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 2017
- 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)

Astronomy

AST 1040 - Introductory Astronomy [LE CAT, NAT SCI] (3.0 cr)
AST 4110 - Observational Astronomy (3.0 cr)

Astronomy/Geology

AST 2040 *{Inactive}*(3.0 cr)
or EES 2120 - The Earth's Dynamic Interior (3.0 cr)

Physics I

PHYS 2013 - General Physics I [LE CAT, NAT SCI] (4.0 cr)
or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

Physics II

PHYS 2015 - General Physics II (4.0 cr)
PHYS 2016 - General Physics Lab II (1.0 cr)

Physics

PHYS 2021 - Relativity and Quantum Physics (4.0 cr)
PHYS 3561 - Astrophysics I Stellar Astrophysics (3.0 cr)

Math Requirement (10 cr)

Calculus I

MATH 1296 - Calculus I [LE CAT, LOGIC & QR] (5.0 cr)
or MATH 1596 *{Inactive}*[LE CAT2, LOGIC & QR] (5.0 cr)

Calculus II

MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
or MATH 1597 *{Inactive}*[LOGIC & QR] (5.0 cr)

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