

UCLA

Student Learning Outcomes for the B.S. in Astrophysics

Astrophysics graduates should:

- demonstrate mastery of the fundamental principles and applications of classical mechanics, electricity and magnetism, quantum mechanics, statistical mechanics, and thermodynamics along with the associated necessary mathematical skills in differential equations, analysis, and linear algebra.
- demonstrate proficiency in basic lab skills, including understanding and using modern instrumentation and computers.
- have developed their critical scientific thinking.
- be able to retrieve and organize scientific information.
- be able to apply scientific methodology to qualitatively and quantitatively analyze a wide variety of physical phenomena.
- be able to present clear written and oral accounts of scientific results, old and new.
- have a good understanding of astronomy and astrophysics, including planets, stars, galaxies and cosmology and the relevant underlying physical processes that govern these systems.