

Department of Mechanical Engineering

Course Outcomes of all courses of B Tech 3rd semester MECH

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

Course	COURSE OUTCOMES	
C201 Mathematics-III B000311(014)	C 201.1	Define Fourier series including half range series, Analyze Harmonic analysis and variety of its applications. (level. 1,4)
	C 201.2	Describe Unit step, Unit impulse, Laplace transforms, its properties, Inverse and applications to Illustrate ordinary differential equations.(level 1,2)
	C 201.3	Formulate and Solve by direct integration method Linear equation of first order including Homogeneous and Non-homogeneous Linear equations and also method of separation of variables. (level 5)
	C 201.4	Solve difficult problems using theorems of complex analysis and Apply Residue theorem to evaluate real integrals. (level 3,6)
	C 201.5	Define Z-transform, Inverse Z-transform and solve by Convolution theorem, Partial fraction, Residue method Hands on these Mathematical topics will make them equipped to prepare for higher studies through competitive examinations. (level 1, 3,)



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Course	COURSE OUTCOMES	
C202-Mechanical Measurement and Metrology B037312(037)	C202.1	Describe the functional elements of measurement system and its performance characteristics. (Level 1,2,4)
	C202.2	Describe & Distinguish measurement of pressure, strain and temperature. (Level 2,5)
	C202.3	Analyze the type of fluid flow interpret its nature . Describe the data acquisition system.(Level 3,4)
	C202.4	Describe linear and angular measurement devices, measurement of geometrical forms, optical projectors, tool maker microscope and autocollimators. (Level 2)
	C202.5	Distinguish And Describe the interferometers ,comparators , screw threads and gear measurement.(Level 6)

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Course	COURSE OUTCOMES	
C203- Engineering Mechanics B037313(037)	C203.1	Apply basic concepts and laws of mechanics to determine resultant and analyze the systems of forces. (Level 3, 4)
	C203.2	Analyze static system by applying law of friction/ principle of virtual work. (Level 4,3)
	C203.3	Determine the centroid, second moment of area and product of inertia of simple and composite plane figures and centre of gravity and mass moment of inertia of
	C203.4	Analyze problem related to kinematics of a particle and rigid bodies. (Level 4)
	C203.5	Analyze problem related to kinetics of rigid bodies. (Level 4)



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Course	COURSE OUTCOMES	
C204-Engineering Thermodynamics B037314(037)	C204.1	Apply basic concepts and first laws of thermodynamics to analyze thermodynamics system. (Level 3,4)
	C204.2	Apply the concepts of second law of thermodynamics and entropy to analyze thermodynamics system. (Level 3,4)
	C204.3	Apply the concepts of exergy to solve related problems. (Level 3)
	C204.4	Explain the equations of state and thermodynamic properties of real gases and calculate properties of mixture of ideal non- reactive gases.
	C 204.5	Analyze processes involving pure substances.

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Course	COURSE OUTCOMES	
C205- Material Science B037315(037)	C205.1	Explain crystal structure and Imperfection in crystal structure. (Level 2)
	C205.2	Define basic mechanical properties of materials & explain the theories of deformation. (Level 1,2)
	C205.3	Explain solidification phenomenon of pure metal, alloys and interpret phase diagrams. (Level 2)
	C205.4	Explain how microstructure and mechanical properties of carbon and alloy steels are controlled by various heat treatment/surface treatment processes. (Level 2)
	C205.5	Compare characteristics of various ferrous, nonferrous and composite materials. (Level 2)



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Course	COURSE OUTCOMES	
C206- Computer Aided Machine Drawing Lab B037321(037)	C206.1	Demonstrate and understanding of Indian standards on drawing practices, conventional symbol of surface roughness, lay of machining, welded joints and standard components. (Level 2,3)
	C206.2	Demonstrate an understanding of Limit, Fits, Tolerances and representation of dimensional and geometrical tolerance in mechanical engineering drawing. (Level 2,3)
	C206.3	Convert pictorial view of machine components into orthographic views and orthographic sectional view with sectioning conventions (Level 3)
	C206.4	Draw assembled orthographic views of screwed fasteners and riveted joints. (Level 6)
	C206.5	Draw assembly drawing from disassembled views of important mechanical engineering assembly e.g. cotter joint, pin joint, bearing, coupling, pulley and valves. (Level 6)

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Course	COURSE OUTCOMES	
C207- Mechanical Measurement and Metrology Lab B037322(037)	C207.1	Identify different mechanical measurement and metrological instruments. (Level 1)
	C207.2	Describe the working of different mechanical measurement and metrological instruments. (Level 2)
	C207.3	Conduct experiments, observe, interpret data and report results of pressure, displacement, temperature, flow rate, angle, torque and strain measurement instruments. (Level 3)
	C207.4	Conduct experiments, observe, interpret data and report results of heights, lengths, diameter, various angles, accuracies in electrical and optical comparator, surface flatness and contour etc using various types of metrological instruments. (Level 3)
	C207.5	Calibrate vernier calipers, micrometer, height gauge, depth micrometer using slip gauge. (Level 3)



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Course	COURSE OUTCOMES	
C208- Engineering Thermodynamics Lab B037323(037)	C208.1	Demonstrate an ability to explain basic knowledge of laws of thermodynamics and its verification through experimentation . (Level 3, 5)
	C208.2	Describe construction and working of various types of boilers, boiler mountings, accessories, performance parameters and draught. (Level 2,6)
	C208.3	Describe various types of steam engine, steam turbines. (Level 2)
	C208.4	Describe surface and jet condenser. (Level 2)
	C208.5	Describe reciprocating air compressor. (Level 2)

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Course	COURSE OUTCOMES	
C209-Software Lab B037324(037)	C209.1	Demonstrate various concepts of surface/solid modeling and sheet metal design. (Level 3)
	C209.2	Demonstrate an understanding of different features used in surface/solid modeling and sheet metal in engineering practice. (Level 3,2)
	C209.3	Design a part or assembly of parts using Computer-Aided Design software. (Level 3)
	C209.4	Apply top-down design principles to model a design. (Level 3)
	C209.5	Make appropriate selection of CAD functionality to use as tools in the