



*I want to walk on the Moon.
I want to look out into the blackness of space.
I want to see Earth in its place in the cosmos.
I want to feel it, and know my place better.
– Chris Churchill*

*Above:
What might you do with this course?
Build a system like this
for mining propellant from the Moon,
to make Mars transportation easier.*

A NEW COURSE for 2018 Fall:

PHYS 175T Orbital Mechanics (3 units)

MW 4:00-5:15 p.m. in McLane 258.

Instructor: Professor Ringwald

Course description:

Prerequisites: PHYS 4A and CSCI 40, or equivalent programming experience.

This course is an introduction to spaceflight, for scientists and engineers. Topics include basic gravitation and orbital theory as applied to spaceflight, coordinate and timekeeping systems, the two-body problem, and particle dynamics and motion under inverse square forces. Applications to analytical, numerical, and computer solutions for spacecraft orbit determination, trajectories, time of flight, and maneuvers. Orbits for Earth satellites. The three-body problem: lunar and interplanetary trajectories.