Physics

Course # EAES 2011

Credits 6

Prerequisites and/or Corequisites: Precalculus

Course Description

This course introduces students to physical processes and ways of thinking quantitatively about the world around us, to understand every day and specific physical phenomena related to Earth and Environmental Sciences. The course includes introductions to mechanics and gravity (how objects move, potential field gravity field, principles of Newtonian mechanics, stress and strain), fluids and material properties (how solids, liquids and gases behave, buoyancy forces, gases rules, model of ideal gases, thermal physics (how heat moves, latent constant, thermodynamics laws), and waves (e.g., light and sound). Throughout the course, we'll develop skills of asking physics questions and making scientific estimates.

Course learning outcomes

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

- Apply kinematic equations to non-accelerating frames.
- recognize fundamental concepts throughout physics (e.g., conservation of energy).
- recognize that EES phenomena as combination of multiple physical processes
- interpret physical concepts quantitatively
- derive the most important physics concepts and equations for EES

Course Assessments and Grading

Item	**Weight**
Homework	10%
Quizzes	15%
Laboratory experiments	10%
Project	15%
Midterm Exam	20%

Item	Weight
Final exam	30%