**ASTRON 12 Course Outline as of Fall 1981**

# CATALOG INFORMATION

Dept and Nbr: ASTRON 12 Title: ASTRON OBSERVTN LAB
Full Title: Astronomy Observational Lab
Last Reviewed: 4/22/2019

| Units | | Course Hours per Week | | Nbr of Weeks | Course Hours Total | |
|---|---|---|---|---|---|---|
| Maximum | 1.00 | Lecture Scheduled | 0 | 17.5 | Lecture Scheduled | 0 |
| Minimum | 1.00 | Lab Scheduled | 3.00 | 1 | Lab Scheduled | 52.50 |
| | | Contact DHR | 0 | | Contact DHR | 0 |
| | | Contact Total | 3.00 | | Contact Total | 52.50 |
| | | Non-contact DHR | 0 | | Non-contact DHR | 0 |

Total Out of Class Hours: 0.00 Total Student Learning Hours: 52.50

Title 5 Category: AA Degree Applicable
Grading: Grade or P/NP
Repeatability: 33 - 3 Enrollments Total
Also Listed As:
Formerly:

**Catalog Description:**
Observational laboratory involves use of small aperture telescopes and binoculars, star charts, constellation identification, celestial coordinate systems, solar and sidereal time system, short exposure and deep-sky astrophotography.

**Prerequisites/Corequisites:**
Completion of or concurrent enrollment in Astron 2 or 3 or 4 or 5.

**Recommended Preparation:**
Eligibility for ENGL 100 or ESL 100.

**Limits on Enrollment:**

**Schedule of Classes Information:**
Description: Observational lab involves use of small aperture telescopes & binoculars, star charts, constellations identification, celestial coordinate systems, solar & sidereal time system, short exposure & deep sky astrophotography. (Grade or P/NP)
Prerequisites/Corequisites: Completion of or concurrent enrollment in Astron 2 or 3 or 4 or 5.
Recommended: Eligibility for ENGL 100 or ESL 100.
Limits on Enrollment:

Transfer Credit: CSU;UC.
Repeatability: 3 Enrollments Total

## ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

| | | | | |
|---|---|---|---|---|
| **AS Degree:** | **Area** | | Effective: | Inactive: |
| **CSU GE:** | **Transfer Area** | | Effective: | Inactive: |
| | B3 | Laboratory Activity | Fall 2012 | |
| | B1 | Physical Science | Fall 1981 | Fall 2012 |
| | B3 | Laboratory Activity | | |
| **IGETC:** | **Transfer Area** | | Effective: | Inactive: |
| | 5C | Fulfills Lab Requirement | Fall 2012 | |
| | 5A | Physical Sciences | Fall 1981 | Fall 2012 |
| | 5C | Fulfills Lab Requirement | | |

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|---|---|---|---|---|
| **CSU Transfer:** | Transferable | Effective: | Fall 1981 | Inactive: |
| **UC Transfer:** | Transferable | Effective: | Fall 1981 | Inactive: |

**CID:**

**Certificate/Major Applicable:**
Not Certificate/Major Applicable

## COURSE CONTENT

**Outcomes and Objectives:**
Provides the student with the theoretical, experimental descriptive and methodological framework to successfully understand the use of astronomical telescopes.
Students participants in this course will have the opportunity to learn the use of astronomical telescopes, motions of the sky astrophotography and the nature of extended stellar objects. They will be able to comprehend and demonstrate such knowledge through lecture, discussion examination and practical exercises.

**Topics and Scope:**

1. Earth and Sky.
   A. Divinal motion.
   B. Annual motion.
   C. Seasons.
   D. Coordinate systems.
   E. Star charts.
2. Optics and Telescopes.
   A. Lenses and mirrors.
   B. Image formation.
   C. Speed and focal length.
   D. Refracting telescopes.
   E. Reflecting telescopes.
   F. Cameras and films.

3. Constellations.
4. Messier Objects.
   A. Galaxies.
   B. Nebulae.
   C. Clusters.
5. Mythology of constellations.

**Assignment:**

1. Evaluation of student performance will be accomplished through examination.
2. At least one of the following written assignments:
   A. Comprehensive research paper.
   B. Analytic essay.
   C. Report and book reviews.
   D. Extra credit reports or field assignments.
3. Students will be required to master text material independently outside of class.

**Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

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| Lab reports | Writing<br>10 - 10% |

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

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| Field work, Lab reports, Quizzes | Problem solving<br>0 - 20% |

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

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| Class performances, Field work | Skill Demonstrations<br>0 - 30% |

**Exams:** All forms of formal testing, other than skill performance exams.

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| Multiple choice, True/false, Completion | Exams<br>0 - 40% |

**Other:** Includes any assessment tools that do not logically fit into the above categories.

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|---|---|
| None | Other Category<br>0 - 0% |

**Representative Textbooks and Materials:**
Course text written by SRJC Earth/Space Science instructors.