

Handouts: \* Syllabus

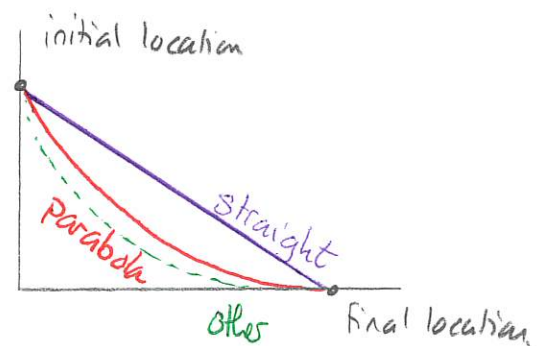
- \* Survey - return by Thursday
- \* Attendance Sheet

Labs: No lab meetings Jan 20-24.

First meetings Jan 27-31

Classical physics

This course will introduce you to the physics of motion and how a system, called Newtonian mechanics or classical mechanics can describe a wide range of physical situations using the same few basic rules. As a demonstration, consider the question of objects sliding down various tracks between fixed initial and final locations. Which path between these will result in the shortest time to travel?



Exercise: \* Introduce yourself to your neighbor

- \* Describe:
  - which gives the shortest time
  - why you think so
  - what evidence you have
  - what do you have to consider
- \* Assess your neighbor's response.

The laws of classical mechanics can address this exactly. The answers were first obtained by the Bernoullis in 1697, about 10 years after Newton produced his system of mechanics.

DEMO: Brachistochrone apparatus

DEMO: Brachistochrone video

Phys 131 introduces you to the mechanics and science that describes such situations. Classical physics addresses situations such as:

- 1) falling objects
- 2) sliding objects
- 3) oscillating objects
- 4) rotating objects
- 5) orbital motion
- 6) fluid motion

Course details:

- 1) syllabus and contact
- 2) website / course materials.
- 3) exam dates
- 4) D2L pages - contain text - show link

This week

- 1) Thursday - regular lecture  
- Warm up exercise. - step through D2L  
- 2pts out of 600
- 2) Friday HW by 5pm Phys 131 Ex 4, 10, 13, 17, 18, 19, 22, 23
- 3) Today FCI - does NOT count for grade.  
- will retake later.

Background needed - no physics

- math: algebra, trig, geometry (vectors/calculus later)