

GRADUATE COUNCIL: PROPOSAL FOR CHANGE IN EXISTING COURSE/PROGRAM

Originating Unit Physics & Astronomy

Type of action: change in course change in program

Type of change requested:

- | | |
|--|--|
| <input type="checkbox"/> Number | <input type="checkbox"/> Course Title |
| <input type="checkbox"/> Description | <input type="checkbox"/> Prerequisite(s) Program |
| <input type="checkbox"/> Drop Course | <input checked="" type="checkbox"/> Requirements |
| <input type="checkbox"/> Drop Program* | <input type="checkbox"/> Other, please specify |

**A SACSCOC Drop Program Justification form will need to be completed*

Semester and year course/program will take effect: Fall 2024

Course instructional methodology:

course component types: [ugradcouncil.tcu.edu/forms/Course Component Types.pdf](http://ugradcouncil.tcu.edu/forms/Course%20Component%20Types.pdf)

Current name: Physics/Astrophysics Option, (Ph.D.)

Proposed name: Physics/Astrophysics Option, (Ph.D.)

Appropriate computer abbreviation (30 spaces or less):

Physics/Astrophysics Option, (Ph.D.)

Programs Only

Current program code: PHYA-PHD
(ex:EDCE-PHD)

Proposed code (list 2) _____ or _____

Current CIP code:

Does the change require a new or change in CIP code: Yes No

If yes, what is the proposed new CIP code:

*for reference please visit: nces.ed.gov/ipeds/cipcode/resources.aspx?y=56

Is the program already considered TCU STEM: Yes No

Does the change include a request to be a TCU STEM program: Yes No

Description of change (omit if dropping a course or program):

Increasing course options with the existing Physics/Astrophysics Option, (Ph.D.) program to allow more choice of elective classes for space-research students for Physics PhD (e.g., planetary science)

Present Catalog Copy

Requirements

Completion of the following courses with a GPA of 2.75 or better:

PHYS 50743 Stellar Astrophysics	3
PHYS 50773 Cosmology	3
PHYS 60003 Methods of Advanced Physics	3
PHYS 60303 Quantum Mechanics	3
PHYS 60323 Advanced Analysis & Modeling	3
PHYS 60403 Electrodynamics	3
PHYS 60743 Galactic & Extragalactic Astrophysics	3
PHYS 60753 Gaseous Astrophysics	3

Plus 2 courses from the following:

PHYS 60203 Classical Mechanics	3
PHYS 60313 Quantum Mechanics	3
PHYS 60413 Electrodynamics	3
PHYS 60603 Statistical Physics	3
AND	
PHYS 60970 Research Problems (9 hours)	9
PHYS 90980 Dissertation (6 hours)	6
PHYS 90990 Dissertation (6 hours)	6

A minimum of nine hours of PHYS 60970 Research Problems must be completed with an average grade of 2.75 or better.

Except for the courses specified above, the remaining regulations concerning coursework, predissertation qualifying exam and dissertation are the same as those prescribed above for the Ph.D. in Physics.

Proposed Catalog Copy:

Requirements

Completion of the following courses with a GPA of 2.75 or better:

PHYS 60003 Methods of Advanced Physics	3
PHYS 60303 Quantum Mechanics	3
PHYS 60323 Advanced Analysis & Modeling	3
PHYS 60403 Electrodynamics	3
PHYS 60743 Galactic & Extragalactic Astrophysics	3

AND

PHYS 60970 Research Problems (9 hours)	9
PHYS 90980 Dissertation (6 hours)	6
PHYS 90990 Dissertation (6 hours)	6

Plus 2 courses from the following:

PHYS 60203 Classical Mechanics	3
PHYS 60313 Quantum Mechanics	3
PHYS 60413 Electrodynamics	3
PHYS 60603 Statistical Physics	3
PHYS 60823 Optical Spectroscopy and Fluorescence	3

Plus 3 courses from the following:

PHYS 50743 Stellar Astrophysics	3
PHYS 50773 Cosmology	3
PHYS 50813 Meteorites, Asteroids, and Planets	3
PHYS 60753 Gaseous Astrophysics	3
GEOL 50233 Optical Mineralogy and Petrography	3
GEOL 50613 Igneous and Metamorphic Petrology	3

A minimum of nine hours of PHYS 60970 Research Problems must be completed with an average grade of 2.75 or better.

Except for the courses specified above, the remaining regulations concerning coursework, pre-dissertation qualifying exam and dissertation are the same as those prescribed above for the Ph.D. in Physics.

Supporting evidence or justification:

Changes will allow more flexibility for students and their interests, plus will enable unit to increase recruiting in a new area (Planetary science), while providing more flexibility for offering elective classes. Proposed changes developed in consultation and approved by Dr. Mayne, Monnig Curator. (No change in units needed for degree.)

Explain how the change(s) will affect the current outcomes and assessment mechanisms?

The core program assessments will not be affected by these course/elective changes

Additional resources required

Faculty: None

Space: None

Equipment: None

Library: None

Financial Aid: None

Other:

Change in teaching load: none

Does this change affect any other units of the University? Yes No

If yes, submit supporting statement signed by chair of affected unit.

If cross-listed, provide evidence of approval by all curriculum committees appropriate to both the originating and the cross-listed units.

Chair of Originating Unit:

Name: Hana Dobrovolny

Unit: Physics & Astronomy

Signature: 