ME301T: Applied Mathematics III (Theory)

Course Outcome:

After the completion of Course, Students will be able to.....

		Blooms Level	PO
ME301T.1	**Apply** the operations of sets and use Venn diagrams to **solve** applied problems . **Simplify** and **evaluate** basic logic statements including compound statements, implications, inverses, converses, and contra positives using truth tables and the properties of logic.	Level 3,5	PO 1,2
ME301T.2	**Determine** the domain and range of a discrete or non-discrete function, graph functions, **identify** one-to-one functions, perform the composition of functions, **find** and/or graph the inverse of a function, and **apply** the properties of functions to application	Level 5,31	PO 1, 2
ME301T.3	**Define** the core idea of group and can **apply** it for coding theory and cryptography.	Level 1,3	PO 1, 2
ME301T.4	**Define** the basic concept of Ring and Lattices **Evaluate** Boolean functions and **simplify** expression using the properties of Boolean algebra; **apply** Boolean algebra to circuits and gating networks.	Level 1,5,3	PO 1,2
ME301T.5	**Determine** that a given graph is simple or a multigraph, directed or undirected, cyclic or acyclic, and **determine** the connectivity of a graph.	Level 2	PO1, 2

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ME302T: KINEMATICS OF MACHINE (Theory)

Course Outcome:

After the completion of Course, Students will be able to.....

		Blooms Level	PO
ME302T.1	***Define*** the basics of machines and ***explain*** the different types of mechanisms.	Level 1, 2	PO 1
ME302T.2	***Analyze*** the kinematics of planer mechanisms	Level 4	PO 1, 2
ME302T.3	***Classify*** types of cams and followers and ***Compare*** cam mechanisms with linkages.	Level 2,4	PO 1, 4
ME302T.4	***Explain*** the concept of motion of toothed wheels and ***Solve*** the problems on gear trains	Level 2,3	PO 2
ME302T.5	***Explain*** Synthesis of mechanisms.	Level 2	PO 2
ME302T.6	***Define*** the concept of friction , brakes ,clutches and dynamometers and ***solve*** the different types of problems on these topics.	Level 1,3	PO 1, 4

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ME303T: FLUID MECHANICS (Theory)

Course Outcome:

After the completion of Course, Students will be able to.....

		Blooms Level	PO
ME303T.1	***Define*** the Newton's law of viscosity and ***explain*** the basic properties of fluids at rest and in motion by observing the fluid phenomena	Level 1, 2	PO 1
ME303T.2	***Measure*** the pressure of fluid system by various devices and ***analyze*** the stability of a floating body	Level 4,5	PO 1, 2
ME303T.3	***Derive*** Bernoulli's equation and ***apply*** the same for various devices like venture, orifice, pitot tube for measurement of flow	Level 3	PO 1, 4
ME303T.4	***Identify*** behavior of flow in closed conducts and can use dimensional analysis methods to ***derive*** any equation	Level 3, 4	PO 2
ME303T.5	***Identify*** energy losses in pipe transitions and ***sketch*** energy gradient lines.	Level 4	PO 2
ME303T.6	***Illustrate*** the boundary layer phenomenon and can ***apply*** it for Lift and Drag Development of lift on Aerofoil	Level 2,3	PO 1, 4

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ME304T: MANUFACTURING PROCESSES (Theory)

Course Outcome:

After the completion of Course, Students will be able to.....

		Blooms Level	PO
ME304T.1	***Select*** *a suitable pattern making and moulding processes for manufacturing engineering products/components*	Level 1	PO 1,2
ME304T.2	***Distinguish*** *the principles, operations and capability of various metal joining processes and shall understand their significance.*	Level 4	PO 1,2
ME304T.3	***Select*** and ***apply*** *appropriate hot and cold working method for manufacturing metal components.*	Level 1,3	PO 1
ME304T.4	***Select*** *an appropriate press and press working operations for manufacturing sheet metal components.*	Level 1	PO 1
ME304T.5	***Explain*** *principles, operations and capabilities of various processing on plastics and shall understand their importance.*	Level 2	PO 1

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ME305P: ENGINEERING METALLURGY (Practical)

Course Outcome:

After the completion of Course, Students will be able to.....

		Blooms Level	PO
ME305P.1	***Recall*** the knowledgeof various crystal structures existing in crystalline materials.	Level 1	PO1
ME305P.2	***Apply*** the knowledge of Physicsin studying metallurgical microscope.	Level 3	PO1
ME305P.3	***Explain*** various stages in the process of metallurgical sample preparation.	Level 2	PO2, PO4
ME305P.4	***Compare*** different microstructures of different materials on the basis of their chemical composition, structure, properties and applications.	Level 2	PO, PO5
ME305P.5	***Classify*** different heat treatment processes like Annealing and Normalizing and ***compare*** these processes based on various process parameters.	Level 4, 2	PO2
ME305P.6	***Apply*** the concept of hardenability & ***demonstrate*** the testused to find hardenability of steels.	Level 3,2	PO4

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ME305T: ENGINEEING METALLURGY (Theory)

Course Outcome:

After the completion of Course, Students will be able to.....

		Blooms Level	PO
ME305T.1	***Analyze*** the Structure of different crystalline materials and basic concepts like unit cell, FCC, BCC, APF (Atomic Packing Factor) of a unit cell.	Level 4	PO2, PO4
ME305T.2	***Illustrate*** concept of mechanical behavior of materials under loading condition.	Level 2	PO1, PO4
ME305T.3	***Explain*** the concept of phase & phase diagram to Construction and ***identify*** the phase diagrams and reactions and amount of phase in any microstructure.	Level 2,3	PO1, PO4
ME305T.4	***Classify*** the heat treatment process & types and significance of properties Vs microstructure.	Level 2	PO3
ME305T.5	***Explain***features, classification,and applicationsof various materials like white Cast Iron, gray Cast Iron and non-ferrous alloys like brass, bronze and aluminum alloys.	Level 2	PO2
ME305T.6	***Illustrate*** concept of non-destructive testing of materials and various processes in Powder Metallurgy	Level 2	PO2

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BEME306P: MACHINE DRAWING (Practical)

Course Outcome:

After the completion of Course, Students will be able to.....

		Blooms Level	PO
ME306P.1	***Interpret*** *the principles and requirements of machine & production drawings*	Level 2	PO 1
ME306P.2	***Interpret*** *drawing and* ***develop*** *orthographic drawing of different machine parts.*	Level 2, 6	PO 2, 3
ME306P.3	***Select*** *standard machine elements/components as per the standards.*	Level 1	PO 1, 2
ME306P.4	***Develop*** *skill to produce assembly drawing & detailed drawings of machines parts from assembly drawing.*	Level 3	PO 3

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BEME307P: TECHNICAL REPORT & SEMINAR

Course Outcome:

After the completion of Course, Students will be able to.....

		Blooms Level	PO
ME307P.1	***Identify*** the theme/topic & Review/ Appraise the literature online/offline of the selected theme/topic from Journals/ Conferences/ reference books for the Technical Seminar	Level 3	PO 1, 2
ME307P.2	***Compile*** the reviewed literature in viewpoint & ***Interpret*** the topic of technical seminar including application, merits & limitations	Level 6, 2	PO 3
ME307P.3	***Improve*** confidence in presentation skills and techniques	Level 6	PO 1

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