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 2018, Fall 2017, Spring 2017, Fall 2016.
Current Offerings: http://uwm.edu/schedule

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 2018, Fall 2017, Spring 2017, Fall 2016.
Current Offerings: http://uwm.edu/schedule

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+
Current Offerings: http://uwm.edu/schedule

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
Current Offerings: http://uwm.edu/schedule

ASTRON 199 Independent Study
1-3 cr. Undergraduate.
For further information, consult dept chair.
Prerequisites: 2.5 gpa; writ cons instr, dept chair & asst dean for SAS.
Course Rules: May be retaken to 6 cr max.
Current Offerings: http://uwm.edu/schedule

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 2017, Fall 2015, Fall 2013.
Current Offerings: http://uwm.edu/schedule

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: http://uwm.edu/schedule

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: http://uwm.edu/schedule

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 2016, Fall 2014, Fall 2012, Fall 2010.
Current Offerings: http://uwm.edu/schedule

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).
Current Offerings: http://uwm.edu/schedule

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: http://uwm.edu/schedule

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: http://uwm.edu/schedule