## ENG ME406 Dynamics of Space Vehicles

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Text: Howard D. Curtis, Orbital Mechanics for Engineering Students, Elsevier, 2009.

Week Beginning	Topics	Reading
9/5	Two-body problem	Secs. 2.1-2.11
9/12	п	ш
9/19	Elliptical orbits	Secs. 3.1-3.4
9/26	Earth satellite orbits	Secs. 4.1-4.5
10/3	Orbital maneuvers	6.1 - 6.5
10/10	Relative motion and rendezvous	Secs. 7.1–7.6
10/17	Interplanetary orbits	Secs. 8.1-8.11
10/24	Kinematics of moving reference frames	Ch. 1
10/31	Rigid body dynamics	Secs. 7.1-7.6
11/7	Satellite attitude dynamics	Secs. 10.1-10.10
11/14	II	"
11/21	n	"
11/28	n	"
12/5	Three-body problem	Sec. 2-12

- Grading: Three examinations, each worth 25% of the final grade. Homework assignments, together worth 25% of the final grade. Optional course project.
- References: W. E. Wiesel, Spaceflight Dynamics, McGraw-Hill, 1997.
  R. H. Battin, An Introduction to the Mathematics and Methods of Astrodynamics, AIAA, 1987.