

LEARNING OUTCOMES: COMPUTER SCIENCE + ASTRONOMY, BSLAS

Learning outcomes for the degree of Bachelor of Science in Liberal Arts & Sciences Major in Computer Science & Astronomy

Undergraduate Computer Science & Astronomy majors will graduate with a demonstrated ability to:

LO1. Understand the hierarchical architecture of the cosmos, increasing in scale from the Solar System to the Galaxy to the Universe, and decreasing in scale to atoms and their nuclei. Understand the interplay among these scales.

LO2. Define and use fundamental principles and techniques of astronomy and astrophysics.

- Identify which principles should be applied to a specified situation
- Show familiarity with astronomical observables and their physical origin.
- Understand and apply basic physics and computational techniques to solve problems in astrophysics, and interpret the results.

LO3. Analyze astronomical data, and quantitative data generally.

- Demonstrate the ability to link observation and theory.
- Demonstrate the ability to draw qualitative conclusions from quantitative information, and vice versa.
- Demonstrate the ability to plan observational programs, use astronomical telescopes and instrumentation, and to analyze and present astronomical data.

LO4. Plan and perform guided research, or attain an advanced-level understanding of a topic of contemporary interest in astronomy and astrophysics.

LO5. Demonstrate the ability to communicate effectively both verbally and in writing.