VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY
LESSON PLAN

Semester >>2nd (B.Tech)	Year >> 2015	Contact Hours per week >>4
Sub: Engineering Mechanics	**Branch >>** **Mechanical Engineering**	**Total Credit >>4**
TEACHER		**Dr.Pragyan Paramita Mohanty**
Period		**Jan 2015-April 2015**

Recommended books >>	**Text book**: 1. Engineering mechanics: S Timoshenko & Young; 4th Edition (international edition) MC Graw Hill. **Reference books**: 1. Fundamental of Engineering mechanics (2nd Edition): S Rajesekharan & G Shankara Subramanium; Vikas Pub. House Pvt ltd. 2. Engineering mechanics: K.L. Kumar; Tata MC Graw Hill.

Sl. No.	Lecture No.	Topics to be covered	No. of Classes
		MODULE-1	**10**
1	Lecture-01	Introduction to mechanics	
2	Lecture-02	**Concurrent forces on a plane**: Composition, resolution	
3	Lecture-03	**Concurrent forces on a plane**: equilibrium of concurrent forces	
4	Lecture-04	**Concurrent forces on a plane**: Problems on composition, resolution and equilibrium of concurrent forces	
5	Lecture-05	**Concurrent forces on a plane**: Problems on composition, resolution and equilibrium of concurrent forces	
6	Lecture-06	**Concurrent forces on a plane**: Method of Projections	
7	Lecture-07	**Concurrent forces on a plane**: Equilibrium of three forces in a plane	
8	Lecture-08	**Concurrent forces on a plane**: Problems on methods of projection and equilibrium of coplanar forces	
9	Lecture-09	**Concurrent forces on a plane**: Problems on methods of projection and equilibrium of coplanar forces	
10	Lecture-10	**Concurrent forces on a plane:** Method of moments, Problems on method of moments	
		MODULE-2	

11	Lecture-12	**Concurrent forces on a plane:** Friction	**7**
12	Lecture-13	**Concurrent forces on a plane:** Problems on friction	
13	Lecture-14	**Parallel forces on a plane**: General case of parallel forces	
14	Lecture-15	**Parallel forces on a plane**: Center of parallel forces and center of gravity	
15	Lecture-15	**Parallel forces on a plane**: Center of parallel forces and center of gravity	
15	Lecture-16	**Parallel forces on a plane**: Centroid of composite plane figure and curves	
16	Lecture-17	**Class Test on Module-2**	
		MODULE-3	
17	Lecture-18	**General case of forces on a plane**: Composition and equilibrium of forces in a plane, plane trusses, method of joints	**11**
18	Lecture-19	Problems on truss(method of joint)	
19	Lecture-20	**General case of forces on a plane**: method of sections	
20	Lecture-21	Problems on truss(method of section)	
21	Lecture-22	**General case of forces on a plane**: plane frame	
22	Lecture-23	Problems on truss(method of frame)	
23	Lecture-24	**General case of forces on a plane**: principle of virtual work, equilibrium of ideal systems.	
24	Lecture-25	Problems on virtual work	
25	Lecture 27	**Moments of inertia**: Plane figure with respect to an axis in its plane and perpendicular to the plane	
26	Lecture 28	**Moments of inertia**: parallel axis theorem, Problems	
27	Lecture 29	**Moments of inertia**: Problems	
		MODULE-4	
28	Lecture 28	**Rectilinear Translation:** Kinematics, principle of dynamics,	**12**
29	Lecture 29	**Rectilinear Translation:** D Alembert's Principle	
30	Lecture 30	Problems	
31	Lecture 31	**Rectilinear Translation:** momentum and impulse	
32	Lecture-32	Problems	
33	Lecture-33	**Rectilinear Translation:** work and energy, impact,problems	
34	Lecture-34	**Curvilinear translation:** Kinematics, equation of motion,	
35	Lecture 35	**Curvilinear translation:** projectile	
36	Lecture-36	**Curvilinear translation:** D Alembert's principle of curvilinear motion.	
37	Lecture-37	D Alembert's principle of curvilinear motion.	
38	Lecture-38	**Kinematics** of rotation of rigid body	
39	Lecture-39	Class Test on Module-4	
40		**Tips for final exams**	