

# AST 109L - PLANETARY ASTRONOMY LAB

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## Course Description

See AST 109 for course description.

## Credit Hours

0

## Contact Hours

0

## Lab Hours

2

## Corequisites

AST 109

## Course Learning Outcomes

### Knowledge:

- Describe the scientific thinking process.
- Describe the concept of seasonal changes on Earth.
- Explain how to measure objects comparing size and distance.

### Application:

- Determine sizes and distances using indirect methods.
- Utilize different methods of time and timekeeping.
- Use co-ordinate systems for plotting and locating objects.
- Explain motion of objects.
- Determine optics and resolution.
- Relate the process of science to its importance in the daily world.
- Describe the history of discovery including changes from inductive to deductive reasoning.
- Recognize that science is a "way of thinking" process.
- Describe the cause and effect of positions and their locations as they appear in space.

### Integration:

- Recognize the role of science by integrating historical, social and literature into their perspective.
- Analyze physical data from observations to write scientific papers.
- Utilize a variety of sources to make astronomical measurements.
- Make predictions based upon all of the information gathered.

### Human Dimension:

- Work together in groups as well as individually during lab assignments.
- Recognize the importance of collaboration and learn to utilize data from others.

### Caring - Civic Learning:

- Appreciate the concept that they are part of a larger universe.

### Learning How to Learn:

- Apply researching skills to areas of interest.