SSGMCE SHEGAON

DEPARTMENT OF ELECTRICAL ENGINEERING

COURSE OUTCOMES OF ALL COURSES OF FIRST SEMESTER
BE ELECTRICAL (ELECTRONICS & POWER)

1A1 ENGINEERING MATHEMATICS - I

After completing this course, student will be able to

1. Find n^{th} order derivative of functions and product of functions and expand the function in a power series and evaluation of limits of indeterminate forms.
2. Find the partial derivatives and Jacobian of explicit and implicit functions
3. Obtain maxima and minima of a function with constraints by using Lagrange's method of undetermined multipliers.
4. Find the powers and roots of complex numbers, separate the complex quantity in real & imaginary parts, and find the logarithms of complex numbers.
5. Able to solve ordinary differential equations of first order and first degree by various methods and apply these to solve problems in engineering fields.
6. Able to solve ordinary differential equations of first order and higher degree by various methods

1A2 ENGINEERING PHYSICS

After completing this course, student will be able to

1. To apply the knowledge of solid-state devices such as semiconductor diode, Zener diode & LED in various Electronics applications.
2. To apply the knowledge of Quantum Mechanics in engineering fields
3. To apply the principles of electron ballistics to demonstrate the functioning of CRO & mass spectrograph.
4. To apply the principles of geometrical optics such as interference & diffraction in various engineering fields
5. To apply the principles of fiber optics, LASER & fundamentals of acoustics, ultrasonics & fluid dynamics in various engineering domains

1A3 ENGINEERING MECHANICS

After completing this course, student will be able to

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

1A4 COMPUTER PROGRAMMING

After completing this course, student will be able to

1. To explain fundamental concepts of computer and computing.
2. To test and execute the programs and correct syntax and logical errors.
3. To demonstrate various operators and expressions to solve real life problems.
4. To demonstrate various concepts of control structure to solve complex problems
5. To use arrays, strings and structures to formulate algorithms and programs.
6. To demonstrate various concepts of functions, pointers and file handling mechanism.

1A5 WORKSHOP PRACTICE

After completing this course, student will be able to

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