# **ME401T: Applied Mathematics IV (Theory)**

## **Course Outcome:**

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

		Blooms Level	PO
ME401T.1	<b>Apply</b> numerical methods to obtain approximate solutions to mathematical problems.	Level 3	PO 1,2
ME401T.2	<b>Analyse</b> and <b>evaluate</b> the accuracy of common numerical methods.	Level 4,5	PO 1, 2
ME401T.3	<b>Find</b> Solutions of Difference Equations with Constant Coefficients using z-transform	Level 1	PO 1, 2
ME401T.4	<b>Simplify</b> the series solution of differential equation by different methods	Level 4	PO 1,2
ME401T.5	<b>Determine</b> probability distribution and density function	Level 5	PO1, 2
ME401T.6	<b>classify</b> different probability distribution function	Level 2	PO 1, 2

# ME402T: ENGINEERING THERMODYNAMICS (Theory)

## **Course Outcome:**

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

		Blooms Level	PO
ME402T.1	Understand and <i>explain</i> gas laws, thermodynamic processes, concept of energy,	Level 2	PO 1,2
ME402T.2	<b>Analyze</b> work and heat interactions associated with thermodynamic process	Level 4	PO 2
МЕ402Т.3	<b>Define</b> first law and second law of thermodynamics and <i>apply</i> it to thermodynamic systems	Level 1,3	PO 2, 3
ME402T.4	<b>Define</b> the concept of entropy and <b>Evaluate</b> the entropy changes in different processes	Level 1, 5	PO 1
ME402T.5	Explain air standard and vapor power cycles	Level 2	PO 2

## **ME404P: MACHINING PROCESSES (Practical)**

#### **Course Outcome:**

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

		Blooms Level	PO
ME404P.1	<i>Illustrate</i> the Single Point Cutting Tool and Various forces acting on it.	Level 2	PO 1,2
ME404P.2	<i>Illustrate</i> the multiple point cutting tools with their operations	Level 2	PO 1
ME404P.3	<i>Illustrate</i> and <i>Distinguish</i> with constructional details, mechanisms involved and working principle of various production machines	Level 2,4	PO 1,2

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## **ME404T: MACHINING PROCESSES (Theory)**

#### **Course Outcome:**

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

		Blooms Level	PO
ME404T.1	<b>Summarize</b> and <b>identify</b> the machining parameters, cutting tool materials and <b>Illustrate</b> the concept of theory of metal cutting	Level 2	PO 1,2
ME404T.2	<i>Illustrate</i> Lathe machines, its types and operations.	Level 2	PO 1
ME404T.3	<i>Illustrate</i> Shaper machines, Slotter machines and their operations.	Level 2	PO 1
ME404T.4	<b>Illustrate</b> Milling machines and their operations.	Level 2	PO 1
ME404T.5	<i>Illustrate</i> Grinding and Drilling processes.	Level 2	PO 1

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## **ME405P: MECHANICS OF MATERIAL (Practical)**

## **Course Outcome:**

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

		Blooms Level	PO
ME405P.1	<b>examine</b> various samples for testing different mechanical properties	Level 4	PO4, PO3
ME405P.2	<b>Apply</b> theoretical knowledge and concepts in actual test sample	Level 3	PO3, PO4
ME405P.3	<b>Find</b> out <b>conclusion</b> from results of material testing on different machines	Level 1,4	PO3, PO4

## **ME405T: MECHANICS OF MATERIAL (Theory)**

## **Course Outcome:**

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

		Blooms Level	PO
ME405T.1	<b>Summarize</b> the fundamental concepts of loads, stresses and their types. <b>Analyze</b> the concept of composite sections, thermal stresses	Level 2,4	PO1, PO2
ME405T.2	Classify different types of beams, their behavior on different type of loading conditions, Relate relation between shear force and bending moments	Level 2	PO1, PO2, PO3
ME405T.3	<b>Analyze</b> the behavior of deflection of beams and Principal Stresses	Level 4	PO2, PO4
ME405T.4	Analyze torsional stresses induced in material and behavior of short and long column under loading	Level 4	PO1, PO4
ME405T.5	<b>Illustrate</b> various modes of fracture, crack phenomenon and crack propagation. Analyze loading under impact and calculation ofstrain energy stored in thematerial	Level 2	PO2, PO3
ME405T.6	<b>Discuss</b> various theories of failure and able to <b>design</b> a component under fatigue loading	Level 6	PO4, PO3, PO2

# **BEME407P: MINI PROJECT (Practical)**

## **Course Outcome:**

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

		Blooms Level	РО
ME407P.1	<b>Apply</b> the basic principles & their applications to mechanical engineering & <b>Adapt</b> an idea or concept into a simple working physical model	Level 3,6	PO 1,2,3
ME407P.2	<b>Develop</b> the habit to work in a group.	Level 3	PO 9