

**College of Science
Department of Physics
Minor: ASTRONOMY
For students graduating in calendar year 2018**

I. Required courses (16 credit hours)

PHYS 1055 Introduction to Astronomy
 PHYS 1056 Introduction to Astronomy
 PHYS 1155 Astronomy Laboratory
 PHYS 1156 Astronomy Laboratory
 PHYS 3154 Observational Astrophysics
 PHYS 3655 Introduction to Astrophysics I
 PHYS 3656 Introduction to Astrophysics II

3
 3
 1
 1
 2
 3
 3

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 2104 Cell and Molecular Biology	3 <input type="checkbox"/>
BIOL 2704 Evolutionary Biology	3 <input type="checkbox"/>
GEOS 3114 Introduction to Meteorology	3 <input type="checkbox"/>
GEOS 4154 Earthquake Seismology	3 <input type="checkbox"/>
GEOS 4714 Volcanoes and Volcanic Processes	3 <input type="checkbox"/>
AOE 4134 Astromechanics	3 <input type="checkbox"/>
ECE 4114 Antennas	3 <input type="checkbox"/>
ECE 4124 Radio Wave Propagation	3 <input type="checkbox"/>
ECE 4144 Introduction to Optical Information Processing	3 <input type="checkbox"/>
ECE 4604 Applied Spectral Analysis and Filtering	3 <input type="checkbox"/>
ESM 3016 Fluid Mechanics II	3 <input type="checkbox"/>
ESM 3024 Introduction to Fluid Mechanics	3 <input type="checkbox"/>
ESM 4524 Introduction to Wave Motion	3 <input type="checkbox"/>

II. Prerequisites and/or Corequisites

For the courses listed above, prerequisites and/or corequisites may apply: see your advisor.

III. Minimum GPA

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

IV. Accepted Substitutions

PHYS 3355: AOE 4134 (Astromechanics), or ESM 3124 (Dynamics II Analytical and 3-D Motion).
 PHYS 3405: ECE 3105 (Electromagnetic Fields).