



**Learning Outcomes:** (including any relevant competencies listed in the Minnesota Transfer Curriculum)

Upon completion of this course, the student will be able to:

- demonstrate an understanding of scientific theories by solving problems and applying them to practical applications
- formulate and test hypotheses in a laboratory setting
- communicate laboratory findings, both orally and in writing
- critically analyze and solve problems with multiple steps
- develop their troubleshooting, analytical, and reasoning skills
- explain the world around him or her

**Student Assessment Methods:**

Homework, quizzes, examinations, performance on laboratory exercises, performance on written laboratory reports, in-class presentations, in-class participation, individual problem solving performance and their performance on peer-group problem solving exercises.

**Use of Instructional Technology:** (includes software, interactive video and other instructional technologies):

Laboratory experimental equipment, some use of PC-based laboratory exercises and simulations, the use of the Internet for information.

**Outline or Statement of Major Course Content:**

- One and Two-dimensional Motion
- Newton's Laws of Motion
- Mechanical Energy
- Linear Momentum and Collisions
- Rotational Kinematics and Dynamics
- Waves and Sound
- Fluid Mechanics
- Thermodynamics
- Electrostatics and Current
- Magnetism
- Electromagnetic Radiation
- Geometrical Optics

**Additional Special Information:** (special fees, directives on hazardous materials, etc.)

**Transfer Information:** (Please list colleges/majors that accept this course in transfer.) Minnesota State University-Mankato (PHYS 101), UMD (PHYS 1011), College of St. Scholastica (PSC 1201/PSC 1501)

**Approvals:**

Body	Representative Signatures	Date
Curriculum Committee		
Faculty Association		
Academic Affairs Standards Committee		
Chief Academic Officer		

**Distribution:** Original – Administrative Office

**Copies:** Curriculum Committee Chair, AASC Chair, Transfer Specialist, Originating Faculty Member, Scheduler, Records, Student Services, Learning Center, Library

**Revised:** October 2006