



**Department of Computer Science and Engineering**  
**KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE**  
 Warangal-506015

**B. Tech(CSN) Course Outcomes of Autonomous Syllabus URR-24**

**KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE:WARANGAL**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

<b>B.Tech –I-Year I-Semester</b>	
<b>Course Code/Name</b>	<b>Course Outcomes</b>
<b>U24MH101: DIFFERENTIAL CALCULUS AND ORDINARY DIFFERENTIAL EQUATIONS</b>	After completion of this course, the students will be able to,
	<b>C01:</b> examine the convergence of a series and interpret mean value theorems.
	<b>C02:</b> apply partial differentiation to functions of several variables in solving various engineering problems.
	<b>C03:</b> apply appropriate methods of differential equations of first order and first degree to solve real life engineering problems.
	<b>C04:</b> analyze the solutions of higher order linear differential equation with constant Coefficients
<b>U24CY102B: ENGINEERING CHEMISTRY</b>	<b>C01:</b> apply the concepts of electrochemical energy systems for batteries and fuel cells
	<b>C02:</b> interpret suitable techniques of water analysis and corrosion treatment of solid materials
	<b>C03:</b> apprise manufacturing of engineering materials and spectroscopic techniques of chemical analysis
	<b>C04:</b> apprise the synthesis, applications of engineering materials and principles of green chemistry
<b>U24CI111: DIGITAL LOGIC DESIGN</b>	<b>C01:</b> determine the time period and frequency of SHM oscillatory system and Know the principles and applications of ultrasonics in different fields
	<b>C02:</b> analyse and apply the concepts of interference, diffraction and Polarization phenomena in accurate determination of wavelengths, thicknesses, narrow slit widths, optical activity, etc
	<b>C03:</b> describe the characteristics and working of lasers, optical fibers and Their applications in various fields
	<b>C04:</b> classify and enumerate the properties of magnetic, super conducting and nonmaterial and know their engineering applications
<b>U24CN104: PROGRAMMING FOR PROBLEM SOLVING WITH C</b>	<b>C01:</b> demonstrate knowledge on fundamental of C programming language and design an algorithm & flow chart for a given application
	<b>C02:</b> apply logical skills for problem solving using control structures and arrays
	<b>C03:</b> develop string programs and modular programming with functions
	<b>C04:</b> implement structures, unions, pointers and files in C programming
<b>U24MH105/U24MH205: ENGLISH COMMUNICATION AND REPORT WRITING</b>	<b>C01:</b> apply basic grammar principles in speech and writing, read fast, form new words, make coherent paragraphs, and adapt the real value of life.
	<b>C02:</b> create effective letters, e-mails, reply to Memos and do the given tasks with confidence.
	<b>C03:</b> analyze the given texts and write clear and unambiguous reports.
	<b>C04:</b> deduct the superfluous information from lengthy text, prepare SoP (Statement of Purpose) effectively and solve critical problems in life with emotional balance..

<b>U24VA106:</b>  <b>SPORTS and YOGA</b>	<b>C01:</b> demonstrate physical fitness by performing yoga aasanas
	<b>C02:</b> demonstrate physical fitness through various games & sports events with defined benchmarks
	<b>C03:</b> demonstrate sportsman spirit and ethics
	<b>C04:</b> demonstrate physical, psychological, social and emotional balance
<b>U24ELXYY :</b>  <b>PRACTICUM</b>  <b>(I,II,III,IV SEM)</b>	<b>C01:</b> synthesize literature survey, identify research gaps and define objective & scope of practicum problem
	<b>C02:</b> apply knowledge to design & conduct experiments, utilize modern tools for solution of practicum problem and develop working model/ process/ system
	<b>C03:</b> apply knowledge to design & conduct experiments, utilize modern tools for solution of practicum problem and develop working model/ process/ system
	<b>C04:</b> create a video pitch on practicum and make an effective oral presentation using PPTs
<b>U24VA109XXXXX :</b>  <b>SOCIAL</b> <b>EMPOWERMENT</b> <b>ACTIVITY / SELF</b> <b>ACCOMPLISHMENT</b> <b>ACTIVITY</b> <b>(SEA-I /SAA-I)</b> <b>(1,II,III,I,V,VI SEM)</b>	<b>C01:</b> integrate the five dimensions of physical, emotional, cognitive, spiritual and social aspects in life for holistic development and demonstrate social sensibility
	<b>C02:</b> interact effectively through written, oral and nonverbal communication with external- world in a professional, sensitive and culturally relevant manner
	<b>C03:</b> analyse the issues related to social empowerment / self-accomplishment, demonstrate problem-solving skills, articulate solutions and demonstrate social sensibility
	<b>C04:</b> demonstrate the generic competencies in making a well-documented report and an effective oral presentation with PPTs portraying knowledge, skills, qualities acquired through fieldwork/practice sessions and social impact of the course learning
<b>U24AE110:</b>  <b>EXPERT TALK SERIES-I</b>	<b>C01:</b> identify real-world problems, different career paths, industry requirements, emerging job roles, business practices and exploit new opportunities by staying up-to-date with industry knowledge, trends and technology
	<b>C02:</b> identify what 21st century employability-related skills and professional etiquette are must in a range of recruitment situations, what skills are absent in him/her, and demonstrate skill improvement
	<b>C03:</b> interact with experts, exhibit confidence, demonstrate improved communication and networking abilities potentially leading to mentorship opportunities, internships, or even future job prospects
	<b>C04:</b> demonstrate the generic competencies in making a well-documented report portraying knowledge, skills, qualities acquired through ETS sessions and impact of the expert talks

<b>B. Tech–I-Year II-Semester</b>	
<b>Course Code/Name</b>	<b>Co's</b>
<b>U24ME107/ U24ME207:  ENGINEERING GRAPHICS THROUGH CAD</b>	<b>CO1:</b> draw projections of points and straight lines inclined to one plane with Auto CAD.
	<b>CO2:</b> develop the projections of planes using Auto CAD
	<b>CO3:</b> construct the projections of solids and sections of solids using Auto CAD
	<b>CO4:</b> create orthographic and isometric projections and develop the simple electrical and electronic circuit using Auto CAD
<b>U24MH201:  MATRIX THEORY AND VECTOR CALCULUS</b>	<b>CO1:</b> analyze eigen value problems using matrix theory
	<b>CO2:</b> apply basic concepts of multiple integrals in evaluating physical quantities of real-life engineering problems
	<b>CO3:</b> apply differential operators on vector and scalar point functions
	<b>CO4:</b> solve line, surface, volume integrals and correlate these with applications of Green, Stoke and Gauss divergence theorems
<b>U24PY202B:  ENGINEERING PHYSICS</b>	<b>CO1:</b> evaluate properties of lasers and optical fibre parameters
	<b>CO2:</b> calculate the electric field, electric potential, magnetic field and flux density; determine properties of magnetic and superconducting materials
	<b>CO3:</b> evaluate the energy values of a particle in an infinite potential well and apply the quantum principles in quantum computing
	<b>CO4:</b> analyze V-I characteristics of semiconductor diodes and suggest their applications; determine resistances of transistor biasing circuits
<b>U24CN203:  COMPUTER ARCHITECTURE AND ORGANIZATION</b>	<b>CO1:</b> analyze instruction formats and addressing modes of assembly language
	<b>CO2:</b> examine hardwired & CISC style processors and solve arithmetic operations using signed and unsigned integers
	<b>CO3:</b> assess cache memory mapping techniques and examine data transfer between processor, memory & I/O
	<b>CO4:</b> evaluate different modes of data transfer, classify interconnection structures
<b>U24CN204:  DATA STRUCTURES THROUGH C</b>	<b>CO1:</b> analyze and implement array operations by utilizing dynamic memory allocation and evaluating their time and space complexities
	<b>CO2:</b> analyze and implement stack and queue data structures by utilizing array representations and evaluating their applications and operational complexities
	<b>CO3:</b> analyze and implement various types of linked lists by utilizing dynamic memory allocation techniques and evaluating their operational complexities
	<b>CO4:</b> develop various sorting algorithms, analyze their time complexities, and apply hashing techniques with collision resolution methods, comparing their efficiencies
<b>U24EE205B :  BASIC ELECTRICAL ENGINEERING</b>	<b>CO1:</b> determine voltage, current & power in electrical circuits using network reduction techniques, mesh & nodal analysis
	<b>CO2:</b> apply suitable network theorems to analyze DC circuits
	<b>CO3:</b> determine impedance, voltage, current, and power in 1- $\emptyset$ AC circuits & determine line and phase quantities in 3- $\emptyset$ AC circuits
	<b>CO4:</b> select a suitable electrical machine for given applications and determine the energy consumed by a lighting load.
<b>U24CY206:  ENVIRONMENTAL STUDIES</b>	<b>CO1:</b> identify the natural resources and practice their usage more equitably
	<b>CO2:</b> develop an action plan for sustainable alternatives and conserving biodiversity
	<b>CO3:</b> examine and perceive the solutions for the environmental pollution
	<b>CO4:</b> adapt issues involved in enforcement of environmental legislation and green methodology
<b>U24AE107 / U24AE207:  IDEA Lab Makerspace</b>	<b>CO1:</b> produce wooden joints and intricate articles using carpentry and CNC wood router respectively
	<b>CO2:</b> implement procedures to prepare the mould cavity for sand casting and arc welding joints

<b>(I &amp; II SEM)</b>	<b>C03:</b> produce innovative prototypes using laser engraving and 3D printing
	<b>C04:</b> design and develop systems based on PCB and IoT for given applications
<b>U24SE208: Programming Skill Development Lab1</b>	<b>C01:</b> develop efficient and optimized C programs to solve a range of moderate to complex problems, demonstrating a strong understanding of programming fundamentals and algorithm design
	<b>C02:</b> analyze and debug C programs to identify errors and optimize code performance, employing appropriate debugging techniques and tools
	<b>C03:</b> apply advanced programming concepts such as dynamic memory allocation, data structures, and file handling in C to create robust and scalable solutions
	<b>C04:</b> design, implement, and test real-world applications in C, simulating industry scenarios and preparing for technical roles in software development and problem-solving
<b>U24EL209: PRACTICUM-2 (I/ II/ III/IV SEM)</b>	<b>C01:</b> synthesize literature survey, identify research gaps and define objective & scope of practicum problem
	<b>C02:</b> apply knowledge to design & conduct experiments, utilize modern tools for solution of practicum problem and develop working model/ process/ system
	<b>C03:</b> demonstrate the generic competencies in making a well-documented report portraying knowledge, skills, qualities acquired through practicum
	<b>C04:</b> create a video pitch on practicum and make an effective oral presentation using PPTs
<b>U24VA109XXXXX : SOCIAL EMPOWERMENT ACTIVITY / SELF ACCOMPLISHMENT ACTIVITY (SEA-I /SAA-I) (1,II,III,I,V,VI SEM)</b>	<b>C01:</b> integrate the five dimensions of physical, emotional, cognitive, spiritual and social aspects in life for holistic development and demonstrate social sensibility
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	<b>C04:</b> demonstrate the generic competencies in making a well-documented report and an effective oral presentation with PPTs portraying knowledge, skills, qualities acquired through fieldwork/practice sessions and social impact of the course learning
<b>U24AEXYY: EXPERT TALK SERIES-II</b>	<b>C01:</b> identify real-world problems, different career paths, industry requirements, emerging job roles, business practices and exploit new opportunities by staying up-to-date with industry knowledge, trends and technology
	<b>C02:</b> identify what 21st century employability-related skills and professional etiquette are must in a range of recruitment situations, what skills are absent in him/her, and demonstrate skill improvement
	<b>C03:</b> interact with experts, exhibit confidence, demonstrate improved communication and networking abilities potentially leading to mentorship opportunities, internships, or even future job prospects
	<b>C04:</b> demonstrate the generic competencies in making a well-documented report portraying knowledge, skills, qualities acquired through ETS sessions and impact of the expert talks
<b>U24CN211X: COMPUTER NETWORKS FUNDAMENTALS</b>	<b>C01:</b> classify OSI and TCP/IP reference models
	<b>C02:</b> examine data link and medium access control protocols
	<b>C03:</b> develop routing algorithms and congestion control
	<b>C04:</b> make use of Transport and Application Layer protocols in the networks