



ELECTRICAL AND ELECTRONICS ENGINEERING
I Year-I Sem

MATHEMATICS – I

(MA101BS)

Course Outcomes:

After learning the contents of this paper the student must be able to

- 1) Write the matrix representation of a set of linear equations and to analyse the solution of the system of equations Find the Eigen values and Eigen vectors
- 2) Reduce the quadratic form to canonical form using orthogonal transformations.
- 3) Analyse the nature of sequence and series. Solve the applications on the mean value theorems.
- 4) Evaluate the improper integrals using Beta and Gamma functions
- 5) Find the extreme values of functions of two variables with/ without constraints.

BASIC ELECTRICAL ENGINEERING

(EE108ES/EE208ES)

Course Outcomes:

- 1) To analyze and solve electrical circuits using network laws.
- 2) To analyze and solve electrical circuits using theorems.
- 3) To understand and analyze basic Electric and Magnetic circuits
- 4) To study the working principles of Electrical Machines
- 5) To introduce components of Low Voltage Electrical Installations

**CHEMISTRY****(CH102BS/CH202BS)****Course Outcomes:**

The basic concepts included in this course will help the student to gain:

- 1) The knowledge of atomic, molecular and electronic changes, band theory related to conductivity.
- 2) The required principles and concepts of electrochemistry, corrosion and in understanding the problem of water and its treatments.
- 3) The required skills to get clear concepts on basic spectroscopy and application to medical
- 4) The required skills to get clear concepts on basic spectroscopy and application to medical and other fields.
- 5) The knowledge of configurational and conformational analysis of molecules and reaction mechanisms.

ENGLISH**(EN105HS/EN205HS)****Course Outcomes:**

Students should be able to

- 1) Use English Language effectively in spoken and written forms.
- 2) Comprehend the given texts and respond appropriately.
- 3) Communicate confidently in various contexts and different cultures.
- 4) Acquire basic proficiency in English including reading and listening comprehension,
- 5) Acquire basic proficiency in English including, writing and speaking skills.



BASIC ELECTRICAL ENGINEERING LAB

(EE108ES/EE208ES)

Course Outcomes:

- 1) Get an exposure to basic electrical laws.
- 2) Understand the response of different types of electrical circuits to different excitations.
- 3) Understand the measurement, calculation and relation between the basic electrical parameters
- 4) Understand the basic characteristics of transformers and electrical machines.

ENGLISH LANGUAGE AND COMMUNICATION SKILLS LAB

(EN107HS/EN207HS)

Course Outcomes:

Students will be able to attain

- 1) Better understanding of nuances of English language through audio- visual experience and
- 2) Better understanding of nuances of English language through group activities
- 3) Neutralization of accent for intelligibility
- 4) Speaking skills with clarity and confidence which in turn enhances their employability Skills

ENGINEERING WORKSHOP

(ME105ES/ME205ES)

Course Outcomes:

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

- 1) Study and practice on machine tools and their operations
- 2) Practice on manufacturing of components using workshop trades including plumbing, fitting,
- 3) carpentry, foundry, house wiring and welding.
- 4) Identify and apply suitable tools for different trades of Engineering processes including drilling, material removing, measuring, chiseling.
- 5) Apply basic electrical engineering knowledge for house wiring practice.

**ENGINEERING CHEMISTRY LAB****(CH106BS/CH206ES)****Course Outcomes:**

The experiments will make the student gain skills on:

- 1) Determination of parameters like hardness content in water.
- 2) Determination of parameters like chloride content in water
- 3) Estimation of rate constant of a reaction from concentration – time relationships.
- 4) Determination of physical properties like adsorption and viscosity.
- 5) Calculation of R_f values of some organic molecules by TLC technique.

Principal



ELECTRICAL AND ELECTRONICS ENGINEERING I Year-II Sem

PROGRAMMING FOR PROBLEM SOLVING

(CS106ES/CS206ES)

Course Outcomes:

The student will learn

- 1) To write algorithms and to draw flowcharts for solving problems.
- 2) To convert the algorithms/flowcharts to C programs.
- 3) To code and test a given logic in C programming language.
- 4) To decompose a problem into functions and to develop modular reusable code.
- 5) To use arrays, pointers, strings and structures to write C programs. Searching and sorting problems.

MATHEMATICS – II

(MA201BS)

Course Outcomes:

After learning the contents of this paper the student must be able to

- 1) Identify whether the given differential equation of first order is exact or not
- 2) Solve higher differential equation and apply the concept of differential equation to real world problems
- 3) Evaluate the multiple integrals and apply the concept to find areas, volumes, centre of mass and
- 4) Gravity for cubes, sphere and rectangular parallelepiped
- 5) Evaluate the line, surface and volume integrals and converting them from one to another

**ENGINEERING GRAPHICS****(ME104ES/ME204ES)****Course Outcomes:**

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

- 1) Preparing working drawings to communicate the ideas and information.
- 2) Read, understand and interpret engineering drawings.
- 3) Apply Orthographic Projection Techniques
- 4) Visualize and Draw Isometric Projections
- 5) Understand and Draw Projections of Solids

PROGRAMMING FOR PROBLEM SOLVING LAB**(CS106ES/CS206ES)****Course Outcomes:**

The candidate is expected to be able to:

- 1) formulate the algorithms for simple problems
- 2) translate given algorithms to a working and correct program
- 3) correct syntax errors as reported by the compilers
- 4) identify and correct logical errors encountered during execution
- 5) represent and manipulate data with arrays, strings and structures
- 6) use pointers of different types
- 7) create, read and write to and from simple text and binary files
- 8) modularize the code with functions so that they can be reused



APPLIED PHYSICS

(AP102BS/AP202BS)

Course Outcomes:

Upon graduation:

- 1) The student would be able to learn the fundamental concepts on Quantum behaviour of matter in its micro state.
- 2) The knowledge of fundamentals of Semiconductor physics, Optoelectronics, Lasers and fibre
- 3) optics enable the students to apply to various systems like communications, solar cell, photo cells and so on.
- 4) Design, characterization and study of properties of material help the students to prepare new materials for various engineering applications.
- 5) The course also helps the students to be exposed to the phenomena of electromagnetism and also to have exposure on magnetic materials and dielectric materials.

APPLIED PHYSICS LAB

(AP105BS/AP205BS)

Course Outcomes:

Upon graduation:

- 1) The student would be able to learn the fundamental concepts on Quantum behaviour of matter in its micro state.
- 2) The knowledge of fundamentals of Semiconductor physics, Optoelectronics, Lasers and fibre optics enable the students to apply to various systems like communications, solar cell, photo cells and so on.
- 3) Design, characterization and study of properties of material help the students to prepare new materials for various engineering applications.
- 4) The course also helps the students to be exposed to the phenomena of electromagnetism
- 5) The course also helps the students to be exposed to have exposure on magnetic materials and dielectric materials.



ENVIRONMENTAL SCIENCE

(*MC109ES)

Course Outcomes:

- 1) Based on this course, the Engineering graduate will understand /evaluate / develop technologies on the basis of ecological principles and environmental regulations which in turn helps in sustainable development
- 2) Understand the Fundamentals of Environmental Science
- 3) Identify the Components of the Environment
- 4) Analyze Human Impact on the Environment
- 5) Understand the Importance of Natural Resources

Principal