



Program and Degree: BSc in Aerospace Engineering	
Course Description	
Course Title	Orbital Mechanics
Prerequisites	Engineering Mathematics, Dynamics
The course aims	Students' acquaintance with fundamentals of space flight and satellite orbits.
Contents	<ol style="list-style-type: none"> 1- An Introduction to Newtonian Gravity Law 2- Central gravity force and Keplerian orbits. 3- Circular, elliptical, parabolic and hyperbolic orbits. 4- Orbital parameters and different earth orbits (LEO, GEO, MEO, HEO). 5- Non-Keplerian orbits. 6- Orbit control and station keeping. 7- Orbital Maneuvers.
Duration	1 Semester (16 weeks)
Course Hours	3 hours/week
Course Type	Required