

# **Program Approval Form**

For approval of new programs and deletions or modifications to an existing program.

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Submitted by:	Joseph Weing	Joseph Weingartner		Email:	jweinga1
Effective Term: Justification: (attach sep	Fall 201	/ must be fully approved, e			tificate or concentration, the program versity Catalog.
		Existing		New/Modified	
Program Title: (Required) Title must identify subject matter. Do not include name of college/school/dept. Concentration(s):		Astronomy minor		Astronomy minor	
Admissions Standards / Application Requirements: (Required only if different from those listed in the University Catalog) Degree Requirements: Consult University Catalog for models, attach		See attached.		See attached.	
separate document if necessar changes for modifications <b>Courses offered via di</b>					
(if applicable)		18 or 20		18 - 21	
TOTAL CREDITS REQUIRED:		18 01 20			
*For Certificates Only Approval S		ner students are able to pursu	ie on a	Full-time basis	Part-time basis
Department	D	ate College/School	Date	Provost's Off	
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For Undergradu	ate Progran	ns only			
Undergraduate Council M	lember	Provost Office		Undergraduate Council Approval Date	
For Gradua	te Program	s Only			

Graduate Council Member	Provost Office	Graduate Council Approval Date
For Registrar Office's Use Only: Received revised 9/2/2016	Banner	_Catalog

## Program Proposal Submitted to the College of Science Curriculum Committee (COSCC)

The form above is processed by the Office of the University Registrar. This second page is for the COSCC's reference. Please complete the applicable portions of this page to clearly communicate what the form above is requesting.

#### FOR ALL PROGRAMS (required)

Program Title: Astronomy minor

Date of Departmental Approval:

### FOR MODIFIED PROGRAMS (required if modifying a program)

- Summary of the Modification: In sequence 2, replace PHYS 262 with PHYS 262 or PHYS 308; add ASTR 480 to astronomy electives.
- Text before Modification (title, degree requirements, etc.):

The minor requires completion of 18 or 20 credits in physics and astronomy, with a minimum GPA of 2.00. Eight credits of coursework must be unique to the minor. For policies governing all minors, see the <u>Undergraduate Policies</u> section of this catalog.

**Minor Requirements** 

Core Courses (12 or 14 credits)

Students will take one of the following sequences listed below:

Sequence One

- <u>PHYS 243 College Physics</u> Credits: 3 and PHYS 245 - College Physics Credits: 3
- or
- <u>PHYS 160 University Physics I</u> Credits: 3 and <u>PHYS 260 - University Physics II Credits: 3</u>
- Plus:
- ASTR 111 Introductory Astronomy: The Solar System Credits: 3
- ASTR 112 Introductory Astronomy Lab: The Solar System Credits: 1
- ASTR 113 Introductory Astronomy: Stars, Galaxies, and the Universe Credits: 3
- <u>ASTR 114 Introductory Astronomy Lab: Stars, Galaxies, and the Universe</u> Credits: 1

## Sequence Two

- <u>PHYS 160 University Physics I</u> Credits: 3
- <u>PHYS 260 University Physics II</u> Credits: 3
- <u>PHYS 262 University Physics III</u> Credits: 3
- <u>ASTR 210 Introduction to Astrophysics</u> Credits: 3

## Astronomy Electives (6 credits)

Chosen from the following:

- <u>ASTR 301 Astrobiology</u> Credits: 3
- ASTR 302 Foundations of Cosmological Thought Credits: 3
- ASTR 328 Stars and Interstellar Medium Credits: 3
- <u>ASTR 402 RS: Methods of Observational Astronomy</u> Credits: 4
- ASTR 403 Planetary Sciences Credits: 3
- <u>ASTR 404 Galaxies and Cosmology</u> Credits: 3
- <u>PHYS 428 Relativity</u> Credits: 3

# Minor Total: 18 or 20 credits

• Text after Modification (title, degree requirements, etc.):

The minor requires completion of 18-21 credits in physics and astronomy, with a minimum GPA of 2.00. Eight credits of coursework must be unique to the minor. For policies governing all minors, see the <u>Undergraduate Policies</u> section of this catalog.

# **Minor Requirements**

Core Courses (12 or 14 credits)

Students will take one of the following sequences listed below:

Sequence One (14 Credits)

• <u>PHYS 243 - College Physics</u> Credits: 3 and <u>PHYS 245 - College Physics Credits: 3</u>

- or
- <u>PHYS 160 University Physics I</u> Credits: 3 and <u>PHYS 260 - University Physics II Credits: 3</u>
- Plus:
- ASTR 111 Introductory Astronomy: The Solar System Credits: 3
- ASTR 112 Introductory Astronomy Lab: The Solar System Credits: 1
- ASTR 113 Introductory Astronomy: Stars, Galaxies, and the Universe Credits: 3
- ASTR 114 Introductory Astronomy Lab: Stars, Galaxies, and the Universe Credits: 1

# Sequence Two (12 Credits)

- PHYS 160 University Physics I Credits: 3
- <u>PHYS 260 University Physics II</u> Credits: 3

#### Plus:

- <u>PHYS 262 University Physics III</u> Credits: 3 or
- PHYS 308 Modern Physics with Applications Credits: 3 Plus:
- ASTR 210 Introduction to Astrophysics Credits: 3

## Astronomy Electives (6 or 7 credits)

Chosen from the following:

- ASTR 301 Astrobiology Credits: 3
- ASTR 302 Foundations of Cosmological Thought Credits: 3
- ASTR 328 Stars Credits: 3
- ASTR 402 RS: Methods of Observational Astronomy Credits: 4
- ASTR 403 Planetary Sciences Credits: 3
- ASTR 404 Galaxies and Cosmology Credits: 3
- ASTR 480 The Interstellar Medium Credits: 3
- <u>PHYS 428 Relativity</u> Credits: 3

Minor Total: 18-21 credits

• Reason for the Modification: PHYS 262 and 308 largely overlap; ASTR 480 is a new undergraduate course in a fundamental area of astronomy.