DATE OF LAST REVIEW: 02/2013
CIP CODE: 24.0101
SEMESTER: DEPARTMENTAL SYLLABUS
COURSE TITLE: Introductory Physics Laboratory
COURSE NUMBER: NASC0131
CREDIT HOURS: 1
INSTRUCTOR: DEPARTMENTAL SYLLABUS
OFFICE LOCATION: DEPARTMENTAL SYLLABUS
OFFICE HOURS: DEPARTMENTAL SYLLABUS
TELEPHONE: DEPARTMENTAL SYLLABUS
EMAIL: DEPARTMENTAL SYLLABUS

PREREQUISITE(S): College Algebra (MATH-0105) is 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:
A laboratory related to Introductory Physics, NASC-0130. The course counts as a lab science when preceded or accompanied by NASC-0130.

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

CORE OUTCOMES MISSION STATEMENT: The Core Outcomes Project is an academic initiative of the Kansas Board of Regents that brings together faculty for the purpose of developing core outcomes and competencies for general education courses from the state’s universities, community colleges, and technical colleges. Common core outcomes and
competencies contribute to the state’s system of higher education by creating a seamless pathway for students by improving articulation and transfer between state institutions, facilitating communication within disciplines among the state’s faculty, and communicating to the state’s secondary schools the expectations of college-level curriculum that could result in improvements in college preparedness of students.

CORE OUTCOMES SYLLABI: The learning outcomes and competencies detailed in this syllabus meet or exceed the learning outcomes and competencies specified by the Kansas Core Outcomes Project for this course, as sanctioned by the Kansas Board of Regents.

COURSE OUTLINE:
The course outline is indicated below and is subject to change as course development dictates. Laboratory materials are designed including but not limited to the following topics:

I. Measurement
II. Motion
III. Momentum and Energy
IV. Equilibrium and Simple Machines
V. Thermal Properties of Matter
VI. Waves, Sound and Light
VII. Electricity and Magnetism
VIII. Radioactive Materials

EXPECTED LEARNER OUTCOMES:
A. The learner will be able to demonstrate familiarity with the tools of physics experimentation.
B. The learner will be able to demonstrate familiarity with the methods of physics experimentation.
C. The learner will be able to demonstrate knowledge of physics as applied to setting up the experiments and principles involving the experiments.

COURSE COMPETENCIES:

The learner will be able to demonstrate familiarity with the tools of physics experimentation.

1. The learner will be able to write a conclusion on every laboratory report that displays good-English composition.
2. The learner will be able to design and display data tables appropriate for the experiment.
3. The learner will be able to display and interpret graphs as required by the instructor.
4. The learner will be able to demonstrate cooperation with the instructor and other students.
5. The learner will be able to correctly measure and record length and mass using the metric system of units.

The learner will be able to demonstrate familiarity with the methods of physics experimentation.

6. The learner will be able to properly display a graph as required by your instructor.
7. The learner will be able to calculate the slope of a graph.
8. The learner will be able to describe the difference between velocity and acceleration.
9. The learner will be able to properly graph velocity vs. time and calculate the slope.
10. The learner will be able to calculate the acceleration from experimental data.

_The learner will be able to demonstrate knowledge of physics as applied to setting up the experiments and principles involving the experiments._

11. The learner will be able to describe the velocity and acceleration of a falling object.
12. The learner will be able to describe the concept of momentum as used in physics.
13. The learner will be able to calculate the impulse applied to or the momentum of an object.
14. The learner will be able to describe the concept of energy as used in physics.
15. The learner will be able to collect data and do calculations of energy.
16. The learner will be able to describe the difference between a torque and a force.
17. The learner will be able to use the concept of equilibrium to calculate unknown forces or torques.
18. The learner will be able to use the concepts of simple machines as required in the instruction.
19. The learner will be able to describe the conditions necessary to produce a wave.
20. The learner will be able to use the concepts dealing with waves as required in the instruction.
21. The learner will be able to make calculations as required in the instruction.
22. The learner will be able to set up and describe series or parallel circuitry.
23. The learner will be able to identify or illustrate the effects of magnetism as required in the instruction.
24. The learner will be able to identify or describe the source and effects of radioactive rays.
25. The learner will be able to graph and calculate half life of a radioactive sample as required.

**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 administered 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.