

# AST 100 - OBSERVATIONAL ASTRONOMY

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## Course Description

This course is an introduction to astronomy. The goal of this course is to acquaint the student with the constellations, solar system objects and their motions, the celestial sphere concept and co-ordinate system. Stars, star clusters, nebulae and galaxies are also studied. Students will use naked-eye observations as well as telescopes, spectrograph, photometer and CCD camera to observe and report findings. Each session includes training in the operation of astronomical equipment. Group 2 course.

## Credit Hours

2

## Contact Hours

2

## Lecture Hours

2

## Recommended Prerequisites or Skills Competencies

ENG 111, MTH 100

## Course Learning Outcomes

### Knowledge:

- Describe the rotation and revolution of astronomical objects.
- Identify the distances and sizes relative to astronomical objects.
- Identify the location of objects using charts and atlases.
- Co-ordinate systems and time.
- Identify time and time zones.

### Application:

- Using different methods of time and timekeeping. Co-ordinate systems for plotting and locating objects over time; days, weeks, years. Magnification and resolution using optics. Size and distance scales.
- Explain the difference between visual observation and the actual appearance of astronomical objects
- Use different methods of time and timekeeping.
- Use co-ordinate systems for plotting and locating objects over time; days, weeks, years.
- Explain magnification and resolution using optics.
- Utilize size and distance scales.

### Integration:

- Explain seasons and seasonal changes of Earth.
- Explain the cause and effects of multiple celestial objects, as it relates to alignment or visual appearance.
- Conduct measurements of large scales; both size and distance.
- Interpret maps, atlases and co-ordinate systems.

### Human Dimension:

- Discuss the historical progress of the scientific processes.
- Describe the impact on cultures around the world relating to scientific discoveries.

### Caring - Civic Learning:

- Appreciate the contribution of astronomy to society.

### Learning How to Learn:

- Develop a curiosity about the astronomical context of the universe.