

# AST-Astronomy Courses

---

## Courses

### **AST 101. Astronomy of the Universe. 3 Hours.**

Survey of the universe of matter and energy. Interpretation of observations to develop a self-consistent view of the universe, basic physical laws and structures, cosmic history and evolution. Quantitative Literacy is a significant component of this course. This course meets Blazer Core Scientific Inquiry with a Flag in High Impact Practices/ Collaborative Assignments and Projects.

### **AST 102. Stars and Galaxies. 3 Hours.**

Conceptual and collaborative approach to understanding the scientific processes by which astronomers make inferences about stars' and galaxies' formation and evolution from ground- and space-based observations. This course will include multicultural perspectives of the astronomical enterprise and sustainability of the nighttime environment. This course meets Blazer Core Scientific Inquiry with Flags in Sustainability and High Impact Practices/Collaborative Assignments and Projects.

### **AST 103. Astronomy of the Solar System. 3 Hours.**

Descriptive and interpretive approach to solar and interplanetary phenomena, comets, and cometary/meteor relationships, asteroids and planetesimals, planetary surfaces, atmospheres, and interior structures. Physical law governing the solar system and quest for understanding its history and evolution, including formation. Lecture. This course meets Blazer Core Scientific Inquiry with a Flag in High Impact Practices/ Collaborative Assignments and Projects.

### **AST 105. Extraterrestrial Life. 3 Hours.**

Interdisciplinary treatment (astronomy, chemistry, biology, planetary science, communications, and information sciences) of the universe as habitat, cosmic chemistry of molecules and evolution, environmental requirements, origin and occurrence of life, search for evidence, intelligence, communication, and contact. Lecture and laboratory. This course meets Blazer Core Scientific Inquiry with a Flag in High Impact Practices/Collaborative Assignments and Projects.

### **AST 111. Astronomy of the Universe Laboratory. 1 Hour.**

Laboratory experience surveying the astronomical enterprise and the scientific study of the universe, including methods by which observations and measurements are interpreted to determine physical laws, cosmic history, and evolution. Multicultural perspectives toward the interpretation and protection of the night sky and astronomy. Specific experiences illuminate topics presented in AST 101. Must take with AST 101 to receive credit. This course meets Blazer Core Scientific Inquiry with Flags in High Impact Practices in Multicultural Perspectives, Sustainability, and Collaborative Assignments & Projects.

### **AST 112. Stars and Galaxies Laboratory. 1 Hour.**

Laboratory experience in conceptual and collaborative approach to understanding the scientific processes by which astronomers make inferences about stars' and galaxies' formation and evolution from ground- and space-based observations. This course will include multicultural perspectives of the astronomical enterprise and sustainability of the nighttime environment. Specific experiences illuminate topics presented in AST 102. This course meets Blazer Core Scientific Inquiry with Flags in High Impact Practices in Multicultural Perspectives, Sustainability, and Collaborative Assignments & Projects.

### **AST 113. Astronomy of the Solar Systems Laboratory. 1 Hour.**

Laboratory experience demonstrates how astronomy is practiced through observation experiences, laboratory experiments, and exercises involving analysis of data. Specific experiments illuminate topics presented in AST 103. Must take AST 103 to receive credit. This course meets Blazer Core Curriculum Scientific Inquiry with a flag in Collaborative Assignments and Projects.

### **AST 115. Extraterrestrial Life Laboratory. 1 Hour.**

Laboratory experience illuminates topics presented in AST 105. Must take AST 105 to receive credit. This course meets Blazer Core Curriculum Scientific Inquiry with a flag in Collaborative Assignments and Projects.

### **AST 121. Protecting Starry Skies in Birmingham and Beyond. 3 Hours.**

Examines perspectives and strategies for the protection of the natural nighttime environment. Beginning with multicultural perspectives of the night sky and darkness, students will explore scientific, social, and environmental issues related to the impact of artificial light at night on access to the night sky, public safety, and health. Skills to address these impacts will accrue through participation in a scientific service-learning project. Designed for students with little or no scientific experience. Meets Blazer Core Curriculum City as a Classroom with flags in Sustainability and Service/Community-Based Learning.