

College of SCIENCE  
Department of PHYSICS  
Minor in PHYSICS

**For student date of entry under UG Catalog 2021-2022**

All courses below have prerequisites or corequisites. These are listed below.

The Minor in Physics requires the completion of 21 credit hours.

**I. Required courses (12 credit hours)**

PHYS 2305 Foundations of Physics	4 <input type="checkbox"/>
PHYS 2306 Foundations of Physics	4 <input type="checkbox"/>
PHYS 3324 Modern Physics	4 <input type="checkbox"/>

**Select 9 credit hours from the list below:**

PHYS 2504 Mathematical Methods in Physics	3 <input type="checkbox"/>
PHYS 3355 Intermediate Mechanics	3 <input type="checkbox"/>
PHYS 3356 Intermediate Mechanics	3 <input type="checkbox"/>
PHYS 3405 Intermediate Electricity and Magnetism	3 <input type="checkbox"/>
PHYS 3406 Intermediate Electricity and Magnetism	3 <input type="checkbox"/>
PHYS 3655 Introduction to Astrophysics	3 <input type="checkbox"/>
PHYS 3656 Introduction to Astrophysics	3 <input type="checkbox"/>
PHYS 3704 Thermal Physics	3 <input type="checkbox"/>
PHYS 4254 Quantum Information Technologies	3 <input type="checkbox"/>
PHYS 4504 Introduction to Nuclear and Particle Physics	3 <input type="checkbox"/>
PHYS 4554 Introduction to Solid State Physics	3 <input type="checkbox"/>
PHYS 4564 Polymer 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"/>

Total 21 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 3356: ESM 3134 (Dynamics III Vibration and Control), or ESM 4114 (Nonlinear Dynamics and Chaos).
- PHYS 3405: ECE 3105 (Electromagnetic Fields).
- PHYS 3406: ECE 3106 (Electromagnetic Fields).

**IV. Prerequisites and/or Corequisites**

For 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 2504: Pre: 2305; Co: MATH 2214, MATH 2224, 2306

PHYS 3324: Pre: 2306; Co: MATH 2214, 2504

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 3704: Pre: 2306, 3324; Co: MATH 2214, 2504

PHYS 2305-2306: Pre: (MATH 1205 or MATH 1205H or MATH 1225) or (MATH 1206 or MATH 1206H or MATH 1226) for 2305; (MATH 1206 or MATH 1206H or MATH 1226), PHYS 2305 for 2306; Co: 2325 or (MATH 1206 or MATH 1206H or MATH 1226) for 2305

PHYS 3356: Pre: 3355 for 3356

PHYS 3406: Pre: 3405 for 3406

PHYS 3655: Pre: 2306

PHYS 3656: Pre: 2306

PHYS 4254: Pre: 2306, (MATH 2114 or MATH 2114H)

PHYS 4504: Co: 4456

PHYS 4554: Co: 4456

PHYS 4564: Pre: 2306

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