

HONORS 135 - Ideas in Honors - Week 1

Introduction

Demo: Cartesian Diver, and Particle Fever

Overview: Introduce students and ask for their background, why take course? Gauge student knowledge by asking questions. Answer these questions in slide form. Discuss expectations of students. Cover syllabus. Ask about student interest.

Class plan:

- 5min. Cartesian Diver demo. Keep the diver on the table and ask students to explain how it works.
- 5min. Ask students names, majors, home towns.
- 5min. Ask why students took the course, and what they expect from it.
- 20min. Discussion to gauge student knowledge. Find out how much they know about:
 1. The four forces. What are they, how do they behave. What are their effects. Inverse square law.
 2. What is a particle? Have students list particles they know of. Categorize as baryon, meson, and fundamental particle.
 3. How do we know these particles exist?
 4. What is CERN, what is the LHC, what is a particle detector?
 5. What is dark matter? How do we know it exists?
 6. What are the biggest mysteries in science?
- 20min. Slides to answer questions listed above. Slides should set up a framework for what we will cover in the course.
- 15min. Go over syllabus and course expectations. Website, show up on time. Course structure, demos. Emphasize participation. Student input.
- 15min. Clip from particle fever talking about LHC physics.