

Universal Engineering College, Thrissur
Vallivattom, ThrissurKerala

Department:ME Batch:ME2023 Semester:S3								
Subject :MET203MECHANICS OF FLUIDS								
Subject Plan Report between: 17-07-2024 to 04-11-2024								
Sl No.	Topic Name	Proposed Plan			Topic Name	Actual Plan		
		Date	Module	Hour		Date	Teaching Pedagogy	Hour
1	Introduction: Fluids and continuum	17/7/2024	1	3	Introduction: Fluids and continuum	17/7/2024	chalk and board	3
2	Physical properties of fluids	18/7/2024	1	6	Physical properties of fluids	18/7/2024	chalk and board	6
3	Density, specific weight, vapour pressure, Newton's law of viscosity	22/7/2024	1	3	Density, specific weight, vapour pressure, Newton's law of viscosity	22/7/2024	chalk and board	3
4	Ideal and real fluids	23/7/2024	1	1	Ideal and real fluids	23/7/2024	chalk and board	1
5	Ideal and real fluids	23/7/2024	1	6	Ideal and real fluids	23/7/2024	chalk and board	6
6	Newtonian and non-Newtonian fluids	24/7/2024	1	3	Newtonian and non-Newtonian fluids	24/7/2024	chalk and board	3
7	Fluid Statics - Pressure-density-height relationship	25/7/2024	1	6	Fluid Statics - Pressure-density-height relationship	25/7/2024	chalk and board	6
8	Manometers	29/7/2024	1	3	Manometers	29/7/2024	chalk and board	3
9	Pressure on plane and curved surfaces	30/7/2024	1	1	Pressure on plane and curved surfaces	30/7/2024	chalk and board	1
10	Center of pressure	30/7/2024	1	6	Center of pressure	30/7/2024	chalk and board	6
11	Buoyancy	31/7/2024	1	3	Buoyancy	31/7/2024	chalk and board	3
12	Stability of immersed and floating bodies	1/8/2024	1	6	Stability of immersed and floating bodies	1/8/2024	chalk and board	6
13	Fluid masses subjected to uniform accelerations	5/8/2024	1	3	Fluid masses subjected to uniform accelerations	5/8/2024	chalk and board	3
14	Measurement of pressure	6/8/2024	1	1	Measurement of pressure	6/8/2024	chalk and board	1
15	Kinematics of fluid flow: Eulerian and Lagrangian approaches	6/8/2024	2	6	Kinematics of fluid flow: Eulerian and Lagrangian approaches	6/8/2024	chalk and board	6
16	Classification of fluid flow	7/8/2024	2	3	Classification of fluid flow	7/8/2024	chalk and board	3
17	1-D, 2-D and 3-D flow	8/8/2024	2	6	1-D, 2-D and 3-D flow	8/8/2024	chalk and board	6

18	Steady, unsteady, uniform, non-uniform, laminar, turbulent, rotational, irrotational flows	12/8/2024	2	3	uniform, laminar, turbulent, rotational, irrotational flows	12/8/2024	chalk and board	3
19	Velocity and acceleration in fluid	13/8/2024	2	1	Velocity and acceleration in fluid	13/8/2024	chalk and board	1
20	Circulation and vorticity	13/8/2024	2	6	Circulation and vorticity	13/8/2024	chalk and board	6
21	Stream function and potential function	14/8/2024	2	3	Stream function and potential function	14/8/2024	chalk and board	3
22	Laplace equation	19/8/2024	2	3	Laplace equation	19/8/2024	chalk and board	3
23	Equipotential lines	21/8/2024	2	3	Equipotential lines	21/8/2024	chalk and board	3
24	Flow nets: uses and limitations	22/8/2024	2	6	Flow nets: uses and limitations	22/8/2024	chalk and board	6
25	Control volume analysis of mass, momentum and energy	27/8/2024	3	1	Control volume analysis of mass, momentum and energy	27/8/2024	chalk and board	1
26	Equations of fluid dynamics	27/8/2024	3	6	Equations of fluid dynamics	27/8/2024	chalk and board	6
27	Remedial	29/8/2024	1,2	6	Remedial	29/8/2024	Remedial	6
28	Navier-Stokes equations (without proof) in cartesian co-ordinates	31/8/2024	3	1	Navier-Stokes equations (without proof) in cartesian co-ordinates	31/8/2024	chalk and board	1
29	Dynamics of Fluid flow: Bernoulli's equation	2/9/2024	3	3	Dynamics of Fluid flow: Bernoulli's equation	2/9/2024	chalk and board	3
30	Energies in flowing fluid: head, pressure, dynamic, static and total head	3/9/2024	3	1	pressure, dynamic, static and total head	3/9/2024	chalk and board	1
31	Venturi and Orifice meters	3/9/2024	3	6	Venturi and Orifice meters	3/9/2024	chalk and board	6
32	Notches and Weirs (description only for notches and weirs)	4/9/2024	3	3	Notches and Weirs (description only for notches and weirs)	4/9/2024	chalk and board	3
33	Hydraulic coefficients	9/9/2024	3	3	Hydraulic coefficients	9/9/2024	chalk and board	3
34	Velocity measurements: Pitot tube and Pitot-static tube	10/9/2024	3	1	Velocity measurements: Pitot tube and Pitot-static tube	10/9/2024	chalk and board	1
35	Pipe Flow: Viscous flow: Reynolds experiment to classify laminar and turbulent flows	10/9/2024	4	6	experiment to classify laminar and turbulent flows	10/9/2024	Role play	6
36	Significance of Reynolds number	11/9/2024	4	3	Significance of Reynolds number	11/9/2024	chalk and board	3
37	Critical Reynolds number	12/9/2024	4	6	Critical Reynolds number	12/9/2024	chalk and board	6
38	Shear stress and velocity distribution in a pipe	23/9/2024	4	3	Shear stress and velocity distribution in a pipe	23/9/2024	chalk and board	3
39	Law of fluid friction	24/9/2024	4	1	Law of fluid friction	24/9/2024	chalk and board	1

40	Head loss due to friction	24/9/2024	4	6	Head loss due to friction	24/9/2024	chalk and board	6
41	Hagen Poiseuille equation	25/9/2024	4	3	Hagen Poiseuille equation	25/9/2024	chalk and board	3
42	Turbulent flow: Darcy-Weisbach equation	26/9/2024	4	6	Turbulent flow: Darcy-Weisbach equation	26/9/2024	chalk and board	6
43	Moody's chart	30/9/2024	4	3	Moody's chart	30/9/2024	chalk and board	3
44	Major and minor energy losses	1/10/2024	4	1	Major and minor energy losses	1/10/2024	chalk and board	1
45	Hydraulic gradient and total energy line	1/10/2024	4	6	Hydraulic gradient and total energy line	1/10/2024	chalk and board	6
46	Flow through long pipes	3/10/2024	3	6	Flow through long pipes	3/10/2024	chalk and board	6
47	Pipes in series, pipes in parallel	7/10/2024	3	3	Pipes in series, pipes in parallel	7/10/2024	chalk and board	3
48	Equivalent pipe	8/10/2024	3	1	Equivalent pipe	8/10/2024	chalk and board	1
49	Siphon	8/10/2024	3	6	Siphon	8/10/2024	chalk and board	6
50	Transmission of power through pipes	9/10/2024	3	3	Transmission of power through pipes	9/10/2024	chalk and board	3
51	Efficiency of transmission	10/10/2024	4	6	Efficiency of transmission	10/10/2024	chalk and board	6
52	Water hammer	14/10/2024	4	3	Water hammer	14/10/2024	chalk and board	3
53	Boundary Layer: Growth of boundary layer over a flat plate	15/10/2024	5	1	Boundary Layer: Growth of boundary layer over a flat plate	15/10/2024	chalk and board	1
54	Definition of boundary layer thickness	15/10/2024	5	6	Definition of boundary layer thickness	15/10/2024	chalk and board	6
55	Displacement thickness, momentum thickness and energy thickness	16/10/2024	5	3	momentum thickness and energy thickness	16/10/2024	chalk and board	3
56	Remedial	17/10/2024	3,4	6	Remedial	17/10/2024	Remedial	6
57	Laminar sub layer, velocity profile	21/10/2024	5	3	Laminar sub layer, velocity profile	21/10/2024	chalk and board	3
58	Von-Karman momentum integral equations for the boundary layers	22/10/2024	5	1	Von-Karman momentum integral equations for the boundary layers	22/10/2024	chalk and board	1
59	Calculation of drag	22/10/2024	5	6	Calculation of drag	22/10/2024	chalk and board	6
60	Dimensional Analysis: Dimensional analysis, Buckingham's theorem	23/10/2024	5	3	Dimensional Analysis: Dimensional analysis, Buckingham's theorem	23/10/2024	chalk and board	3
61	Geometric, Kinematic and dynamic similarity	24/10/2024	5	6	Geometric, Kinematic and dynamic similarity	24/10/2024	chalk and board	6

62	Froude, Reynolds, Weber, Cauchy and Mach laws	4/11/2024	5	3	Froude, Reynolds, Weber, Cauchy and Mach laws	4/11/2024	chalk and board	3
63	Course level gap	4/11/2024		3	Laminar Flow simulation - Course level gap	4/11/2024	Simulation Based Learning	3
64	Remedial	05/11/2024	5	6	Remedial	05/11/2024	Remedial	6
Staffname & Signature: HRIDESH SREEDHARAN								
Date & Time:04-11-2024 3:16 pm								