

CATALOG INFORMATION

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Dept & Nbr: AST 205 Title: ASTRONOMY OBSERVATION
Full Title: Astronomy Observation

Units	Course Hours	Per Week	Nbr of Weeks	Course Hours	Total
Max: 1.5	Lecture	1.0	17	Lecture	17.0
Min: 1.5	Lab	2.0		Lab	34.0
	Contact DHR	0.0		Contact DHR	0.0
	Contact Total	3.0		Contact Total	51.0
	Non-contact DHR	0.0		Non-contact DHR	0.0

Title 5 Category: 01 AA Degree Applic
Grading: GC Credit course for grade or CR/NC
Repeatability: 01 2 ENROLLMENTS
Also listed as:

CATALOG DESCRIPTION:

Principles of astronomical observation and measurement. Identification of constellations and celestial phenomenon, astronomical tracking and coordinate systems, use of telescopes, imaging and recording techniques.

PREREQUISITES:

Completion of or concurrent enrollment in AST 200 (or PSC 200); OR
completion of or concurrent enrollment in AST 203 (or PSC 203); OR
completion of or concurrent enrollment in AST 204 (or PSC 204).

RECOMMENDED PREPARATION:

No advisories.

LIMITS ON ENROLLMENT:

SCHEDULE OF CLASSES INFORMATION:

Prerequisites: Completion of or concurrent enrollment in AST 200 (or PSC 200); OR completion of or concurrent enrollment in AST 203 (or PSC 203); OR completion of or concurrent enrollment in AST 204 (or PSC 204).
Principles of astronomical observation and measurement. Identification of constellations and celestial phenomenon, astronomical tracking and coordinate systems, use of telescopes, imaging and recording techniques.
(Grade or CR/NC) (Repeat Code 1)
Transfer Credit: CSU; UC.

ARTICULATION and CERTIFICATE INFORMATION

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ASSOCIATE DEGREE:	Effective:	Inactive:
Area:		
CSU GE:	Effective: FALL 1998	Inactive:
Transfer area:	B3 LAB ACTIVITY	
IGETC:	Effective: FALL 1999	Inactive:

Transfer area: 5A PHYSICAL SCIENCES

CSU TRANSFER: TRANSFERABLE Effective: FALL 1998 Inactive:

UC TRANSFER: TRANSFERABLE Effective: FALL 1998 Inactive:

CAN:

CERTIFICATE APPLICABLE: N NOT CERTIFICATE/MAJOR APPLICABLE

APPROVAL AND DATES

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Version 01 Submitted by: GERALD DEBANE Date: 10/07/1997
Department approved: Catherine Indermill Date: 06/23/2005
Curriculum approved: 10/07/1997 Version approved: 10/07/1997
Prerequisites approved: 05/13/2005 Last reviewed: 10/07/1997
Term effective: FALL 1998 Last taught: FALL 2008 Inactive:

COURSE CONTENT

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OUTCOME AND OBJECTIVES:

1. Traverse the night sky using constellations as their guide.
2. Understand and use the coordinate system of Right Ascension and Declination.
3. Operate a Celestron or Meade eight-inch telescope and find objects in the sky.
4. Operate the camera equipment that they will mount on the telescope and take time-lapse photos of deep sky objects such as planets, comets, nebulae, pulsars, neutron stars, galaxies and other celestial objects.
5. Know and identify the names of about forty stars and other celestial objects.
6. Know the relationship between the lecture portion of the topic and the laboratory work performed in class.

TOPICS AND SCOPE:

1. Geocentric Planetary system
2. Heliocentric Planetary System
3. Constellation Identification
4. Star Map Reading
5. Right Ascension and Declination Coordinate System
6. Identification of Telescope Parts
7. Manual Building and Operating the Telescope
8. Identification of Camera parts and Manual Attachment of Camera Equipment to the Telescope
9. Pointing the Entire System to a Particular Object in the Sky with a Great Degree of Accuracy
10. Take Time-Lapse Photography with Camera/Telescope on a Turning Platform (the Earth)
11. Make a Photo-Album and Page Description of All Required Celestial Objects

ASSIGNMENTS:

READING ASSIGNMENTS:

Students will be reading current articles from the following journals:
Sky and Telescopes; Astronomy; Scientific America

WRITING ASSIGNMENTS:

Students will research scientific data on objects we are viewing and writing in their own words what is known at the time about each particular object they have observed. These writings will be part

of their notebooks along with the photographs that will be handed in at the end of the course for grading purposes.

OUTSIDE ASSIGNMENTS:

Students will observe with the naked eye those objects that are available at that time of the semester and note the movement of those objects whose movement are detectable. Students will be encouraged to seek information on other objects that come to their attention through the media and their readings.

ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING:

Students will know the objects of the night sky and determine what is the relationship between the various types of objects relating this to the time-space of long ago. they will develop a theory of what is going to happen to them in the distant future. We can know the cause of these objects, we can approximate what is the future for these objects, but we won't be able to know why.

METHOD OF INSTRUCTION:

Lecture presentations with slides to show the students what our efforts for the evening will be for the two hour laboratory session. The next two hours will be used by the students working in terms to put the necessary equipment together and begin the observational portion of the course. After they become accustomed to the equipment, they will begin the photographic work.

METHODS OF EVALUATION:

Two tests including the final examination. Each exam will be worth 100 points. The notebooks will be worth 100 points. All points will be summed, with grade distribution as follows: 90% or better (A); 80-89% (B); 70-79% (C); 60-69% (D); below 60% (F).

BASIS FOR GRADING:

The assignment of a grade is based on the level of achievement of the outcomes and objectives of the course outline and is reflected in quantifiable terms in the course syllabus.

REPRESENTATIVE TEXTBOOKS:

Peterson Field Guide Stars and Planets, Menzel, Pasachoff, Mifflin, 2000 edition paperback, Houghton Publisher