

Engs 621: Orbital Mechanics

School of Engineering

Since the beginning of civilization orbital mechanics has played a large role in a person's grasp of what happens in the universe. People like Aristotle, Ptolemy, Copernicus, Kepler, Newton, and Einstein were giants in this field, but with the advent of the Space Age on October 4, 1957, a familiarity with orbital mechanics became essential for space scientists and especially scientists concerned with remote sensing to understand satellite applications. Today, a good knowledge of orbital mechanics enables a remote sensing technologist to locate where an image has been taken, determine what hour the image was taken, and when the next imaging opportunity will be possible. Additionally a student can determine what happens to a remote sensing satellite when an orbit changes due to a deliberate maneuver or an orbital perturbation. This course uses elementary principles of mathematics, physics, and mechanics to introduce the student to the traditional science required to place a spacecraft into orbit, keep it there, determine its position, and maneuver it.

3 Credits

Prerequisites

- (Math 121 and 123) or Math 125 required.

Instruction Type(s)

- Indiv Based: Individual Based for Engs 621
- Indiv Based: Online Program for Engs 621

Subject Areas

- [Geological and Earth Sciences/Geosciences. Other](#)

Related Areas

- [Geochemistry](#)
- [Geochemistry and Petrology](#)
- [Geology/Earth Science. General](#)
- [Hydrology and Water Resources Science](#)
- [Paleontology](#)

