

COLLIN COLLEGE

COURSE SYLLABUS

Course Information

Course Number: PHYS 1405

Course Title: Conceptual Physics

Course Description: This course presents concepts of classical and modern physics with application to biology and health sciences. What students should bring to this course is curiosity about how the world works. Intended for liberal arts, health science, or any majors. Lab required.

Course Credit Hours: 4

Lecture Hours: 3

Lab Hours: 3

Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading; or equivalent

Student Learning Outcomes: Upon successful completion of this course, students should be able to do the following:

1. Know, understand, and apply basic units of measurement and their relationships
2. Critically analyze information, apply and synthesize knowledge, and solve problems involving mechanics, translational and rotational motion, and friction
3. Analyze, apply, and synthesize to solve problems involving work, energy, and energy conservation
4. Analyze, apply, and synthesize to solve problems involving momentum, collisions, and momentum conservation
5. Analyze, apply, and synthesize to solve problems involving oscillations, waves, and sound
6. Analyze, apply, and synthesize to solve problems involving electricity, magnetism, electromagnetic waves, and light
7. Analyze, apply, and synthesize to solve problems involving solids, fluid statics, and fluid dynamics
8. Analyze, apply, and synthesize to solve problems involving heat and thermodynamics
9. Diagnose, correct, critique, and evaluate their own work and the work of others.
10. Collect, analyze, and report information and results from 1-8, applying critical thinking skills, the scientific method, and structure of technical reading, writing, and other communication. (Critical Thinking and Communication Skills)

Withdrawal Policy: See the current *Collin Registration Guide* for last day to withdraw.

Collin College Academic Policies: See the current *Collin Student Handbook*.

Americans with Disabilities Act Statement: Collin College will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to contact the ACCESS office, SCC-D140 or 972.881.5898 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current *Collin Student Handbook* for additional information.