First Year Engineering (Semester I)

REV- 2016, CBCS

Course Outcomes(COs)

Subject: Applied Mathematics-I (FEC101)

List of COs

1. Find the roots of equation by using De-Moivre's theorem

2. Find the rank of matrix to solve linear equation and encode –decode the messages using matrices.

3. Find the nth derivative of the function by using Leibnitz's rule

4. **S**olve non linear programming problems in using partial differentiation

5. Inculcate the habit of mathematical thinking through indeterminate forms and Taylor's series expansion

6.Find roots of transcendental equation by using numerical methods.

Subject: Applied Physics- I (FEC102)

List of COs

1. Apply the reasons for acoustic defects and use this in the proper design of a hall/auditorium.
2. Use the knowledge of Piezoelectric and Magnetostriction effect for production of ultrasonic waves and its application in various fields.
3. Categorize the materials based on their crystal structures and to use XRD techniques for analysis of crystal structure and solve numericals.
4. To comprehend the basic concepts of semiconductor physics and apply the same to electronic devices and solve numericals.
5. Apply the knowledge of Quantum Mechanics to derive the mathematical formulation and use them to predict the unseen effects.
6. Apply the knowledge of superconductivity to various applications like SQUIDS and Magnetic Levitation.

Subject: Applied Chemistry- I (FEC103)

List of COs

1. Apply the knowledge of types of hardness of water and its estimation.
2. Apply the knowledge of various softening and disinfecting methods.
3. Apply the knowledge of various polymers, their synthesis , properties and uses along with their fabrication techniques.
4. Apply the knowledge of thermodynamics in studying chemical systems in equilibrium obeying Gibbs Phase Rule.
5. Apply the knowledge of lubricants, types, properties and mechanism to avoid frictional resistance.
6. Demonstrate the knowledge of Portland cement and carbon nanomaterials.

Subject: Engineering Mechanics (FEC104)

List of COs

1. Solve for the resultants of any force systems

2. Determine equivalent force systems

3. Determine the internal forces in plane frames, simple span trusses and beams

4. Solve the mechanics problems associated with friction forces

5. Describe the motion of a particle in terms of its position, velocity and acceleration in different frames of reference

6. Apply work, energy, impulse and momentum relationships for a particle in motion

Subject: BEE (FEC105)

List of COs

1. To evaluate D.C. circuits using network theorems.

2. To evaluate 1-Φ AC circuits.

3. To illustrate constructional features and operation of 1-Φ transformer.

4. To evaluate 3-Φ AC circuits.

5. To illustrate working principle of DC machines.

6. To conduct experiments on D.C. circuits and AC circuits.

Subject: Environmental Studies (FEC106)

List of COs

1. Students will be able to illustrate depleting nature of environmental resources, global environmental crisis and ecosystem.
2. Students will be able to study different control measures related to Environmental Pollution.
3. Students will be able to demonstrate the working of renewable energy sources and equipments.
4. To understand disaster management techniques and illustrate the concept of carbon credit and green building.
5. Students will be able to illustrate and analyze various case studies related to Environmental Legislation.
6. Students will be able to adapt 3R (Reuse, Recovery and Recycle).

Subject: Basic Workshop Practice –I (FEL101)

List of COs

1. Applying the engineering skills in day to day life
2. Apply the carpentry skills and make some small jobs using carpentry skills.
3. Apply the electrical knowledge and design small electrical circuits
4. Apply the plumbing knowledge and make some small jobs using plumbing skills