SYLLABUS

DATE OF LAST REVIEW: 02/2013
CIP CODE: 24.0101
SEMESTER: DEPARTMENTAL SYLLABUS
COURSE TITLE: Introduction to Astronomy Lab
COURSE NUMBER: NASC0108
CREDIT HOURS: 1
INSTRUCTOR: DEPARTMENTAL SYLLABUS
OFFICE LOCATION: DEPARTMENTAL SYLLABUS
OFFICE HOURS: DEPARTMENTAL SYLLABUS
TELEPHONE: DEPARTMENTAL SYLLABUS
EMAIL: KCKCC-issued email accounts are the official means for electronically communicating with our students.

PREREQUISITE(S): None. Good algebra skills strongly recommended

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, http://www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:
This laboratory introduces the variety of techniques used by astronomers to learn information about the planets, stars, and galaxies. This course counts as a lab science when taken concurrently or after NASC0107

METHOD OF INSTRUCTION:
A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:
The course outline is indicated below and is subject to change as course development dictates. Laboratory materials including, but not limited to:

I. Study of the Celestial Coordinate System and the use of star charts.
II. The uses of Newton's and Kepler's Laws in Astronomy.
III. The use of Spectroscopy in the study of the sun, the planets of our solar system, and the stars.
IV. The use of the HR diagram to understand stellar evolution.
V. The use of the Doppler Shift in Astronomy.
VI. Study of the optical properties of a telescope.
VII. Distance measurements to various objects in our universe.

EXPECTED LEARNER OUTCOMES:
A. The learner will be able to promote the understanding of the methods of observational astronomy.
B. The learner will be able to provide the student with a laboratory experience.

COURSE COMPETENCIES:

The learner will be able to promote the understanding of the methods of observational astronomy.
1. The learner will be able to describe the difference between velocity and acceleration.
2. The learner will be able to employ the equations of UAL to calculate the velocity and or acceleration.
3. The learner will be able to explain how force relates to velocity and acceleration.
4. The learner will be able to identify or illustrate which of Newton’s Laws apply in a given situation.

The learner will be able to provide the student with a laboratory experience.
5. The learner will be able to employ Newton’s Laws to calculate the motion caused by an applied force.
6. The learner will be able to calculate the impulse applied to or the momentum of an object.
7. The learner will be able to identify or illustrate the concept of impulse as it applies to momentum.
8. The learner will be able to use the concept of the conservation of momentum to calculate the resultant motion of an object(s).

ASSESSMENT OF LEARNER OUTCOMES:
Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

SPECIAL NOTES:
This syllabus is subject to change at the discretion of the instructor. Material included is meant to provide and outline of the course and rules that the instructor will adhere to in evaluating the
student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome at any time.

Kansas City Kansas Community is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personal. Various laws, including Title IX of the Educational Amendments of 1972, require the college’s policy on non-discrimination be administrated without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center at 913-288-7670.