval)		
PHYS/ASTR Group A or Advanced Level Electives[3]		
PHYS/ASTR Group A or Advanced Level Electives[1,2,]	4	
PHYS 4073 Introduction to Quantum Mechanics (Fa)[1,2,3]	3	
University/state core humanities or fine arts requirement (as needed)	3	
General Electives	3	
Select one of the following:		4
PHYS/ASTR Group A[1,2,3]		
3000+ Level Fulbright College Elective (if needed)[1,2,3]		
Advanced Level Electives[3]		
PHYS 4991 Physics Senior Seminar (Sp, Su, Fa)[1,2,3]		1
Advanced Level Electives[1]		9
Year Total:	16	14
Total Units in Sequence:		120

1 Meets 40-hour advanced credit hour requirement. See College Academic Regulations.

2 Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations.

3 Nine hours of upper division computer science or mathematics courses can count toward the physics major.

Group A Any PHYS or ASTR classes numbered 3000 or above.

Are Similar Programs available in the area?	No
Estimated Student Demand for Program:	NA
Scheduled Program Review Date:	NA
Program Goals and Objectives:	NA
Learning Outcomes:	NA
Description and justification of the request:	Changing MATH 4423 to MATH 3083 in 8-semester plans to align our program with new math minor requirements. MATH 3083 is needed for an upper level physics course - Intro to Quantum Mechanics (PHYS 4073).
Program reviewer comments	**ddraper (09/22/16 1:24 pm):** Added comments in 8-semester plan to reflect that certain courses are highly recommended since they are needed as prerequisites for upper-level course options. Also clarified upper-level listing in year 4 as being recommended vs. required, and listed alternative course options allowed by the concentration. **agriffin (09/23/16 12:56 pm):** Rollback: Please adjust reason for change to a minor change.
Uploaded	

attachments:

Key: 536