

Course Competencies Template - Form 112

GENERAL INFORMATION			
Name: Joe Orta and Michael McGauley	Phone #: 7-2588, 7-2687		
Course Prefix/Number: AST 1002L	Course Title: Descriptive Astronomy Lab		
Number of Credits: 1			
Degree Type	<input type="checkbox"/> B.A. <input checked="" type="checkbox"/> B.S. <input checked="" type="checkbox"/> B.A.S <input checked="" type="checkbox"/> A.A. <input type="checkbox"/> A.S. <input type="checkbox"/> A.A.S. <input type="checkbox"/> C.C.C. <input type="checkbox"/> A.T.C. <input type="checkbox"/> V.C.C		
Date Submitted/Revised:	Effective Year/Term: 2008-1		
<input checked="" type="checkbox"/> New Course Competency <input type="checkbox"/> Revised Course Competency			
Course to be designated as a General Education course (part of the 36 hours of A.A. Gen. Ed. coursework): <input type="checkbox"/> Yes <input type="checkbox"/> No			
The above course links to the following Learning Outcomes: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Communication <input checked="" type="checkbox"/> Numbers / Data <input checked="" type="checkbox"/> Critical thinking <input type="checkbox"/> Information Literacy <input type="checkbox"/> Cultural / Global Perspective </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Social Responsibility <input type="checkbox"/> Ethical Issues <input checked="" type="checkbox"/> Computer / Technology Usage <input type="checkbox"/> Aesthetic / Creative Activities <input type="checkbox"/> Environmental Responsibility </td> </tr> </table>		<input checked="" type="checkbox"/> Communication <input checked="" type="checkbox"/> Numbers / Data <input checked="" type="checkbox"/> Critical thinking <input type="checkbox"/> Information Literacy <input type="checkbox"/> Cultural / Global Perspective	<input type="checkbox"/> Social Responsibility <input type="checkbox"/> Ethical Issues <input checked="" type="checkbox"/> Computer / Technology Usage <input type="checkbox"/> Aesthetic / Creative Activities <input type="checkbox"/> Environmental Responsibility
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Course Description (limit to 50 words or less, must correspond with course description on Form 102): This is a laboratory course available to students taking the introductory Astronomy course AST1002. Students will learn to obtain astronomically relevant scientific information by performing experiments, exercises or observations. They will learn to measure, collect, and analyze scientific data, to do calculations with the data, and to report their results.			
Prerequisite(s):	Corequisite(s): AST 1002		

Course Competencies: (for further instruction/guidelines go to: <http://www.mdc.edu/asa/curriculum.asp>)

Competency 1: The student will demonstrate knowledge and comprehension of the gathering of scientific data by:

- a. using various instruments to make relevant astronomical measurements.
- b. recording data in a precise and organized manner.

Competency 2: The student will demonstrate knowledge and comprehension of experimental data analysis by:

- a. Creating graphs using collected data.
- b. interpreting information from data graphs.
- c. extracting information from data graphs.
- d. using numbers in scientific notation.

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- e. performing relevant calculations using experimental data.
- f. identifying different sources of experimental error.
- g. evaluating the accuracy of results.
- h. relating experimental results to theory.

Competency 3. The student will demonstrate knowledge and comprehension of star charts by:

- a. describing celestial coordinates.
- b. locating and/or identifying astronomical objects using celestial coordinates.
- c. using star charts properly, given specific terrestrial latitudes, dates, and times.

Competency 4. The student will demonstrate knowledge and comprehension of the sky by:

- a. identifying the most prominent constellations and solar system objects visible in the sky throughout the term of study.
- b. locating constellations precisely enough to allow observations.

Competency 5. The student will demonstrate knowledge and comprehension of telescopes by:

- a. identifying the components, structure and functioning of a telescope.
- b. focusing and orienting a telescope.
- c. taking proper care of a telescope.

Competency 6. The student will demonstrate knowledge and comprehension of the rudiments of laboratory report writing by:

- a. distinguishing the different components of lab report.
- b. formatting graphs correctly.
- c. formatting data tables correctly.
- d. using the proper number of significant figures in data and results.
- e. discussing experimental results
- f. supporting all conclusions.
- g. writing lab reports demonstrating proper English usage and logical organization.

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