

# Astronomy (ASTR)

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## Courses

### **ASTR 120 Fundamentals of Astronomy (3 Hours) †**

This course is a study of the universe from the earth, moon and planets to the stars and the most distant galaxies. Topics include black holes, quasars, and the origin of the universe and the possibility of life on other planets. Current astronomical discoveries are discussed in class as they occur. Access to astronomical websites is available to students in this course. 3 hrs. lecture/wk.

### **ASTR 122 Astronomy (4 Hours) †**

This course is a study of the universe from the Earth, moon and planets to the stars and the most distant galaxies. Topics include black holes, quasars, and the origin of the universe and the possibility of life on other planets. Current astronomical discoveries are discussed in class as they occur. Access to astronomical websites is available to students in this course. 3 hrs. lecture, 3 hrs. lab/wk., 5 nighttime telescope sessions are required.

### **ASTR 214 Introduction to Teaching Math and Science I\* (1 Hour)**

**Prerequisites :** MATH 171 with a grade of "C" or higher or an appropriate score on the math placement test or department approval.

This course allows math and science students to explore and develop an appreciation for teaching as a career. To support their learning, students will be introduced to the theory and practice that is necessary to design and deliver quality instruction. They will plan and implement lessons of an inquiry-based curriculum in an elementary classroom during the semester. MATH 214, ASTR 214, BIOL 214, CHEM 214, GEOS 214, PHYS 214 and PSCI 214 are the same course; enroll in only one.

### **ASTR 215 Introduction to Teaching Math and Science II\* (1 Hour)**

**Prerequisites :** ASTR 214 with a grade of "C" or higher or BIOL 214 with a grade of "C" or higher or CHEM 214 with a grade of "C" or higher or GEOS 214 with a grade of "C" or higher or MATH 214 with a grade of "C" or higher or PHYS 214 with a grade of "C" or higher or PSCI 214 with a grade of "C" or higher.

Students learn about the middle school environment and work on math and science inquiry-based lesson analysis, design and assessment. Student partners will plan and teach three inquiry-based lessons in a middle school. The course emphasizes writing 5E lesson plans with a focus on the importance of using appropriate questioning and assessment strategies throughout the lesson, as well as how to analyze and modify a lesson based on personal reflections and observer feedback. By the completion of the course, students should be able to reflect on their personal suitability/interest in teaching secondary math or science, and develop a feasible pathway to a career in teaching. MATH 215, ASTR 215, BIOL 215, CHEM 215, GEOS 215, PHYS 215 and PSCI 215 are the same course; enroll in only one.

### **ASTR 291 Independent Study\* (1-7 Hour)**

**Prerequisites :** 2.0 GPA minimum and department approval.

Independent study is a directed, structured learning experience offered as an extension of the regular curriculum. It is intended to allow individual students to broaden their comprehension of the principles of and competencies associated with the discipline or program. Its purpose is to supplement existing courses with individualized, in-depth learning experiences. Such learning experiences may be undertaken independent of the traditional classroom setting, but will be appropriately directed and supervised by regular instructional staff. Total contact hours vary based on the learning experience.