

I & II Semester



Physics Cycle

- Calculus and Matrix Algebra
- Applied Physics
- Problem Solving using C
- Basic Electrical and Electronics Engineering
- Engineering Mechanics
- Mind Management & Human Values - 1
- Communicative English/ Business communication
- Project Centric Learning -1

Chemistry Cycle

- Partial differential Equations & Laplace Transforms
- Applied Chemistry
- Computer Aided Engineering Drawing
- Data Structures and Algorithm
- Environmental Engineering & Sustainability
- Mind Management & Human Values - 2
- Project Centric Learning – 1

III Semester



- Numerical Methods and Matrix Algebra
- Materials science and Engineering
- Engineering Thermodynamics
- Strength of Materials
- Languages / Economics for Engineers
- Law for Engineers
- Computer Aided Machine Drawing
- Strength of materials Lab
- Project Centric Learning - 2
- Internships I

IV Semester



- Theory of Machines
- Fluid Mechanics and Machinery
- Applied Thermodynamics
- Open Elective – I
 - Track-I: Energy - Solar and wind energy technologies
 - Track-II: Industrial Engineering - Total Quality Management
 - Track-III : Automobile Engineering - Automotive Technology
- Scientific Foundations of Health
- Intellectual property rights
- Project Centric Learning -2
- Fluid Mechanics and Machinery Lab

V Semester



- Workshop Technology
- Design of Machine elements
- Heat and mass transfer
- Open Elective – II
 - Track-I: Energy - Energy storage techniques
 - Track-II: Industrial Engineering - Production Planning & Control
 - Track-III : Automobile Engineering - Automotive protection
- Internships II
- Production and Operations Management/
- Machine Shop Lab
- Thermal Engineering Lab
- Project Centric Learning - 3

VI Semester



- Precision engineering
- Finite Element Method
- Professional elective Course-I
 - Track-I: Design - Strength of Materials
 - Track-II: Thermal Engineering - Automobile Engineering
 - Track-III : Materials & Manufacturing - CAD/ CAM
 - Track-IV: Industrial Engineering - Total Quality Management
- Professional elective Course-II
 - Track-I: Design - Mechanical Vibrations
 - Track-II: Thermal Engineering - Alternative Fuels
 - Track-III : Materials & Manufacturing - Composite Materials
 - Track-IV: Industrial Engineering - Production Planning & Control
- Computer Aided Simulation Lab
- Precision engineering Lab
- Open Elective - III
 - Track-I: Energy - Energy conservation and management
 - Track-II: Industrial Engineering - Process Planning and cost estimation
 - Track-III : Automobile Engineering - Smart and Hybrid Vehicles
- Project Centric Learning -3

VII Semester



- Control Engineering
- Non-Conventional Energy Systems
- Professional elective course -III
 - Track-I: Design - Control Engineering
 - Track-II: Thermal Engineering - Power Plant Engineering
 - Track-III : Materials & Manufacturing - Additive Manufacturing
 - Track-IV: Industrial Engineering - Operations Management
- Professional elective course -IV
 - Track-I: Design - Tribology
 - Track-II: Thermal Engineering - Refrigeration & Air Conditioning
 - Track-III : Materials & Manufacturing - Material Characterization Techniques
 - Track-IV: Industrial Engineering - Agile Manufacturing
- Open Elective – IV
 - Track-I: Energy - Energy management in buildings
 - Track-II: Industrial Engineering - Supply Chain Management
 - Track-III : Automobile Engineering – Automobile Pollution & Control
- Design thinking
- Financial and Project Management
- Project Centric Learning -4

- Powerplant engineering
- Professional elective course -V
 - Track-I: Design - Flexible Manufacturing Systems
 - Track-II: Thermal Engineering - Renewable Sources of Energy
 - Track-III : Materials & Manufacturing - Non-Traditional Machining
 - Track-IV: Industrial Engineering - Statistical Quality Control
- Professional elective course -VI
 - Track-I: Design - Product Design & Life Cycle
 - Track-II: Thermal Engineering - Energy Conservation & Management
 - Track-III : Materials & Manufacturing - Non-Destructive Testing
 - Track-IV: Industrial Engineering - Supply Chain Management
- Capstone project
- Research Publication
- Major specialisation courses