



**Course Outcomes (Year 2017-18)**

**SEM: I / II**

**SUB: Engg. Mathematics-I**

**SUB CODE: 17MAT11**

CO	After studying this course, students will be able to:
CO101.1	Find the $n^{\text{th}}$ derivative of product of two functions and polar curves
CO101.2	Use partial derivatives to calculate rates of change of multivariate functions.
CO101.3	Analyze position, velocity and acceleration in two or three dimensions using the calculus of vector valued functions.
CO101.4	Recognize and solve first order ordinary differential equations, Newton's law of cooling
CO101.5	Use matrices techniques for solving systems of linear equations in the different areas of Linear Algebra.

**SEM: I/II**

**SUB: Engg. Physics**

**SUB CODE: 17PHY12/22**

CO	After studying this course, students will be able to:
CO102.1	<b>Instantiating</b> experimental proof for the dual nature of light and <b>using</b> of uncertainty principle
CO102.2	<b>Carrying</b> out of electrical conductivity and specific heat value for the conduction electrons.
CO102.3	<b>Illustrating</b> industrial application of lasers and <b>structuring</b> Advantages of optical communication system
CO102.4	<b>Interpretation</b> of crystal system helps to study the defects in materials and the structures of alloys.
CO102.5	<b>Understand</b> basic concepts of nano science and Experimental <b>explanation</b> with shock wave.

**SEM: I/II**

**SUB: Basic Civil Engg.**

**SUB CODE: 17CIV13/23**

CO	After studying this course, students will be able to:
C103.1	Describing the basics of civil engineering, its scope of study, knowledge about roads, bridges and dams.
C103.2	Understanding the action of forces, moments and other loads on systems of rigid bodies.
C103.3	Interpreting the reactive forces and the effects that develop as a result of external loads.
C103.4	Finding the centroid and moment of inertia of composite, plane and curved figures.
C103.5	Describing the basics of kinematics, different types of motions. Analyzing the motion of the body



SEM: I/II

SUB: Elements of Mechanical Engineering

SUB CODE: 17EME14/24

CO	After studying this course, students will be able to:
CO104.1	Describe energy sources, energy conversion systems, boilers, boiler accessories, boiler mountings and steam generation.
CO104.2	Classify and explain the working principle of turbines, I.C. engines and their applications.
CO104.3	State and explain the metal cutting operations of machine tools, robot configurations and automation in industries.
CO104.4	Illustrate engineering metals, composite metals and the metal joining processes with their applications.
CO104.5	Discuss the working principles of Refrigeration systems, room air conditioner & their applications.

SEM: I/II

SUB: Basic Electrical Engg.

SUB CODE: 17ELE15/25

CO	After studying this course, students will be able to:
C105.1	Analyze the behaviour of electrical and magnetic circuits.
C105.2	Explain the basics of DC machine and Construction & working of Induction type Energy meter, Dynamometer type wattmeter.
C105.3	Analyze the single phase AC circuits and Practice Electrical Safety Rules & standards.
C105.4	Analyze the three phase AC circuits and basics of synchronous generator
C105.5	Discuss the performance of single phase transformer, concepts of three phase Induction Motor.

SEM: I/II

SUB: Workshop Lab

SUB CODE: 17WSL26

CO	After studying this course, students will be able to:
CO106.1	Demonstrate the metal removal process by fitting practice using appropriate fitting tools.
CO106.2	Demonstrate and produce various types of welding joints.
CO106.3	Develop surfaces and forming models by soldering work.
CO106.4	Explain the basics of workshop practice

SEM: I/II

SUB: Engg. Physics Lab

SUB CODE: 17PHYL17/27

CO	After studying this course, students will be able to:
C107.1	Practical knowledge to co-relate with the theoretical studies. To achieve perfectness in experimental skills and the study of practical applications will bring more confidence and ability to develop and fabricate engineering and technical equipments.
C107.2	Design of circuits using new technology and latest components and to develop practical applications of engineering materials and use of principle in the right way to implement the modern technology.



SEM: I/II

SUB: Engg. Mathematics-II

SUB CODE: 17MAT21

CO	After studying this course, students will be able to:
C109.1	Solve second and higher order ordinary differential equations
C109.2	Solve Non linear differential equations
C109.3	Solve partial differential equations of fluid mechanics, electromagnetic theory and heat transfer.
C109.4	Apply double and triple integrals to find area, volume, mass and moment of inertia of plane and solid region.
C109.5	Use Laplace transforms to solve Linear Differential Equations with constant coefficients.

SEM: I/II

SUB: Engineering Chemistry

SUB CODE: 17CHE12/22

CO	After studying this course, students will be able to:
C110.1	Explain the types of electrodes, electrochemical and concentration cells and Classification, construction of Classical & modern batteries and fuel cells.
C110.2	Explain the causes & effects of metal corrosion and its control also develop the surface properties of metals for the resistance to corrosion, wear; tear impact etc. by electroplating and electro less plating processes.
C110.3	Identify the techniques used for producing & consuming of energy for industrialization of country and living standards of people. Utilize solar energy for different useful forms of energy.
C110.4	Illustrate the knowledge of polymer materials and interpret replacement of conventional materials by polymers for various applications.
C110.5	Identify the boiler troubles and apply sewage treatment and desalination of sea water and Explain the synthesis, properties of nanomaterials in various applications of science and technology.

SEM: I/II

SUB: Programming in C & Data Structure

SUB CODE: 17PCD13/23

CO	After studying this course, students will be able to:
C111.1	Explain the problem solving skills through Pseudo code /Algorithm /Flowchart
C111.2	Demonstrate the basic principles of Programming in C language.
C111.3	Explain the modular programming skills.
C111.4	Develop C Programs using Advanced principles of C language.
C111.5	Explain the basic concepts of pointers and data structures.



SEM: IV

SUB: Computer Aided & Engg. Drawing

SUB CODE: 17CED14/24

CO	At the end of the course students will be able to:
CO112.1	Construct the orthographic projections of points and lines.
CO112.2	Construct the orthographic projections of planes.
CO112.3	Construct the orthographic projections of solids.
CO112.4	Construct the sectional views of various solids and also develop the lateral surfaces of their truncated portion.
CO112.5	Construct the isometric projections of combination of solids shown in orthographic view.

SEM: I/II

SUB: Basic Electronics

SUB CODE: 17ELN15/25

CO	At the end of the course, the students will be able to
CO113.1	Illustrate the significance of semiconductor diode in different applications and Explain bipolar junction transistor operation.
CO113.2	Explain the BJT biasing and other devices.
CO113.3	Explain the operational amplifier circuit & Oscillator circuit.
CO113.4	Define the functional block of communication system.
CO113.5	Compile the different building blocks in digital electronics.

SEM: I/II

SUB: Computer Programming Lab

SUB CODE: 17CPL16/26

CO	At the end of the course, students will be able to:
CO114.1	Summarize the building blocks of computer
CO114.2	Design and develop C Program to demonstrate the concepts of decision making and looping.
CO114.3	Design and develop C Program to demonstrate the concepts of sorting and searching techniques
CO114.4	Design and develop C Program to demonstrate the String concepts
CO114.5	Design and develop C Program to demonstrate the concepts of Modular Programming
CO114.6	Design and develop C Program to demonstrate the Data Structure concepts.

SEM: I/II

SUB: Engineering Chemistry Lab

SUB CODE: 17CHEL17/27

CO	At the end of the course, students will be able to:
CO115.1	Explain the knowledge of different types of instruments and its applications for analyzing materials using small quantities of materials involved for quick and accurate results which are used in various industrial laboratories.
CO115.2	Experimenting different types of titrations for the analyzing of concerned materials using comparatively more quantities of materials involved for good results.
CO115.3	Illustrate the knowledge about quality of cement, ore and alloy by volumetric method.
CO115.4	Explaining the quality of water by determining its chemical parameter.



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Course Outcomes

2017-18

SEM: I/II

SUB: Environmental Science

SUB CODE: 17CIV18/28

CO	After studying this course, students will be able to:
CO116.1	Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale,
CO116.2	Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment,
CO116.3	Hypothesizing ecology knowledge of a complex relationship between predators, prey, and the plant community.
CO116.4	Implementing the ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues.