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.