

COURSE OUTCOMES
Fifth Semester B. Tech.

BEME501T Heat Transfer

After successful completion of this course the student will be able to:

- CO501.1 Students will be able to define and compare the different modes of heat transfer and calculation of thermal resistance and heat transfer through plane and composite wall, cylinder and sphere with and without thermal contact resistances.
- CO501.2 Students will be able to apply the concept of internal heat generation for the calculation of heat transfer for plane wall, cylinder and sphere and also learn about various types of fins and their significance in steady state conduction heat transfer calculations. It will also help them to understand the concept of unsteady state heat transfer.
- CO501.3 Students will be able to select and apply appropriate empirical correlations to estimate forced convection and free convection heat transfer, for internal and external flows.
- CO501.4 Students will be able to evaluate heat transfer rate by radiation from ideal and actual surfaces and enclosures of different geometries.
- CO501.5 Students will be able to evaluate heat exchanger performance for the given geometry and boundary conditions and design suitable heat exchanger geometry to deliver a desired heat transfer rate.

BTME502T Energy Conversion-I

After successful completion of this course the student will be able to:

- CO502.1 Explain, classify, analyze layout of power plant, cogeneration principle of steam generators (i.e. Boilers), boiler mountings & accessories and evaluate performance parameters of boiler.
- CO502.2 Explain the concepts of fluidized bed boilers and various draught system and evaluate performance parameters of natural draught system(i.e. chimney)
- CO502.3 Explain the importance of steam nozzle and determine its throat area, exit area, exit velocity. Also compare impulse and reaction steam turbines and explain the concept of governing of steam turbine
- CO502.4 Explain the methods of compounding of steam turbine, various energy losses in steam turbine and able to draw velocity diagrams of steam turbine blades to analyze the angles of the blades, work done, thrust, power, efficiencies of turbine.
- CO502.5 Explain, classify steam condensers, cooling towers and evaluate performance parameters of surface condenser.

BTME503T Design of Machine Elements

After successful completion of this course the student will be able to:

- CO503.1 Apply principals of static loading for design of Cotter joint, Knuckle joint
- CO503.2 Design bolted, welded joints, power screws & pressure vessels
- CO503.3 Design the power transmission shaft & coupling
- CO503.4 Design components subjected to fatigue or fluctuating stresses. Also, will be able to apply principles for determining bending stresses for desing of curved beams e.g. crane hook, C-Frame.
- CO503.5 Design clutches, brakes and springs

BTME504T Industrial Economics & Management

After successful completion of this course the student will be able to:

- CO504.1 Understand the concept of demand and supply and its relationship with the price
- CO504.2 Relate various factors of production with reference to different economic sectors
- CO504.3 Analyze the causes and effects of inflation and understand the market structure
- CO504.4 Acquire knowledge of various functions of management and marketing management
- CO504.5 Perceive the concept of financial management for the growth of business

BTME505T Mechanical Measurement and Metrology

After successful completion of this course the student will be able to:

- CO504.1 Students will be able to analyze statistical characteristic of systems.
- CO504.2 Students will be able asses the system response.
- CO504.3 Students will be able to understand the instrumentation process.
- CO504.4 Students will be able to understand limits fits and tolerance.
- CO504.5 Students will learn the basics of various metrology measurement terms and techniques.

BTME506P Industrial Visit

After successful completion of this course the student will be able to:

- CO506.1 Opportunity to interact with Industry Experts
- CO506.2 Learning experience.
- CO506.3 Enhanced employability and PPO's.
- CO506.4 Interpersonal skills enhancement.
- CO506.5 Acquire in depth knowledge about industries & innovative technologies employed.

BTME507P Performing Art

After successful completion of this course the student will be able to:

- CO507P.1 Empower the students in problem solving skills.
- CO507P.2 The ability to analyze things and communicate them in the right way is taught.
- CO507P.3 These skills are very much essential to get employed in reputed companies and most of the companies prefer candidates with the mentioned skills.
- CO507P.4 It helps in selecting future options.

K. D. K. COLLEGE OF ENGINEERING
Department Of Mechanical Engineering

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BTME501P Heat Transfer Lab (Practical)

After successful completion of this course the student will be able to:

- CO501P.1 Students will be able to determine the heat transfer rates through various cross-sections and mediums in different modes.
- CO501P.2 Student will be able to acquire, tabulate, analyze experimental data, and draw interpretation and conclusions
- CO501P.3 Student will be able to calculate radiation heat transfer and utilize that knowledge in designing any heat transfer application .
- CO501P.4 Student will be able to understand heat exchanger analysis.
- CO501P.5 Student will able to select the proper heat exchangers per system requirements.

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BTME505P Mechanical Measurement and Metrology Lab (Practical)

After successful completion of this course the student will be able to:

- CO503P.1 Students will be able to perform the instrumentation.
- CO503P.2 Students will be able to use the instrumentation for measurement of thermal properties.
- CO503P.3 Students will be able obtain the response from the instruments also can be able to calibrate the instruments.
- CO503P.4 Students will be able to calculate the limits and allowances to obtain the proper fit.
- CO503P.5 Students will able to identify the surface roughness using optical flat.