



VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY

LESSON PLAN

Semester >>2 nd (B.Tech)		Year >> 2015	Contact Hours per week >>4
Sub: Engineering Mechanics		Branch >> Production Engineering	Total Credit >>4
TEACHER	Prof. Pragyan Paramita Mohanty		
Period	Jan 2015-April 2015		
Recommended books >>	<p>Text book:</p> <p>1. Engineering mechanics: S Timoshenko & Young; 4th Edition (international edition) MC Graw Hill.</p> <p>Reference books:</p> <p>1. Fundamental of Engineering mechanics (2nd Edition): S Rajesekharan & G Shankara Subramaniam; Vikas Pub. House Pvt ltd.</p> <p>2. Engineering mechanics: K.L. Kumar; Tata MC Graw Hill.</p>		
Sl. No.	Lecture No.	Topics to be covered	
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
11	Lecture-11	Class Test on Module-1
12	Lecture-12	Concurrent forces on a plane: Friction
13	Lecture-13	Concurrent forces on a plane: Problems on friction
14	Lecture-14	Parallel forces on a plane: General case of parallel forces
15	Lecture-15	Parallel forces on a plane: Center of parallel forces and center of gravity
16	Lecture-16	Parallel forces on a plane: Centroid of composite plane figure and curves
17	Lecture-17	Class Test on Module-1
18	Lecture-18	General case of forces on a plane: Composition and equilibrium of forces in a plane, plane trusses, method of joints
19	Lecture-19	Problems on truss(method of joint)
20	Lecture-20	General case of forces on a plane: method of sections
21	Lecture-21	Problems on truss(method of section)

22	Lecture-22	General case of forces on a plane: plane frame
23	Lecture-23	Problems on truss(method of frame)
24	Lecture-24	General case of forces on a plane: principle of virtual work, equilibrium of ideal systems.
25	Lecture-25	Problems on virtual work
26	Lecture-26	Class Test on Module-2
27	Lecture 27	Moments of inertia: Plane figure with respect to an axis in its plane and perpendicular to the plane
28	Lecture 28	Moments of inertia: parallel axis theorem, Problems
29	Lecture 29	Moments of inertia: Problems
30	Lecture 30	Rectilinear Translation: Kinematics, principle of dynamics, D'Alembert's Principle
31	Lecture 31	Problems
32	Lecture 32	Class Test on Module-3
33	Lecture 33	Rectilinear Translation: momentum and impulse
34	Lecture-34	Problems
35	Lecture-35	Rectilinear Translation: work and energy, impact, problems
36	Lecture-36	Curvilinear translation: Kinematics, equation of motion, projectile
37	Lecture-37	Curvilinear translation: 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	Lecture-40	Tips for final exams

Signature of Teacher