



Program and Degree: BSc in Aerospace Engineering	
Course Description	
Course Title	Aeroelasticity
Prerequisites	Aircraft structural analysis, Materials and Processes in Manufacturing
The course aims	Students' acquaintance with the principles of Aeroelastic Phenomena in aerospace.
Contents	<ol style="list-style-type: none"> 1- History of Aeroelasticity, Some Aeroelastic Phenomena and Their effects on the Design of Aerospace Vehicles 2- Basic equations of Aeroelasticity, Aeroelastic modelling of Aerospace Vehicles and their solutions. 3- Steady state Aeroelastic Phenomena: Propeller Divergence, control surfaces efficiency, Control Reversal, Aerodynamic Tailoring, Flight Quality. 4- Flutter effect in aircraft, Transient loads, effect of wind and gust loads in aircraft motion. 5- Solar Flutter in space vehicles and satellites.
Duration	1 Semester (16 weeks)
Course Hours	3 hours/week
Course Type	Optional