TCET

DEPARTMENT OF MECHANICAL ENGINEERING (MECH)

Credit Based Grading Scheme(Revised - 2012) - University of Mumbai

CBGS-2012(R)

Semester Plan (Theory)

TCET/FRM/IP-02/10 Revision: A

Semester: III Program MECH Course: CAMD

Class: SE MECH -B

Sr. No.	Prerequisite/ Bridge course:	Duration (Week /Hrs)	Modes of Learning	Recommended Sources
1	Prerequisite Course: Engineering Drawing	4 hours	Self Learning/ Revision	**Textbooks:** 1. Engineering Drawings - By N.D.Bhatt.

Class Room Teaching

Sr. No	Module No.	Lesson No.	Topics Planned (Technology to be used)	Teaching Aids Required	Planned /Completion Date	Book Reference	Remarks
1	1	L 2.1	Preparation of 2-D drawings of standard machine elements nuts, bolts.	Laptop , Projector, chalk , Board	19-07-2017/	1,6	
2	1	L 3.1	Preparation of 2-D drawings of standard machine elements keys, cotter, screws, spring	Laptop , Projector, chalk , Board	26-07-2017/	1,6	
3	1	L 3.2	Conventional representation of threaded parts, Types of threads; thread designation, Conventional representation of machine components and materials, Designation of standard components	Laptop , Projector, chalk , Board	27-07-2017/	1,6	
4	1	L 4.1	Solid Geometry: Intersection of surfaces and interpenetration of solids	Laptop , Projector, chalk , Board	02-08-2017/	9,10	
5	1	L 4.2	Intersection of prism with prism; cylinder or cone,	Laptop , Projector, chalk , Board	03-08-2017/	9,10	
6	1	L 5.1	Intersection of cylinder with prism; cylinder or cone,	Laptop , Projector, chalk , Board	09-08-2017/	9,10	
7	1	L 5.2	Primary auxiliary views	Laptop , Projector, chalk , Board	10-08-2017/	9,10	
8	2	L 6.1	Geometric Dimensioning and Tolerancing (GD&T) : Dimensioning with tolerances indicating various types of fits,	Laptop , Projector, chalk , Board	16-08-2017/	1,6	
9	2	L7.1	Geometric Dimensioning and Tolerancing (GD&T) : Dimensioning with tolerances indicating various types of fits,	Laptop , Projector, chalk , Board	24-08-2017/	1,6	
10	2	L 8.1	Details and assembly drawing: Types of assembly drawings, part drawings,	Laptop , Projector, chalk , Board	30-08-2017/	1,6	
11	2	L 8.2	Details and assembly drawing:drawings for catalogues and instruction manuals, patent drawings, drawing standards,	Laptop , Projector, chalk , Board	31-08-2017/	1,6	

12	2	L 9.1	Introduction to unit assembly drawing, steps involved in preparing assembly drawing from details and vice-versa,	Laptop , Projector, chalk , Board	06-09-2017/	1,6	
13	2	L 9.2	Preparation of details and assembly drawings of Clapper block, Single tool post, Lathe and Milling tail stock, jigs and fixtures	Laptop , Projector, chalk , Board	07-09-2017/	1,6	
14	2	L 10.1	Cotter, Knuckle joint, Keys: keys-sunk, parallel woodruff, saddle, feather etc.	Laptop , Projector, chalk , Board	13-09-2017/	1,6	
15	2	L 10.2	Couplings: simple, muff, flanged Protected flange coupling,	Laptop , Projector, chalk , Board	14-09-2017/	1,6	
16	2	L 11.1	Couplings: Oldham's coupling, Universal coupling	Laptop , Projector, chalk , Board	20-09-2017/	1,6	
17	3	L 11.2	Preparation of details and assembly drawings of Bearings: Simple, solid, Bushed bearing	Laptop , Projector, chalk , Board	21-09-2017/	1,6	
18	3	L 12.1	I.S. conventional representation of ball and roller bearing, Pedestal bearing, footstep bearing	Laptop , Projector, chalk , Board	27-09-2017/	1,6	
19	4	L 12.2	Classification of Pulleys, Pulleys: Flat belt, V-belt, rope belt, Fast and loose pulleys.	Laptop , Projector, chalk , Board	28-09-2017/	1,6	
20	4	L 13.1	Pipe joints: Flanged joints, Socket and spigot joint, Gland and stuffing box, expansion joint	Laptop , Projector, chalk , Board	04-10-2017/	1,6	
21	5	L 13.1	Preparation of details and assembly drawings of Valves, I.C. Engine parts: Types of Valves, introduction to I.C. Engine	Laptop , Projector, chalk , Board	04-10-2017/	1,6	
	5	L 13.2	Preparation of details and assembly drawings Air cock; Blow off cock, Steam stop valve, Gate valve, Globe valve, Non return Valve, I.C. Engine parts: Piston, Connecting rod, Cross head, Crankshaft, Carburettor, Fuel pump, injector, and Spark plug	Laptop , Projector, chalk , Board	05-10-2017/	1,6	
23	6	L 14.1	Reverse Engineering of a physical model: disassembling of any physical model ,measurement, sketch the minimum views .	Laptop , Projector, chalk , Board	12-10-2017/	1,6	
24	6	L15.1	Reverse Engineering of a physical model: sketch the minimum views required for each component, convert these sketches into 3-D model and create an assembly drawing with actual dimensions	Laptop , Projector, chalk , Board	18-10-2017/	1,6	
Remark: Course:		Syllabus Coverage:		Practice Session: 2		**Content Beyond Syllabus:**	
No. of (lectures planned)/(lecture taken):							

Advanced course: Machine Design,Theory of machines	20 Hours	Online course on Machine Design,Theory of Machines	**Web sources:** 1. NPTEL-https://onlinecourses.nptel.ac.in **Textbook reference:** 1.Machine Design-Bhandari 2. Theory of Machines-Ratan

1. Machine Drawing by N.D. Bhatt.
2. A textbook of Machine Drawing by Laxminarayan and M.L. Mathur, Jain brothers Delhi
3. Machine Drawing by Kamat and Rao
4. Machine Drawing by M. B. Shah
5. A text book of Machine Drawing by R. B. Gupta, Satyaprakashan, Tech. Publication
6. Machine Drawing by K.I.Narayana, P. Kannaiah, K.Venkata Reddy
7. Machine Drawing by Sidheshwar and Kanheya **8.**
Autodesk Inventor 2011 for Engineers and Designers by ShamTickoo and SurinderRaina, Dreamtech Press **9.**
Engineering Drawing by P J Shah
10. Engineering Drawing by N D Bhatt

Digital Reference:

3.1 www.nptel.ac.in

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Name & Signature of Faculty	Signature of HOD	Signature of Principal /Dean (Academics)
Mr. Jayant Patil	**Dr. Siddesh S D**	**Dr. R R Sedamkar**
Date: 21.07.17	Date: 21.07.17	Date: 21.07.17

Note:

1. Plan date and completion date should be in compliance
2. Courses are required to be taught with emphasis on resource book, course file, text books, reference books, digital references etc.
3. Planning is to be done for 15 weeks where 1st week will be AOP, 2nd -13th for effective teaching and 14th -15th week for effective university examination oriented teaching, mock practice session and semester consolidation.
4. According to university syllabus where lecture of 4 hrs/per week is mentioned minimum 55 hrs and in case of 3 lectures per week minimum 45 lectures are to be engaged are required to be engaged during the semester and therefore accordingly semester planning for delivery of theory lectures shall be planned.
5. In order to improve score in NBA, faculty members are also required to focus course teaching beyond university prescribed syllabus and measuring the outcomes w.r.t learning course and programme objectives.
6. Text books and reference books are available in syllabus. Here only additional references w.r.t. non –digital/ digital sources can be written (if applicable)
7. Technology to be used in class room during lecture shall be written below the topic planned within the bracket.