

Faculty & Scientists

Chairperson: Eileen Friel

Professors: Haldan N. Cohn, Eileen Friel, Phyllis M. Lugger, Stuart L. Mufson, Catherine A. Pilachowski, John J. Salzer, Liese van Zee

Associate Professors: Constantine P. Deliyannis, Katherine Rhode

Assistant Professors: Enrico Vesperini

Visiting Professors: Alex T. Deibel, Samir Salim

Research Scientists: Thomas Steiman-Cameron, Jonathan Thornburg

Undergraduate Advising

Questions regarding the undergraduate programs or the department should be sent to the advisor or DUS, listed below:

Academic Advisor: Kathy Davis, Swain Hall West 244, kamdavis@indiana.edu

Director of Undergraduate Studies:
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Undergraduate Students Acquiring Data at the WIYN 0.9-meter Telescope

Astronomy Department

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Astronomy



Undergraduate Studies

*Department
of Astronomy
at Indiana
University
Bloomington*

*Above is Kirkwood
Observatory located on the
Bloomington Campus*



Swain Hall West

Astronomy at Indiana University

The Astronomy Department at Indiana University maintains a full program of activities in research, teaching, and outreach. The department offers undergraduate major programs leading to either a B.A. degree or a B.S. degree in Astronomy & Astrophysics, and a graduate program leading to the M.A. and Ph.D. degrees in Astronomy or Astrophysics. In addition, the department has range of introductory astronomy courses designed for students majoring outside of the sciences. There is also an Astronomy undergraduate minor program.

WIYN Observatory

Indiana University is a founding member of the WIYN Consortium which designed, constructed, and is now using a modern 3.5-meter telescope at Kitt Peak, about 50 miles southwest of Tucson AZ. IU has about 25% of the observing time on the WIYN 3.5m, which we use partly by traveling to AZ and partly by remote observing from Bloomington. WIYN also operates a 0.9m telescope at Kitt Peak, that often complements the 3.5m science. IU's share of the 0.9m is about 35%.

Degrees in Astronomy and Astrophysics

The B.A. major is designed for students who are interested in astronomy as the subject of a liberal arts education, and allows great flexibility in the selection of courses because the focus is on breadth of knowledge rather than on depth or specialization. The B.S. major focuses more on depth of knowledge, and as such can prepare students for graduate study and a subsequent career in astronomy and astrophysics, and also for careers in related technical fields.

B.S. Degree requirements: Ideally, majors begin the sequence of Physics and Math courses during the freshman year and may begin the 200-level Astronomy course sequence during either the freshman or sophomore year.

Astronomy Courses: A221, A222 (General Astronomy I & II), A305 (Observational Techniques), and two of A450 (Galactic Astrophysics), A451 (Stellar Astrophysics), A452 (Extragalactic Astrophysics), or A453 (Topical Astrophysics).

Physics Courses: P221, P222 (Physics I & II), P301 (Physics III), P331-P332 (Electricity and Magnetism I & II) and two of P441, P442 (Analytic Mechanics I & II) P453 or P454 (Introduction to Quantum Mechanics, Modern Physics).

Mathematics Courses: M211, M212, M311 (Calculus I, II, III), M343 (Introduction to Differential Equations I).

Students planning to study astronomy or astrophysics in graduate school are encouraged to take additional courses.



WIYN 3.5m Observatory

B.A. Degree requirements:

Astronomy Courses: A221, A222, A305, and two additional courses at the 300 – 400 level, excluding X390, X399, or S499.

Physics Courses: P201 or 221, P202 or 222, and P301 or P371.

Mathematics Courses: M119 or M211, and M120 or M212.

Advanced Electives: At least 5 additional credits at the 300– 400 level in astronomy, math, physics, computing/data mining/visualization/programming AI, science journalism or writing, statistics; please consult Bulletin.

For additional details beyond the above synopses, and for details on distribution requirements, please consult <http://bulletins.iu.edu/iub/college/>.

Minor in Astronomy and Astrophysics

A minor in astronomy and astrophysics is available for students who have a serious interest in the subject but do not plan to major in it. A student must take A221, A222, physics P301, and two of A305, A320, A450, A451, A452, or A453. Altogether, these provide at least 17 credit hours. Students must take all necessary prerequisites, including some math and physics courses.

Departmental Honors Program

Strong B.S. degree students wishing to pursue the honors program should contact the undergraduate advisor in the Department of Astronomy during the second semester of their sophomore year or first semester of their junior year. To be admitted to the program, students must have an overall GPA ≥ 3.3 and a GPA of ≥ 3.3 in their astronomy, mathematics, and physics courses.