

## Master Syllabus

### AST 1117 - Lab for the Solar System

**Division:** Science, Mathematics and Engineering

**Department:** Astronomy

**Credit Hour Total:** 1.0

**Lab Hrs:** 3.0

**Date Revised:** June 2014

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### Course Description:

Laboratory and field activities to supplement The Solar System. Three lab hours per week.

### General Education Outcomes:

- Critical Thinking/Problem Solving Competency

### Course Outcomes:

#### Minor Bodies of Solar System

Analyze the surface features and physical properties of minor bodies in the solar system.

**Assessment Method:** Locally developed exams  
**Performance Criteria:** 60% of exam items correct.

**Assessment Method:** Performance appraisals  
**Performance Criteria:** 60% of items correct.

#### Physical Property & Orbital Motion of Planets

Describe the physical property and orbital motion of planets using qualitative observations and quantitative measurements of the heavenly bodies.

**Assessment Method:** Locally developed exams  
**Performance Criteria:** 60% of exam items correct.

**Assessment Method:** Performance appraisals  
**Performance Criteria:** 60% of items correct.

#### Celestial & Local Coordinates

Determine and locate objects using celestial and local coordinates.

**Assessment Method:** Locally developed exams  
**Performance Criteria:** 60% of exam items correct.

**Assessment Method:** Performance appraisals  
**Performance Criteria:** 60% of items correct.

#### Measuring Size of Earth

Determine the circumference of Earth using latitude and longitude measurements for various locations.

**Assessment Method:** Locally developed exams  
**Performance Criteria:** 60% of exam items correct.

**Assessment Method:** Performance appraisals  
**Performance Criteria:** 60% of items correct.

#### Universal Law of Gravity

Determine the force of gravity between objects in the solar system. Explain tidal force with force of gravity.

**Assessment Method:** Locally developed exams  
**Performance Criteria:** 60% of exam items correct.

**Assessment Method:** Performance appraisals  
**Performance Criteria:** 60% of items correct.

#### Spectroscopy

Identify unknown elements using spectroscopy.

**Assessment Method:** Locally developed exams  
**Performance Criteria:** 60% of exam items correct.

**Assessment Method:** Performance appraisals  
**Performance Criteria:** 60% of items correct.

#### Motion of Observable Objects in Our Sky

Describe the motion of observable objects in our sky.

**Assessment Method:** Locally developed exams  
**Performance Criteria:** 60% of exam items correct.

**Assessment Method:** Performance appraisals  
**Performance Criteria:** 60% of items correct.

**Outline:**

Motion of observable objects in our sky  
Celestial and Local Coordinates  
Physical Property and Orbital Motion of Planets  
Spectroscopy  
The Size of Earth  
Minor Bodies of Solar System  
Universal Law of Gravity