

College of SCIENCE
Department of PHYSICS
Minor in ASTRONOMY

For student date of entry under UG Catalog 2022-2023

A hashtag (#) indicates a course with prerequisites or corequisites. These are listed below.

The Minor in Astronomy requires the completion of 19 credit hours.

I. Required courses (16 credit hours)

PHYS 1055 Introduction to Astronomy	3 <input type="checkbox"/>
PHYS 1056 Introduction to Astronomy	3 <input type="checkbox"/>
# PHYS 1155 Astronomy Laboratory	1 <input type="checkbox"/>
# PHYS 1156 Astronomy Laboratory	1 <input type="checkbox"/>
# PHYS 3154 Observational Astrophysics	2 <input type="checkbox"/>
# PHYS 3655 Introduction to Astrophysics	3 <input type="checkbox"/>
# PHYS 3656 Introduction to Astrophysics	3 <input type="checkbox"/>

Select 3 credit hours from the list below:

# PHYS 3355 Intermediate Mechanics	3 <input type="checkbox"/>
# PHYS 3405 Intermediate Electricity and Magnetism	3 <input type="checkbox"/>
# PHYS 4504 Introduction to Nuclear and Particle Physics	3 <input type="checkbox"/>
# PHYS 4574 Nanotechnology	3 <input type="checkbox"/>
# PHYS 4614 Optics	3 <input type="checkbox"/>
# PHYS 4654 Modern Cosmology	3 <input type="checkbox"/>
# PHYS 4674 Introduction to General Relativity	3 <input type="checkbox"/>
# PHYS 4714 Introduction to Biophysics	3 <input type="checkbox"/>
# PHYS 4755 Intro to Computational Physics	3 <input type="checkbox"/>
# PHYS 4774 Intro to Physics of Galaxies	3 <input type="checkbox"/>
# BIOL 2134 Cell Function and Differentiation	3 <input type="checkbox"/>
# BIOL 2704 Evolutionary Biology	3 <input type="checkbox"/>
# GEOS 4154 Earthquake Seismology	3 <input type="checkbox"/>
GEOS 4714 Volcanoes and Volcanic Processes	3 <input type="checkbox"/>
# AOE 3154 Astromechanics	3 <input type="checkbox"/>
# ECE 4114 Antennas	3 <input type="checkbox"/>
# ECE 4124 Radio Wave Propagation	3 <input type="checkbox"/>
# ECE 4144 Intro to Optical Information Processing	3 <input type="checkbox"/>
# ESM 3024 Introduction to Fluid Mechanics	3 <input type="checkbox"/>

Total 19 credit hours.

II. Minimum GPA

For the courses attempted by the student for this minor, the student's GPA must be 2.0 or higher.

III. Accepted Substitutions

PHYS 3355: AOE 3154 (Astromechanics), or ESM 3124 (Dynamics II Analytical and 3-D Motion).

PHYS 3405: ECE 3105 (Electromagnetic Fields).

IV. Prerequisites and/or Corequisites

For some of the courses listed above, prerequisites and/or corequisites apply. These are detailed below. Please check with your advisor or consult the Undergraduate Course Catalog.

List of prerequisites and corequisites

PHYS 1155: Co: 1055

PHYS 1156: Co: 1056

PHYS 3154: Pre: 1156

PHYS 3655: Pre: 2306

PHYS 3656: Pre: 2306

PHYS 3355: Pre: (MATH 1224 or MATH 2204 or MATH 2204H), (MATH 2214 or MATH 2214H), PHYS 2305, PHYS 2306, PHYS 2504

PHYS 3405: Pre: (MATH 2214 or MATH 2214H), PHYS 2305, PHYS 2306, PHYS 2504

PHYS 4504: Co: 4456

PHYS 4574: Pre: 2205, 2206 or 2305, 2306

PHYS 4614: Pre: 2306, MATH 2214, (MATH 2224 or MATH 2204 or MATH 2204H)

PHYS 4654: Pre: 3656

PHYS 4674: Pre: MATH 2214 or MATH 2214H or MATH 2514, PHYS 3356; Co: 3406

PHYS 4714: Pre: 2206 or 2306 or ISC 2106H

PHYS 4755: Pre: CS 1054 or CS 1064 or CS 1114 or ECE 1574 or AOE 2074 or ESM 2074

PHYS 4774: Pre: 3656

BIOL 2704: Pre: (BIOL 1005 or BIOL 1105 or BIOL 1205H or ISC 2105), (BIOL 1006 or BIOL 1106 or BIOL 1206H)

BIOL 2134: Pre: BIOL 2004

GEOS 4154: Pre: MATH 2204 or MATH 2204H, MATH 2214, PHYS 2305, GEOS 3104

AOE 3154: Pre: ESM 2304

ECE 4114: Pre: ECE 3106

ECE 4124: Pre: ECE 3106

ECE 4144: Pre: ECE 3105

ESM 3024: Pre: ESM 2304, (MATH 2224 or MATH 2204 or MATH 2204H)