

# ASTRONOMY (AST)

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## **AST101 / Survey of Astronomy**

### **4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Survey of astronomy for the nontechnical student. The history, content, and evolution of the solar system and the universe in general. Astronomical principles and instrumentation. The planets, moons, sun, comets, stars and star formation, galaxies, and cosmology. Prerequisites: None.

**Division:** Physical Sciences and Engineering

## **AST102 / Survey of Astronomy Laboratory**

### **1 Credit / 3.0 Periods for Laboratory**

Astronomical observations and exercises designed to familiarize students with the sky, telescopes, and methods used in astronomy. Prerequisites: A grade of C or better in AST101 and permission of Instructor or Department or Division. Course Notes: AST102 is a legacy course intended for those students who have previously completed the corresponding lecture course. Current MCCC students should enroll in AST101 only.

**Division:** Physical Sciences and Engineering

## **AST106 / Life in the Universe**

### **4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Introduction to the search for life in the universe for the non-science major. Earth's location in space and time, nature of life, light and the spectrum, origin and history of the universe, origin of life on Earth and the possibility of life on other planets. Prerequisites: A grade of C or better in MAT090 or MAT091 or MAT092 or completion of higher level mathematics course, or satisfactory placement.

**Crosslisted:** GLG106

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

## **AST111 / Introduction to Solar System Astronomy**

### **4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Introduction to astronomy for the non-science major. The scientific method, properties of light, astronomical instruments, our Solar System and solar systems around other stars. Includes hands-on astronomical observations and laboratory exercises. Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory district placement.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

## **AST112 / Introduction to Stars, Galaxies, and Cosmology**

### **4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Introduction to astronomy for the non-science major. Structure and evolution of stars; supernovae, black holes, and quasars; nebulae; star clusters; galaxies; cosmology, including the birth and death of the universe. Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory district placement. Course Notes: Note that AST111 is not a prerequisite for this course.

**Fulfills:** Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

**Division:** Physical Sciences and Engineering

## **AST113 / Introduction to Solar System Astronomy Laboratory**

### **1 Credit / 3.0 Periods for Laboratory**

Hands-on astronomical observations and exercises to supplement AST111. Prerequisites: A grade of C or better in AST111 and permission of Instructor or Department or Division. Course Notes: AST113 is a course intended for those students who have previously completed the corresponding lecture course. Current MCCC students should enroll in AST111 only.

**Division:** Physical Sciences and Engineering

## **AST114 / Introduction to Stars, Galaxies, and Cosmology Laboratory**

### **1 Credit / 3.0 Periods for Laboratory**

Hands-on astronomical observations and exercises to supplement AST112. Prerequisites: A grade of C or better in AST112 and permission of Instructor or Department or Division. Course Notes: AST114 is a course intended for those students who have previously completed the corresponding lecture course. Current MCCC students should enroll in AST112 only.

**Division:** Physical Sciences and Engineering

## **AST294AB / Special Topics in Astronomy**

### **1 Credit / 1.0 Periods for Lecture**

Conceptual, experimental, and computational aspects of a special topic in astronomy. Prerequisites: Permission of Department or Division. Course Notes: AST294AB may be repeated for credit.

**Division:** Physical Sciences and Engineering