

# PLANETARY SCIENCE AND ASTRONOMY, B.S.

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**Begin Campus:** Any Penn State Campus

**End Campus:** University Park

## Program Learning Objectives

Accurately apply mathematical tools to real physical problems.

Describe how the techniques and principles from biology, chemistry, physics, geoscience, and meteorology are used to study planets and planetary systems.

Explain the physical meaning of mathematical expressions and operations used in quantitative problem solving.

Clearly communicate both technical and descriptive content while following the conventions of scientific writing.

Distinguish between scientific theories and other kinds of (non-scientific) explanations.

Collect and analyze real astronomical data.

Give clear oral presentations of technical material.

Set up and use a small telescope for night sky observing in an education or outreach setting with non-experts.