Department of Mechanical Engineering

Course Outcomes of all courses of B Tech 6th semester MECH

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
C311 Design of Machine Elements C037611(037)	**C 311.1**	**Select** proper material for specific application with proper assumptions with respect to design stress, factor of Safety, stress concentration factor and theory of failure**.**
	C 311.2	**Design** and **analyze** Mechanical Joints, keys and couplings. **(Level 6,3)**
	C 311.3	**Design** and **analyze** shafts, axle and clutches. **(Level 6,3)**
	C 311.4	**Design** and **analyze** threaded fastener and power screws. **(Level 6,3)**
	C 311.5	**Design** and **analyze** riveted and welded joint. **(Level 6,3)**

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Course	COURSE OUTCOMES	
C312- Manufacturing Technology C037612(037)	**C312.1**	**Explain** the principles and techniques of grinding and other surface finishing operations. **(Level 2)**
	C312.2	**Explain** the principles and appropriateness of unconventional machining processes and analyze related Process parameters. **(Level 2)**
	C312.3	**Describe** the principles and techniques of forging and extrusion operations; determine their suitability and **Analyze** related process parameters**(Level 2,4)**
	C312.4	**Describe** the principles and techniques of rolling and drawing operations and be able to **analyze** related Process parameters. **(Level 2,4)**
	C312.5	**Describe** the principles and techniques of sheet metal forming operation and be able to **analyze** related Process parameters. **(Level 2,4)**

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Course	COURSE OUTCOMES	
C313- Heat & Mass Transfer C037613(037)	C313.1	**Explain** the principles of heat transfer due to conduction, convection and radiation an **analyze** problems Related to conduction. **(Level 2,4)**
	C313.2	**Analyze** problems related to heat transfer from extended surfaces and unsteady state hea conduction. **(Level 4)**
	C313.3	**Analyze** problems related to forced convection and natural convection. **(Level 4)**
	C313.4	**Apply** basic concepts of phase change processes and principles of mass transfer to solv related practical problems. **(Level 3)**
	C313.5	**Analyze** heat exchangers and problems related to radiation. **(Level 4)**

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Course	COURSE OUTCOMES	
C314-Power Plant Engineering C037632(037)	C314.1	**Describe** the elements of power plant. **(Level 2)**
	C314.2	**Describe** the working principle and basic components of steam power plants and **analyze** and it's working. **(Level 2,4)**
	C314.3	**Describe** the working principle and basic components of hydro electric and diesel power station and analyze its working. **(Level 2)**
	C314.4	**Describe** the working principle and basic components of nuclear power station and **analyze** and it's working. **(Level 2,4)**
	C 314.5	**Discuss** variable load problems and power station economic. **(Level 4,5)**

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Course	COURSE OUTCOMES	
C315- Principles of Management C000635(037)	C315.1	**Describe** the primary functions of management and the roles of managers and apply the concepts of PPC. **(Level 2)**
	C315.2	**Apply** concepts of marketing management and financial management Inventory control. **(Level 3)**
	C315.3	**Apply** the concept of work study and method study**(Level 3)**
	C315.4	**Describe** job evaluation and Wages and incentive plans. **(Level 2)**
	C315.5	**Describe** Human resource management and apply statistical tool in quality control. **(Level 2)**

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Course	COURSE OUTCOMES	
C316- Design of Machine Elements Lab C037621(037)	C316.1	**Design** a daily use product by applying the conceptual design process and able to sug some alternative material for it. **(Level 6)**
	C316.2	**Design** Flange coupling/ shaft/ single plate clutch/screw jack used in practical application **justify** its design**(Level 6,5)**
	C316.3	**Design** welded joint/riveted joint/ bolted joint used in real life and **justify** its design. **(L 6,5)**
	C316.4	**Design** machine element using software. **(Level 6)**
	C316.5	**Design** complete system/subsystem using design hand book and/or design software. **(Lev**

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Course	COURSE OUTCOMES	
C317- Computer Aided Modeling &Analysis Lab C037622(037)	C317.1	**Demonstrate** working knowledge in Computer Aided Design methods and procedures. **(Level 3)**
	C317.2	**Construct** solid modeling using 3D modeling standard software. **(Level 6)**
	C317.3	**Describe** boundary conditions for structural, heat and fluid flow problems. **(Level 2)**
	C317.4	**Solve** simple structural and heat problems using standard FEA software. **(Level 3,4)**
	C317.5	**Solve** fluid flow problems using standard FEA software. **(Level 3,4)**

On successful completion of this course, students should be able to

Course	COURSE OUTCOMES	
C318- Heat & Mass Transfer Lab C037623(037)	C318.1	**Demonstrate** conduction, convection and radiation heat transfer through experiments. **(Level 3)**
	C318.2	**Determine** thermal conductivity and temperature distribution in different system. **(Level 4)**
	C318.3	**Determine** heat transfer coefficient of different system. **(Level 4)**
	C318.4	**Determine** emissivity and Stefen-Boltsman constant of radiation. **(Level 4)**
	C318.5	**Analyze** the performance characteristics of heat transfer equipments. **(Level 4)**

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Course	COURSE OUTCOMES	
C319- Virtual Lab-2 C037624(037)	**C319.1**	**Analyze** auto motive systems. **(Level 4)**
	C319.2	**Analyze** vibration through virtual simulator. **(Level 4)**
	C319.3	**Analyze** rotating machinery fault**(Level 4)**
	C319.4	**Describe** digital fabrication after learning the process through fabrication laboratory.**(Level 2)**
	C319.5	**Describe** metal forming processes, equipments and applications. **(Level 2)**