



K.S. SCHOOL OF ENGINEERING AND MANAGEMENT, BANGALORE - 560109


DEPARTMENT OF MECHANICAL ENGINEERING


NAME OF THE STAFF : AKASH DEEP B N
 COURSE CODE/TITLE : 15ME742/ Tribology
 SEMESTER/YEAR : VII / IV
 ACADEMIC YEAR : 2019-2020

Sl. No.	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date	Engaged Date
MODULE 1							
1	Explain properties of oils, Differentiate different types of lubricants	L	BB	1	1	30/07/19	20/08
2	Derive equation Viscosity, Derive Newton's Law of viscosity	L	BB+LCD	1	2	31/07/19	21/08
3	Derive Hagen-Poiseuille Law	L	BB	1	3	01/08/19	22/08
4	Tutorial	L+D	BB	0	3	02/08/19	23/08
5	Tutorial	L+D	BB	0	3	02/08/19	23/08
6	Derive Flow between Parallel stationary planes	L	BB	1	4	06/08/19	25/08
7	Explain different viscosity measuring instruments	L	BB	1	5	07/08/19	26/08
8	Explain different lubrication principles	L	BB	1	6	08/08/19	24/08
MODULE 2							
9	Friction forces and power loss in lightly loaded bearing	L+D	BB	1	7	13/08/19	05/09
10	Petroff's law	L+PS	BB	1	8	14/08/19	06/09
11	Tutorial	L+D	BB	0	8	16/08/19	30/08
12	Tutorial	L+D	BB	0	8	16/08/19	30/08
13	Tower's experiments	L+D	BB	1	9	17/08/19	17/09
14	mechanism of pressure development in an oil film	L	BB	1	10	20/08/19	18/09
15	Reynold's investigation and Reynold's equation in 2D	L	BB	1	11	21/08/19	24/09
16	Introduction to idealized journal bearing	L	BB	1	12	22/08/19	25/09
17	Tutorial	L+D	BB	0	12	23/08/19	31/08
18	Tutorial	L+D	BB	0	12	23/08/19	31/08
19	load carrying capacity, condition for equilibrium	L	BB+LCD	1	13	27/08/19	26/09
20	Sommerfeld's numbers and significance of it	L	BB+LCD	1	14	28/08/19	01/10
21	Partial bearings	L	BB+LCD	1	15	29/08/19	03/10
22	Tutorial	L+D	BB	0	15	30/08/19	

23	Tutorial	L+D	BB	0	15	30/08/19	06/09
24	End leakages in journal bearing	L	BB	1	16	31/08/19	06/10
25	Tutorial	L+D	BB	0	16	06/09/19	06/09
26	Tutorial	L+D	BB	0	16	06/09/19	27/09
27	Numerical problems.	L+PS	BB	1	17	11/09/19	09/10
MODULE 3							
28	Pressure distribution	L	BB+LCD	1	18	12/09/19	14/10
29	Tutorial	L+D	BB	0	18	13/09/19	27/09
30	Tutorial	L+D	BB	0	18	13/09/19	18/10
31	Load carrying capacity	L	BB	1	19	17/09/19	15/10
32	coefficient of friction	L	BB	1	20	18/09/19	16/10
33	frictional resistance in a pivoted shoe bearing	L	BB	1	21	19/09/19	17/10
34	Tutorial	L+D	BB	0	21	20/09/19	18/10 18/10
35	Tutorial	L+D	BB	0	21	20/09/19	25/10
36	Numerical examples.	L+PS	BB	1	22	24/09/19	22/10
37	Introduction to hydrostatic lubrication	L+D	BB	1	23	25/09/19	23/10
38	hydrostatic step bearings	L+D PS	BB	1	24	26/09/19	24/10
39	Tutorial	L+D	BB	0	24	27/09/19	25/10
40	Tutorial	L+D	BB	0	24	27/09/19	08/11
41	load carrying capacity	L+D PS	BB	1	25	01/10/19	24/10
42	Oil flow through the hydrostatic step bearing.	L+D PS	BB	1	26	03/10/19	30/10
MODULE 4							
43	Tutorial	L+D	BB	0	26	04/10/19	08/11
44	Tutorial	L+D	BB	0	26	04/10/19	
45	Types of friction and its measurement methods.	L+D	BB	1	27	09/10/19	31/10
46	Friction of metals and non-metals.	L+D	BB	1	28	10/10/19	05/11
47	Tutorial	L+D	BB	0	28	11/10/19	11/10
48	Tutorial	L+D	BB	0	28	11/10/19	11/10
49	Classification and mechanisms of wear	L+D	BB+LCD	1	29	17/10/19	06/11
50	Tutorial	L+D	BB	0	29	18/10/19	16/10
51	Tutorial	L+D	BB	0	29	18/10/19	18/10
52	delamination theory, debris analysis	L+D	BB	1	30	22/10/19	07/11
53	testing methods and standards	L+D	BB	1	31	23/10/19	12/11
54	Related case studies.	L+D	BB	1	32	24/10/19	13/11
MODULE 5							
55	Tutorial	L+D	BB	0	32	25/10/19	25/10
56	Tutorial	L+D	BB	0	32	25/10/19	25/10
57	Commonly used bearings materials, and properties of typical bearing materials.	L	BB	1	33	30/10/19	14/11
58	Advantages and disadvantages of bearing materials	L	BB	1	34	31/10/19	19/11
59	Introduction to Surface engineering	L	BB	1	35	05/11/19	20/11

60	Concept and scope of surface engineering	L	BB	1	36	06/11/19	21/11
61	Surface modification – transformation hardening.	L	BB	1	37	07/11/19	22/11
62	Tutorial	L+D	BB	0	37	08/11/19	28/11
63	Tutorial	L+D	BB	0	37	08/11/19	28/11
64	surface melting, thermo chemical processes.	L	BB	2	38	12/11/19	26/11
65	Surface Coating – plating, fusion processes, vapor phase processes.	L	BB	2	39	13/11/19	28/11
66	Selection of coating for wear and corrosion resistance.	L	BB	1	40	14/11/19	29/11
67	Revision	L	BB	5		19,20, 28/11/19	30/11


Course In charge


Head - Dept
17/9/19


Principal