



Duluth Campus

Astronomy Minor

D Earth & Environmental Sci, UMD-Physics & Astronomy

Swenson College of Science and Engineering

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2013
- Required credits in this minor: 36
- None

The astronomy minor enhances students' understanding of the formation, structure, and evolution of the universe while providing a sound foundation for professional programs in the sciences. The minor program covers a wide range of topics in general astronomy, comparative planetology, stellar dynamics, astrophysics, cosmology, and techniques of astronomical observation and analysis.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Astronomy Required Courses (26 cr)

- [AST 1040](#) - Introductory Astronomy [LE CAT, NAT SCI] (3.0 cr)
- [AST 4110](#) - Observational Astronomy (3.0 cr)
- [PHYS 2013](#) - General Physics I [LE CAT, NAT SCI] (4.0 cr)
- [PHYS 2014](#) - General Physics Lab I [NAT SCI] (1.0 cr)
- [PHYS 2015](#) - General Physics II (4.0 cr)
- [PHYS 2021](#) - Relativity and Quantum Physics (4.0 cr)
- [PHYS 3561](#) - Astrophysics I Stellar Astrophysics (3.0 cr)
- [PHYS 2016](#) - General Physics Lab II (1.0 cr)
- [EES 2120](#) - The Earth's Dynamic Interior (3.0 cr)
or [AST 2040](#) *(Inactive)* (3.0 cr)

Math Requirement (10 cr)

- [MATH 1296](#) - Calculus I [LE CAT, LOGIC & QR] (5.0 cr)
- [MATH 1297](#) - Calculus II [LOGIC & QR] (5.0 cr)