

## **ASTR 301 – The Solar System (3) Course Outline**

Quantitative and descriptive properties of the Solar System including the physics of the planets, their satellites, comets and interplanetary media. Possible origins of the Solar System.  
3 lectures. **Prerequisite:** PHYS 132 or PHYS 122 and MATH 141 or MATH 161.

### **Learning Objectives and Criteria:**

The expected outcomes are:

- (1) A better understanding of the applications of physical laws and mathematical principals to planetary processes
- (2) An understanding and knowledge of the constitution, formation, and evolution of the solar system

### **Text and References:**

DePater/Lissau, *Planetary Sciences*, Cambridge University Press  
Lodders/Fegley, *The Planetary Scientist's Companion*, Oxford University Press

### **Content and Method:**

**Method:** ASTR 301 is offered in a traditional lecture format. It meets a total of 3 hours a week.

**Content:** ASTR 301 will adhere to the following topics:

- The planetary system including the earth, the sun, the moon
- Other planets in our solar system and solar system objects
- Extrasolar planets

### **Lectures**

The approach is on both a descriptive and quantitative basis, emphasizing the application of mathematics and of physical laws.

A student observatory with at least one telescope is available.

The student is expected to study the text and necessary references.

### **Methods of Assessment:**

Student accomplishment is measured by examinations, projects, and assigned problems.