Introductory Courses in Astronomy

(See also http://www.astro.yale.edu and click on “undergraduate program”)

The Yale Department of Astronomy currently offers ten different courses that do not require college level pre-requisites. Courses numbered 100-199 are generally intended for non-science majors, and there are often restrictions on enrollment by science majors. Student evaluations consistently demonstrate that this statement is not synonymous with the statement “this course is an easy A”. Students should expect to do serious work in any of our courses.

Courses numbered 200 and above are designed as introductory courses for science majors, but they are often taken by non-science majors who have strong high-school backgrounds in mathematics and science. The 200-level courses serve as starting points for the Astronomy or Astronomy and Physics majors, although the first priority for potential majors should be completing one of the introductory physics sequences.

- Astro 110, 120: These are broad survey courses intended for non-science majors. They satisfy both the SC and QR distribution requirements. These two courses are independent of each other — both can be taken, in either order. Introductory high-school algebra and geometry is used throughout these courses, but a strong safety net is available for students who experience difficulty.

- Astro 130, 135: These courses are also intended for non-science majors, but they cover subjects outside those of standard introductory astronomy courses. They satisfy the SC requirement, but not QR, although elementary mathematics is used. This does not mean that they are easier courses than 110, 120, just that the subject matter lends itself less to systematic training in quantitative methods.

- Astro 155: This course is a half-credit hands-on course in astronomical observing, using the facilities of the Leitner Family Observatory on Science Hill. While designed for non-science majors, science majors are also welcome. Astronomy majors can use the course to substitute for half of the introductory physics lab sequence.

- Astro 160, 170: These courses focus on key results of modern research in astrophysics. They are intended for non-science majors, and satisfy the SC and QR requirements. While the level of math and physics used is similar to Astro 110 and 120, these courses have a somewhat steeper learning curve and a somewhat less extensive safety net. Students who have particularly weak backgrounds in science and math are encouraged to take 110 or 120 first.

- Astro 210, 220: These are survey courses covering broad areas of modern astronomy and astrophysics. They have significantly smaller enrollment than the 100-level courses, and together provide a comprehensive introduction to contemporary astronomy. They can be taken in either order.

- Astro 255: This course covers techniques used to carry out astronomical research, and is strongly recommended for potential majors. It provides an excellent background for summer research internships. Some previous knowledge of astronomy is recommended.