

0402421 Mechanical Vibrations

(3 Credit hours, Prerequisite 0402203 Dynamics + 0402226 Strength of Materials)

The course aims at introducing the theory and practice of the science of mechanical vibrations. The course covers periodic motion, simple and compound pendulum, torsional vibrations, free and forced vibrations of single degree of freedom systems, transverse vibrations, free and forced vibrations of single degree of freedom systems with and without damping, forced vibrations caused by rotating out-of-balance, vibration isolation and control, vibration measurements, numerical analysis, multi-degree of freedom systems and other special topics