Course Outline

Course Title:  College Physics I
Semester Course Prefix and Number:  PHYS 1561
Old Quarter Course Prefix and Number:  PHYS 101 & 102

Submitted By:  Jason Slattery
Approval Date:  April 2011
Revision Date:  April 2011

Number of Credits:  4  Number of Lecture Credits:  3
Semester(s) Offered:  Number of Lab Credits:  1  Number of Lab Hours:  2
Class Size:  48/lecture  Number of Studio/Demonstration/Internship Credits:
               24/lab

Course Purpose Code:

0 – Developmental Courses
1 – Non-transferable, General Education
2 – Technical course related to career programs
3 – College course which has the primary goal of applying certain concepts (e.g. vocal ensemble)
4 – Other college course not considered a part of general education (MNTC) e.g. computer
    science, health, physical education
5 – Course which is intended to fulfill the Minnesota Transfer Curriculum (MNTC) requirements.
9 – Continuing Education/Customized Training specialized credit course (not occurring in 0-5)

Catalog Description:
This course will cover kinematics, Newton’s Laws, circular motion, linear momentum, rotation motion and
dynamics, elasticity, fluids, wave motion, and sound with a potential section on thermodynamics.

Prerequisites and/or recommended entry skills/knowledge:
Course Prerequisite(s):  None
Reading Prerequisite:  None
Composition Prerequisite:  None
Mathematics Prerequisite:  College Algebra

Career Programs and Transfer Majors Accessing this Course:
General Science majors, High School Teachers, Pharmacy, Forestry

Minnesota Transfer Curriculum Goal(s) partially met by this course if applicable:  Notes: No more
than two goals may be met by any one course.  (Curriculum Committee review and the Chief Academic
Officer's approval are required).

0.  None
1.  Communications
2.  Critical Thinking
3.  Natural Sciences
4.  Mathematical/Logical Reasoning
5.  History and the Social and Behavioral Sciences
6.  The Humanities and Fine Arts
7.  Human Diversity
8.  Global Perspectives
9.  Ethical and Civic Responsibility
10.  People and the Environment
Learning outcomes, including any relevant competencies listed in the Minnesota Transfer Curriculum:
The student will:
- Demonstrate an understanding of the laws of physics
- Critically analyze and solve problems with multiple steps
- Communicate laboratory findings, both orally and in writing
- Formulate and test hypotheses by performing laboratory experiments

Student assessment methods:
Assigned homework, exams, quizzes, and written laboratory reports.

Use of instructional technology (includes software, interactive video and other instructional technologies):
Graphing using Excel

Outline of the major course content:
- One and two-dimensional Motion
- Newton's Laws of Motion
- Mechanical Energy
- Linear Momentum
- Rotational Kinematics and Dynamics
- Fluid Mechanics
- Waves and Sound
- Heat, Thermal properties of matter, and Thermodynamics

Additional special information (special fees, directives on hazardous materials, etc.)

Transfer Information: (Please list colleges/majors that accept this course in transfer.)

Approvals:

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