



P. R. Pote Patil College of Engineering and Management, Amravati



Department of Applied Science and Humanities

Group A (Course Outcomes)

Engg. Mathematics-I (1A1):

Course Outcomes:

On completion of the course the students will learn to:

- Able to understand Rolle's Theorem and its applications to Engineering Problems.
- Able to understand maxima minima concept.
- Able to apply Demoiver's theorem in various concepts of complex number.
- Able to solve differential equations of certain types that they might encounter in the same or higher semester.

Engg. Physics (1A2):

Course Outcome:

At the end of the course the students would be exposed to fundamental, knowledge in:

- Electromagnetic phenomena and wave propagation.
- Interferometric techniques in metrology, communication.
- Application of quantum physics to optical & electrical phenomena.
- Application of lasers and Fiber Optics in Engineering and Technology.
- Conducting, superconducting and dielectric materials.
- Semi conducting and new engineering materials.
- Physics of Modern engineering materials.
- Application of ultrasonic's, acoustics.

Engg. Physics- Lab (1A6):

Course Outcomes:

At the end of the course, the students will be able to:

- To differentiate between PN-junction diode, Zeener Diode, LED and relevant diode to design circuits by analyzing its characteristics.
- To determine the unknown parameters of a given semiconductors such as mobility of charge carriers, concentration of charge carriers.
- To observe and analyze the affects of various parameters such as temperature, magnetic field on semiconductors.
- To know and understand various function of CRO to determine parameters such as voltage, frequency etc and use the knowledge in research and industry.
- To know and understand to handle different optical instruments to calculate unknown parameters such as wavelength of light, R.I. of unknown optical medium etc.
- To learn to plot graphs and develop an ability to analyze them, to study different properties of given materials and to know the basic formulae of Physics and do the calculations correctly.

Engg. Mechanics (1A3):

Course Outcomes :

At the end of course students will be able to -

- Compose and resolve the forces along with its effect.
- Apply principles of statics to the system of rigid bodies and analyze simple structures.
- Calculate frictional forces for simple contact, wedges and belt friction.
- Locate centroid and calculate moment of inertia.
- Calculate various kinematic quantities.
- Solve the problems using different kinetic equations related to direct and interconnected particles.
- Apply principle of conservation of momentum and laws of impact.

Engg. Mechanics -Lab (1A7):

Course Outcomes:

Students will be able to -

- Prove the concepts related to engineering mechanics.
- Calculate lifting machine parameters.
- Perform graphical analysis of force systems and simple structures.

Computer Programming (1A4):

Course Outcomes:

At the end of course, the students will be able –

- To explain fundamental concepts of computer and computing.
- To test and execute the programs and correct syntax and logical errors.
- To implement conditional branching, iteration and recursion.
- To use arrays, pointers and structures to formulate algorithms and programs.
- To recognize various problem solving techniques and computer applications.
- To apply programming concepts to solve real life problems.

Computer Programming-Lab (1A8):

Course Outcomes:

- To explain fundamental concept of computer and computing.
- To test and execute the programs and correct syntax and logical errors.
- To implement conditional branching, iteration and recursion.
- To decompose a problem into function and synthesize a complete program using divide and conquer approach.
- To use arrays, pointers and structures to formulate algorithms and programs.
- To recognize and apply various problem solving techniques using programming concept and computer applications to solve real life problems.

Workshop (1A5):

Course Outcomes:

- Upon completion of this course, the students will gain knowledge of different manufacturing processes which are commonly employed in industry.
- Upon completion of this course, the students will be able to fabricate the components using various manufacturing techniques.
- The students will be conversant with the concept of dimensional accuracy and tolerances.

Group B (Course Outcomes)

Engg. Mathematics-II (1B1):

Course Outcomes:

On completion of the course the students will be able to:

- The essential tool of matrices and linear Algebra in a comprehensive Manner.
- Evaluation of Integrals by Reduction Formulae, Gamma and Beta Function
- Use the tool of Fourier series for learning advanced engineering mathematics.
- Use new techniques DUIS to evaluate Integrals and Tracing of Curves
- The Mathematical tools needed in evaluating Multiple Integrals and their usage.

Engg. Chemistry (1B2):

Course Outcomes:

- Apply the knowledge of chemistry in softening processes involved in water technology.
- Identify various types of corrosion and methods to protect the metallic structures from corrosive environment.
- Understanding of the energy storage system (battery) .
- Apply the knowledge of useful engineering materials such as cement, lubricants, ceramics, refractories and nano materials based on their properties.
- Develop the technique involved in the manufacturing process of cement
- Apply the knowledge about the properties of chemical fuels for the generation of power.
- Apply the knowledge of various polymeric material, their synthesis and applications.
- Identify various phases of material at different thermodynamics variables.
- Identification and analysis of materials by using advanced analytical techniques.

Engg. Chemistry-Lab (1B6):

Course Outcomes:

After completion of this course the student shall be able to :

- Understand the objective of their experiments.
- Record and analyze the results
- Follow the proper and safe procedure to get the accurate results.
- Interpret the results through proper writing in journal.

Basic Electrical Engineering (1B3):

Course Outcomes:

A student completing this course should be able to do the following:

- Explain the basic concepts of electric and magnetic circuits.
- The students will be able to solve problems on AC fundamentals & three phase circuits.
- Explain the operating principles of various electrical machines and describe the working of various measuring instruments and importance of earthing.

Basic Electrical Engineering-Lab (1B7):

Course Outcomes:

- Demonstrate the various electric circuit's laws and theorems.
- Understand the concept of effect of temperature on conductor and temperature Coefficient of resistance.
- Analyze series RLC circuit .Also analyze star connected resistive load and delta connected resistive load.
- Understand the concept DC motor and measuring instrument.

Engg. Graphics (1B4):

Course Outcomes:

On successful completion of the course, the students will be able to attain following Course Outcomes:

- Students will be able to read/prepare/understand the engineering drawings.
- Students will be able to create the projections and sectional views of 3D objects.
- Students will be able to draw the orthographic and isometric views of 3D objects.
- Students will be able to use graphics software to create Engineering drawings and represent engineering systems.

Engg. Graphics Lab (1B8):

Course Outcomes:

- Draw the projection of points, lines and planes.
- Discuss about conics and orthographic views of engineering components.
- Classify solids and projection of solids at different positions.
- Show sectioned view of solids.
- Draw isometric projection of an object/solid.

English Communication Skills –Lab (1B5)

Course Outcomes:

- The learning outcome of students will be assessed through assignments, tests and final exams and most importantly through practical performances.
- Through these tests, it would be revealed that students are able to reproduce their understanding of concepts/principles of communication in English language.
- Students can present themselves well in front of large audience on a variety of topics. Moreover they get the knack for structured conversation to make their point of views clear to the listeners.