Information Competence in Astronomy and Space Sciences
(Tool for General Education Astronomy Courses)

Debi Prasad Choudhary (PI)
Lynn Lampart, MILIS, Oviatt Library, CSUN
Doris Helfer, Oviatt Library, CSUN

The objective of the proposal was to develop tools that help the students to explore the current and other related information in astronomy and space sciences systematically. Integrate these tools in tools in the astronomy curriculum and encourage the instructors to use them. In order to achieve this goal, we have carried out the following activities.

1. We have developed model syllabus for general education astronomy courses. This syllabus includes the lecture on the library literacy, which is achieved by at least one lecture by a library staff. Doris Helfer of Oviatt library has been giving such lectures in both Astronomy lecture and laboratory classes.

2. We have developed computer based assignments and activities that are used in the astronomy laboratory classes as a part of “Smart Lab”. These activity include:

   (a) Using a computer based data base on astronomical objects students perform astronomical activities such as study the relationship between the color and temperature of the stars.
   (b) Using the NASA/JPL web site for the data on the physical and orbital parameters of planets and satellites, students study the basis of Kepler’s law and Newton’s law of gravitation.
   (c) Study the color – brightness relationship and Hubble’s law using the Sloan Digital Sky survey (http://www.sdss.org/).
   (d) Study the solar rotation using the magnetogram observations at National Solar Observatory, Kitt Peak, Arizona.
   (e) Study the weathering process of lunar surface using the data base in “The Sky” software.

These activities are now used in the “Smart Lab”. We are in process of making them available on-line which will enable the students to perform these activities from remote location.

3. We have now two courses in Astronomy General Education that has “Information Competency” component as the requirement.

4. We have developed the following web sites that contain several resources that will help students to become information competent in astronomy and space sciences.

   (a) The current information about the discoveries in astronomy and space science can be found at one place at http://www.csun.edu/~dchoudhary/astrlC/public_html/index.html. This site has links to the important research journals such as Science, Nature, The
Astrophysical Journal and The Sky and Telescope. Students can click on the relevant links and access the journal web pages. They can also get an access to the podcast of Science and Nature in these sites.

(b) The link to several astronomy web sites are collected in the following web site. This site also provides link to several observatories and their news pages. This is an excellent resource for writing assignment for senior students who take astronomy general education course. [http://library.csun.edu/dhelfer/astronomyweb.html](http://library.csun.edu/dhelfer/astronomyweb.html)

(c) The developments of library using skills are developed with the lectures by Doris Helfer. These lectures are given once in the semester to the classes that have a writing and Information Competency component. Various resources discussed in the lecture can be found in the site: [http://library.csun.edu/dhelfer/astronomy352.html](http://library.csun.edu/dhelfer/astronomy352.html)

We have now developed the internet tools that are useful for helping the students to become “Information Competence”. These tools are now used in the class rooms. Some of the tools are also used by the students for writing the term papers who take these courses. We plan to do the following in near future.

1. The web recourses that are developed are now primarily used by the astronomy students in the campus. We are improving some of these recourses to make them more user-friendly. After such an improvement by the end of the Fall 2007 semester, we plan to make system wide advertisement and available to a wider community.
2. At a later stage we plan to develop a set of 30 lectures in Introductory Astronomy and make them available on Podcast for the students who take on-line astronomy course.

The funds for this project were managed by The University Corporation. The Balance Sheet of the Budget is given in the following two pages.