

COURSE OUTCOMES
Forth Semester B. Tech.

BTME401T Machining Processes

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

- CO401.1 Understand fundamentals of metal cutting
- CO401.2 Understand basic construction and operations of lathe shaping, planning
- CO401.3 Understand basics of milling and milling cutters. slotting
- CO401.4 To know about the surface finishing processes.
- CO401.5 Understand the basic of drilling, boring, reaming and broaching.

BTME402T Fluid Mechanics & Hydraulic Machines

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

- CO402.1 Classify and explain fluid and their properties, fluid in rest condition, types of flow & flow measuring devices and mathematical application of equations on hydraulic components.
- CO402.2 Explain behavior of fluid in motion condition and application of Bernoulli's equation to fluid flow measuring devices.
- CO402.3 Apply dimensional analysis to design hydraulic machines and different losses of fluid flow through pipes.
- CO402.4 (i) Classify different layout of hydro-electric power plant and

(ii) Analyze design characteristics of hydraulic machines i.e. turbines (impulse and reaction) Pelton turbine , Francis turbine, propeller turbine and Kaplan turbine
- CO402.5 Explain the working principle & design of Centrifugal and reciprocating pump & practical application of similitude & model testing.

BEME403T Material Science & Engineering

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

- CO403.1 Student will be capable to distinguish microstructure and analyze the effect of Crystalline nature of metals, construct and analyze Iron-Iron carbide equilibrium diagram.
- CO403.2 Student will be able to study the commercial steels.
- CO403.3 Student will be able to analyze and implement suitable heat treatment processes.
- CO403.4 Student will be able to analyze the Cast Iron.
- CO403.5 Student will be able to perceive the basics of powder Metallurgy for powder metallurgical components.

BTME404T Mechanics Of Material

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

- CO404.1 Demonstrate fundamental knowledge about various types of loading and stresses induced
- CO404.2 Draw the SFD and BMD for different types of loads and support conditions.
- CO404.3 Estimate the strain energy in mechanical elements. And analyse the deflection in beams.
- CO404.4 Can design shaft for various loading conditions.
- CO404.5 Understand theory of failure and effective designing of column and struct.

BTME405T Professional Ethics

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

- CO405.1 Understand basic purpose of profession, professional ethics and various moral and social issues
- CO405.2 Analyze various moral issues and theories of moral development
- CO405.3 Realize their roles of applying ethical principles at various professional levels
- CO405.4 Identify their responsibilities for safety and risk benefit analysis.
- CO405.5 Understand their roles in dealing various global issues

BTME401P Machining Processes

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

- CO401P.1 Understand basic cutting tools.
- CO401P.2 Working of lathe and turning operation
- CO401P.3 Shaping and planing operation
- CO401P.4 Milling and drilling operation
- CO401P.5 Grinding and surface finishing

BTME402P FLUID MECHANICS & HYDRAULIC MACHINES (Practical)

Course Outcomes

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

- CO402.1 Explain what is Stability condition of floating bodies, Law of conservation of Energy.
- CO402.2 Apply Frictional losses and Hydraulic co-efficient in the pipe flow.
- CO402.3 Estimate the Performance characteristics of Pelton Turbine
- CO402.4 Estimate the Performance characteristics of Francis Turbine & Kaplan Turbine.
- CO402.5 Estimate the Performance characteristics of Centrifugal Pump & Reciprocating Pump.

BTME404P Material Testing Lab- (Practical)

Course Outcomes

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

- CO404.1 Analyze the Microstructure and investigate various properties of ferrous and Non ferrous Materials . Analyse the stress strain behaviour of materials
- CO404.2 Analyse the effect of tensile, shearing force and can utilized the gained while tackling real life engineering problems for different types of Materials
- CO404.3 Understand Microstructures and their Applications for various uses
- CO404.4 Measure torsional strength , hardness of material
- CO404.5 Incorporate the various important concepts learnt while designing components