Aerospace Engineering is based on the definite knowledge on atmospheric and space flight vehicles. From this point of view, applied mechanics is very important part in aerospace engineering. Applied mechanics laboratory deals with various fields related with aerospace engineering. Dynamics and aircraft vibration are the basic subjects to the analysis of dynamic phenomena in the design and analysis of flight vehicles. With these basic subjects, advanced dynamics, theory of plates and shells, theory of elastic stability, and theory of elasticity are the major research fields.