

# ASTRONOMY (ASTRON)

## ASTRON 103 Survey of Astronomy

3 cr. Undergraduate.

History of astronomy; planets; stellar evolution, nucleosynthesis; death of stars: white dwarfs, neutron stars, black holes; galaxies and quasars; expansion of the universe, dark matter; the big bang.

**Prerequisites:** math placement level 10.

**General Education Requirements:** NS

**Last Taught:** Spring 2024, Fall 2023, Spring 2023, Fall 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## ASTRON 104 Astronomy Laboratory

1 cr. Undergraduate.

Observations of planets, stars, stellar clusters, and galaxies; related experiments. Correlated with Astron 103.

**Prerequisites:** Astron 103(C) or Astron 211(C).

**General Education Requirements:** NS+

**Last Taught:** Spring 2024, Fall 2023, Spring 2023, Fall 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## ASTRON 175 Cosmic Origins

3 cr. Undergraduate.

The Big Bang and early universe, stars and star formation, formation of the solar system; geologic and climate history of Earth and the origin and evolution of life; exoplanets and searches for extraterrestrial life.

**Prerequisites:** math placement level 10.

**General Education Requirements:** NS

**Last Taught:** Fall 2023, Fall 1995, Fall 1993, Fall 1992.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## ASTRON 185 Astronomy for Pre-Education Majors

3 cr. Undergraduate.

Space: how we know and what we know; the solar system, stars, galaxies, and the universe. 2 hrs lec, lab.

**Prerequisites:** none.

**General Education Requirements:** NS+

**Last Taught:** Spring 2024, Spring 2023, Spring 2022, Spring 2021.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## ASTRON 194 First-Year Seminar:

3 cr. Undergraduate.

Specific topics are announced in the Schedule of Classes each time the class is offered.

**Prerequisites:** none.

**Course Rules:** Open only to freshmen. Students may earn cr in just one L&S First-Year Sem (course numbers 192, 193, 194).

**General Education Requirements:** NS

**Last Taught:** Spring 2006, Fall 2001, Spring 2001, Fall 2000.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## ASTRON 199 Independent Study

1-3 cr. Undergraduate.

For further information, consult dept chair.

**Prerequisites:** 2.0 GPA; consent of instructor, department chair, and Assistant Dean for Student Academic Services.

**Course Rules:** May be retaken to 6 cr max.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## ASTRON 211 Principles of Astronomy

3 cr. Undergraduate.

Light and matter; planets; stellar evolution, nucleosynthesis; death of stars; white dwarfs, neutron stars, black holes; galaxies, quasars; expansion of universe, dark matter; big bang.

**Prerequisites:** Physics 120(P) or 209(P) or cons instr.

**General Education Requirements:** NS

**Last Taught:** Fall 2023, Fall 2021, Fall 2019, Fall 2017.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## ASTRON 289 Internship in Astronomy, Lower Division

1-6 cr. Undergraduate.

Application of basic principles of astronomy in a research, business, organizational, educational, political, or other appropriate setting.

**Prerequisites:** intro course in astron; 2.25 gpa; cons supervising faculty member.

**Course Rules:** One cr earned for academic work based on 40 hours in internship. May be retaken to 6 cr max.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## ASTRON 299 Ad Hoc:

1-6 cr. Undergraduate.

Course created expressly for offering in a specified enrollment period. Requires only dept & assoc dean approval. In exceptional circumstances, can be offered in one add'l sem. May be retaken w/chg in topic.

**Prerequisites:** none; add'l prereqs may be assigned to specific topic.

**Last Taught:** Fall 2007.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## ASTRON 400 Astrophysics I

3 cr. Undergraduate.

Introductory astrophysics for students with junior-/senior-level background in mathematics and physics. Light and matter; stars and the sun; extrasolar planets; compact objects.

**Prerequisites:** Astron 103(P) or 211(P) or cons instr; Physics 309(P); Physics 317(R) recom.

**Last Taught:** Fall 2022, Fall 2020, Fall 2018, Fall 2016.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## ASTRON 401 Astrophysics II

3 cr. Undergraduate.

Continuation of Astron 400; for students with junior-/senior-level background in mathematics and physics. The Milky Way Galaxy; galactic evolution; structure of the Universe; cosmology.

**Prerequisites:** Astron 400(300)(P).

**Last Taught:** Spring 2023, Spring 2021, Spring 2019, Spring 2017.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## ASTRON 489 Internship in Astronomy, Upper Division

1-6 cr. Undergraduate.

Application of advanced principles of astronomy in a research, business, organizational, educational, political, or other appropriate setting.

**Prerequisites:** jr st; 300-level or above course in astron; 2.25 gpa; cons supervising faculty member.

**Course Rules:** One cr earned for academic work based on 40 hours in internship. May be retaken to 6 cr max.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**ASTRON 499 Ad Hoc:**

1-6 cr. Undergraduate.

Course created expressly for offering in a specified enrollment period.

Requires only dept & assoc dean approval. In exceptional circumstances, can be offered in one add'l sem.

**Prerequisites:** jr st; add'l prereqs may be assigned to specific topic.

**Course Rules:** May be retaken w/chg in topic.

**Last Taught:** Spring 2006.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>