The Astronomy minor offered by the Department of Physics requires completion of the physics courses PHYS 50, 51, and 52 (or their equivalents) and the astronomy courses ASTR 117A, ASTR 117B and ASTR 155 taken at San Jose State University with a grade of “C” (2.0 GPA) or better.

**Description of Required Courses (and upper division prerequisites):**

- PHYS 50, 51 and 52 (or equivalents): Calculus-based general physics
- ASTR 117A (3 units): Astrophysics I
  An overview of the Solar System (and extra-solar planetary systems) including qualitative and quantitative discussions of such topics as orbital motion, planetary interiors, surface temperatures, atmospheric retention, radioactive age dating, etc.
- ASTR 117B (3 units): Astrophysics II
  An overview of stellar and galactic astronomy including qualitative and quantitative discussions of such topics as general stellar properties, the theory of stellar structure and evolution, characteristics of the interstellar medium of the Milky Way and other galaxies and a survey of modern cosmology.
- ASTR 155 (3 units): Topics in Astronomy (Astr 117A, Astr 117B)
  A detailed examination of some aspect of modern astronomy. Specific topics will vary by semester. Samples topics include modern astronomical observing techniques, astrobiology, detection of extra-solar planets and computational astrophysics.

**Science and Engineering majors:** Most Science & Engineering majors can earn an Astronomy minor with only 9 units (3 courses) beyond the PHYS 50, 51, and 52 courses required for their major.

For more information: Contact the Physics and Astronomy Department Office at 924-5210 or the Astronomy faculty:

Dr. Monika Kress (924-5255) in SCI 264
Dr. Aaron Romanowsky (924-5225) in SCI 235