DEPARTMENT OF HUMANITIES & SCIENCES

R15 Regulation   **Course Outcomes (COs)**

I B. Tech - I Semester (CSE)

S.No	Subject Name	Subject Code		Course Outcomes
1	**Functional English**	**15A52101**	**C111.1**	Describe the communication and writing skills in general communication. (BL-2)
			C111.2	Develop the writing and life skills in structural manner of real time scenarios. (BL-3)
			C111.3	Apply the knowledge of writing and speaking skills to enhance the career opportunities. (BL-3)
			C111.4	Illustrate the concepts of writing and speaking skills to develop the skills in job opportunities.(BL - 2)
			C111.5	Analyze the concepts of various real time scenarios to represent in an effective model. (BL - 4)
2	**Mathematics - I**	**15A54101**	**C112.1**	Analyze the ordinary differential equations to provide solutions of various engineering applications.(BL-4)
			C112.2	Apply the mathematical knowledge of higher order differential equations to solve various engineering problems.(BL-3)
			C112.3	Describe the knowledge of Mean Value theorems, functions of several variables and Radius of Curvature for engineering applications.(BL-2)
			C112.4	Evaluate the Multiple integrals to determine areas and volumes of engineering applications. (BL-5)
			C112.5	Apply the techniques of vector calculus to solve various engineering problems.(BL-3)
3	**Computer Programming**	**15A05101**	**C113.1**	Describe computer programming concepts to solve a problem. (BL -2)
			C113.2	Choose appropriate control structure to solve the real world problems.(BL-3)
			C113.3	Apply the knowledge of pointers for dynamic memory management of an application.(BL-3)
			C113.4	Apply the concepts of Arrays, pointers and structures to develop programs.(BL-3)
			C113.5	Demonstrate the knowledge of Files to organize the data in a disk.(BL- 2)

4	**Engineering Physics**	**15A56101**	**C114.1**	Describe the concepts of physical optics, lasers and fibre optics in various engineering applications. (BL-2)
			C114.2	Illustrate the X-Ray diffraction techniques for determination of crystal structures & production and detection of ultrasonic waves for non-destructive testing of materials. (BL-2)
			C114.3	Analyze the knowledge of basic quantum mechanics and free electron theory of metals to describe the properties of metals. (BL-4)
			C114.4	Demonstrate the physics of semiconductors for electronic devices & properties of various magnetic materials for engineering applications. (BL-3)
			C114.5	Illustrate the concepts of super conducting materials and nano-materials for scientific and engineering applications. (BL-2)
5	**Engineering Drawing**	**15A03101**	**C115.1**	Demonstrate the Principles of Engineering Drawing, BIS conventions and importance of various curves in engineering for solving engineering problems. (BL-2)
			C115.2	Apply the concepts of Engineering scales for drawing view of projection points of a problem. (BL-3)
			C115.3	Analyze the procedure of projection of lines and regular plane surfaces for development of engineering models. (BL-4)
			C115.4	Construct the development of surfaces by understanding the projection of solids concept. (BL-3)
			C115.5	Demonstrate the strategies of projections and visualization skills for conversion of Isometric views into orthographic projections. (BL-2)
6	**ELCS -LAB**	**15A52102**	**C116.1**	Apply knowledge in seeking right pronunciation with better accent through stress, intonation and rhythm.(BL-3)
			C116.2	Develop speaking skills and active participation in the learning process and become expertise lifelong learning Skills.(BL-3)
			C116.3	Demonstrate the learning skills through participate in Group Discussions, Debates, placement Interviews and in Public Speaking. (BL-3)
7	**Engineering Physics lab**	**15A56102**	**C117.1**	Identify the importance of optical phenomenon like Interference and diffraction and illustrate the knowledge about diffraction phenomenon and applications of lasers. (BL-3)
			C117.2	Apply practical application knowledge of optical fiber and lasers by the study of their relative parameters.(BL-3)
			C117.3	Apply the knowledge of semiconductor and magnetic materials in day to day science applications. (BL-3)
8	**Computer Programming Lab**	**15A05102**	**C118.1**	Design and develop programs by selecting the right identifiers, data types & operators, control statements, arrays and strings for effective Computation. (BL-3)
			C118.2	Develop the solution of a given problem by applying functions, pointers, structures &unions.(BL-3)
			C118.3	Develop the solution of a given problem through files and Debug erroneous programs related to the problem. (BL-3)

I B. Tech - II Semester (CSE)

S.No	Subject Name	Subject Code		Course Outcomes
1	EPC	15A52201	C121.1	Demonstrate listening, reading and writing skills of communication in general and obtain general awareness in science(BL-2)
			C121.2	Develop the oral communication skills in real life scenarios. (BL-3)
			C121.3	Illustrate the life and presentational skills for competitive opportunities. (BL-2)
			C121.4	Apply the life skills to deliver presentation effectively in placements.(BL - 3)
			C121.5	Develop employability skills to enhance career opportunities. (BL - 2)
2	Mathematics – II	15A54201	C122.1	Analyze the techniques of Laplace transforms and determine the solutions of ODE in engineering problems.(BL-4)
			C122.2	Describe the mathematical knowledge of Fourier Series to solve various engineering problems.(BL-2)
			C122.3	Illustrate the concepts of Fourier transforms to solve various engineering problems. (BL-2)
			C122.4	Apply the Partial differential equations to generate mathematical models for engineering applications. (BL-3)
			C122.5	Apply the techniques of Z-Transforms to solve difference equations in engineering applications. (BL-3)
3	Data Structures	15A05201	C123.1	Apply the knowledge of arrays and linked lists for various applications. (BL - 3)
			C123.2	Apply the knowledge of stacks and queues f or various applications. (BL - 3)
			C123.3	Develop the tree and graph models of the given problem through tree and graph concepts(BL - 3)
			C123.4	Analyze the sorting algorithms to evaluate the time & space complexities. (BL-4)
			C123.5	Analyze the searching algorithms to evaluate the time & space complexities. (BL-4)
4	Engineering Chemistry	15A51101	C124.1	Describe the various water treatment techniques used for the softening and purification of water in industrial applications.(BL-2)
			C124.2	Demonstrate the various preparation mechanisms of different polymers in engineering applications.(BL-2)
			C124.3	Apply the concepts of electro chemistry and knowledge of protection of metals in engineering and scientific applications.(BL-3)
			C124.4	Analyze the fuels and their synthesis to understand working of Internal Combustion and Diesel engines.(BL-4)
			C124.5	Demonstrate the concepts of cement, refractories, lubricants &carbon clusters in various engineering applications.(BL-3)

5	**Environmental Studies**	**15A01101**	**C125.1**	To comprehend the concepts of environment and its importance in our daily life and develop and apply various water conservation methods and conservation of other natural resources also.
			C125.2	To identify the importance of environmental education for protection of life cycles of various bio systems which are essential for bio sphere.
			C125.3	To develop new innovative methods for controlling of environmental pollution which may affect the human health.
			C125.4	To analyze environmental issues related to society and find solutions for environmental problems.
			C125.5	To analyze the effects of increasing human population as well as health associated problems and develop measures to be taken to protect human health.
6	**Data Structures Lab**	**15A05202**	**C126.1**	Apply problem solving techniques to find solutions to problems. (BL-3)
			C126.2	Apply the concepts of searching, insertion, deletion, and traversing mechanism on various data structures to build solutions for real world problems.(BL-3).
			C126.3	Identify the appropriate data structure to provide a solution of a given application.(BL-3)
7	**Engineering Chemistry Lab**	**15A51102**	**C127.1**	Develop skills in determining the effects of hard water and also importance of knowing effects of presence of excess oxygen, acids and bases in water.(BL-3)
			C127.2	Demonstrate the practical knowledge about flow of lubricant with varying temperatures.(BL-2)
			C127.3	Analyze the amount of iron &manganese through different techniques and applying the knowledge in control of corrosion. (BL-4)
8	**Engineering & IT Workshop (13A99103)**	**15A99201**	**C128.1**	Design and development of sheet metal objects by surface development and join the metals for obtaining desired shape.(BL-3)
			C128.2	Build a Personal Computer and Install operating systems and prepare the computer ready to use.(BL-3)
			C128.3	Develop presentation and documentation of a given tasks through Microsoft Windows and access the Internet & test Interconnect two or more computers for information sharing.(BL-3)