



“Mechanized Design Application”

## **Department: Mechanical Engineering**

**Course Name : Dynamics of Machinery**

**Final Year of Mechanical Engineering (2015 Course)**

**Course Code : 402043**

### **Course Objectives:**

1. To conversant with balancing problems of machines.
2. To understand fundamentals of free and forced vibrations.
3. To develop competency in understanding of vibration and noise in Industry.
4. To develop analytical competency in solving vibration problems.
5. To understand the various techniques of measurement and control of vibration and noise.

### **Course Outcomes:**

On completion of the course, students will be able to -

- C01: Apply balancing technique for static and dynamic balancing of multi cylinder inline and radial engines.
- C02: Estimate natural frequency for single DOF undamped & damped free vibratory systems.
- C03: Determine response to forced vibrations due to harmonic excitation, base excitation and excitation due to unbalance forces.
- C04: Estimate natural frequencies, mode shapes for 2 DOF undamped free longitudinal and torsional vibratory systems.
- C05: Describe vibration measuring instruments for industrial / real life applications along with suitable method for vibration control.
- C06: Explain noise, its measurement & noise reduction techniques for industry and day today life problems.