



MALLA REDDY COLLEGE OF ENGINEERING

(Approved by AICTE(New Delhi), Permanently Affiliated to INTUH & Accredited by NBA & NAAC)
Recognised under Section 2100 & 12(B) of the UGC Act 1956, An ISO 9001:2015 Certified Institution
Maisammaguda, Kompally, Dhulapally, Secunderabad-500100

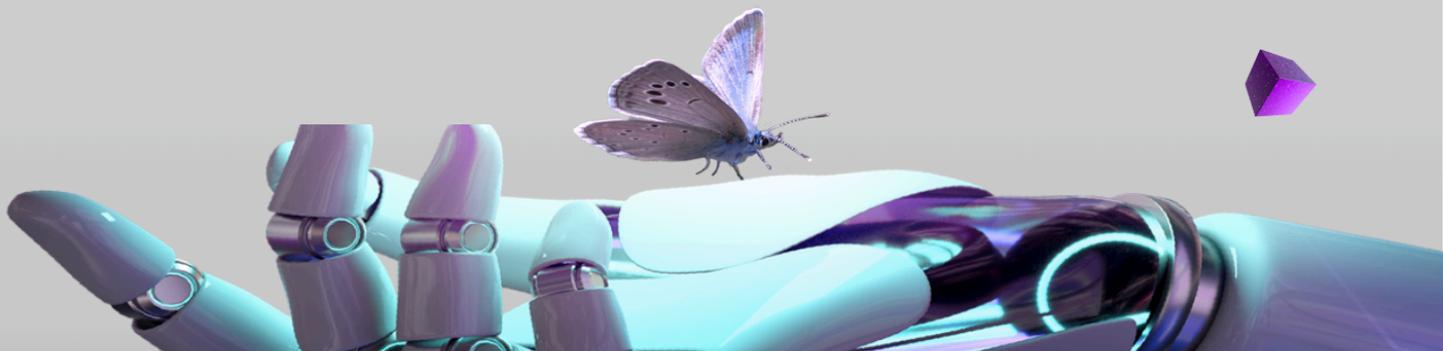
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

WELCOMES YOU TO ACADEMIC PRELUDE 2.0

Venue : 116 LAB

04 JULY 2025

LIVE 10:00 AM





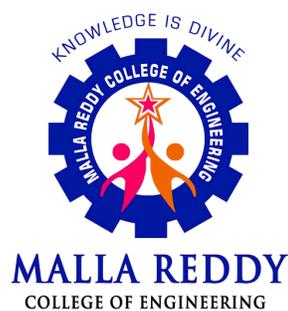
Faculty Presentation

By

Department of Computer Science & Engineering

&

Information Technology





Malla Reddy College Of Engineering

Approved by AICTE(New Delhi), Affiliated to JNTUH)

Recognised under Section 2(f) & 12(B) of the UGC Act 1956, An ISO 9001:2015 Certified Institution.

Institute Vision

To emerge as a Center of Excellence in higher education by producing globally competent professionals and leaders in technology, innovation, entrepreneurship, and management, who contribute meaningfully to the advancement of society and humankind.

Institute Mission

M1: To provide a dynamic and inclusive learning environment that promotes excellence in emerging technologies and interdisciplinary education.

M2: To nurture a state-of-the-art teaching–learning ecosystem supported by innovation, research, and a strong R&D culture.

M3: To foster effective collaboration and networking with alumni, industry, reputed institutions, and other stakeholders for knowledge exchange and professional growth.

M4: To inculcate ethical values, social responsibility, and lifelong learning, encouraging commitment towards societal development.



Department of Computer Science Engineering

Department Vision

To impart futuristic knowledge in Computer Science and Engineering and to produce highly skilled, innovative, and socially responsible professionals capable of contributing to industry, research, and global technological advancement.

Department Mission

M1: To promote strong academic growth by providing sound foundational knowledge and exposure to state-of-the-art technologies, fostering excellence in research and development.

M2: To create a stimulating learning environment that develops analytical thinking, problem-solving abilities, and proficiency in advanced programming, using modern tools and technologies.

M3: To encourage collaborative and experiential learning through real-time projects, enhancing teamwork, communication, and interpersonal skills for improved employability.

M4: To instill high ethical standards, professional values, and social responsibility through active societal engagement.

ALIGNMENT WITH SUSTAINABLE DEVELOPMENT GOALS (SDGS)



SDG 4 – Quality Education

The Academic Prelude contributes to SDG 4 by enhancing the quality of education through the sharing of subject knowledge, teaching perspectives, and effective pedagogical practices among faculty members.

SDG 17 – Partnerships for the Goals

The event supports SDG 17 by fostering collaboration and academic partnership among faculty members, encouraging collective efforts toward improved teaching–learning outcomes.





DR. ASHOK MARAM PRINCIPAL



DR.M. SANDHYA RANI DEAN - ACADEMICS



Dr. MANJUNATH GADIPARTHI
HOD – CSE & IT



Dr. L.V. RAMESH

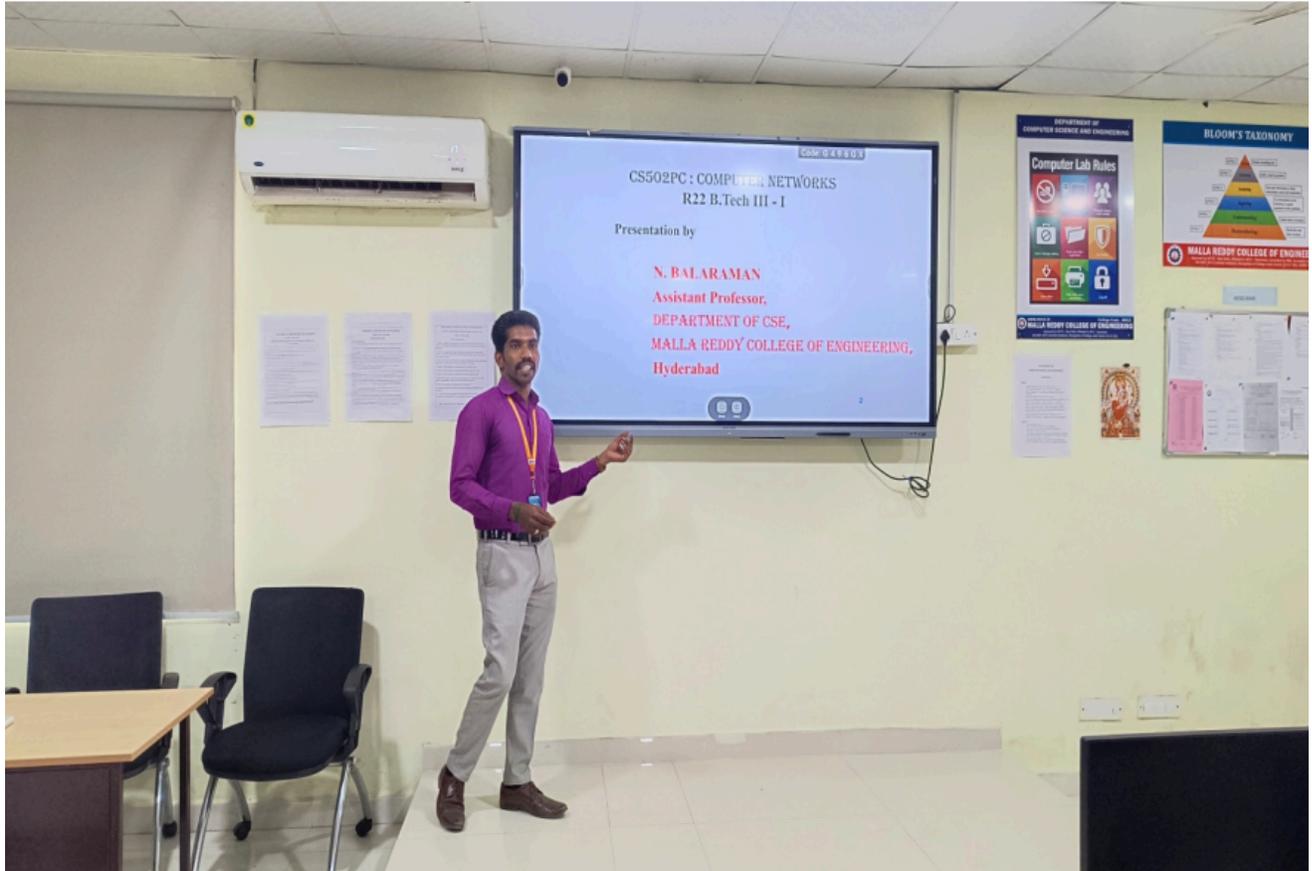
Subject Name: DESIGNING AND ANALYSIS OF ALGORITHMS

Summary:

Design and Analysis of Algorithms (DAA) is a core computer science subject focused on creating and evaluating the efficiency of algorithms.

It involves understanding problem-solving techniques, analyzing algorithm performance (time and space complexity), and choosing the most suitable approach for a given task.

Algorithm Design Techniques: DAA covers various techniques for designing efficient algorithms.



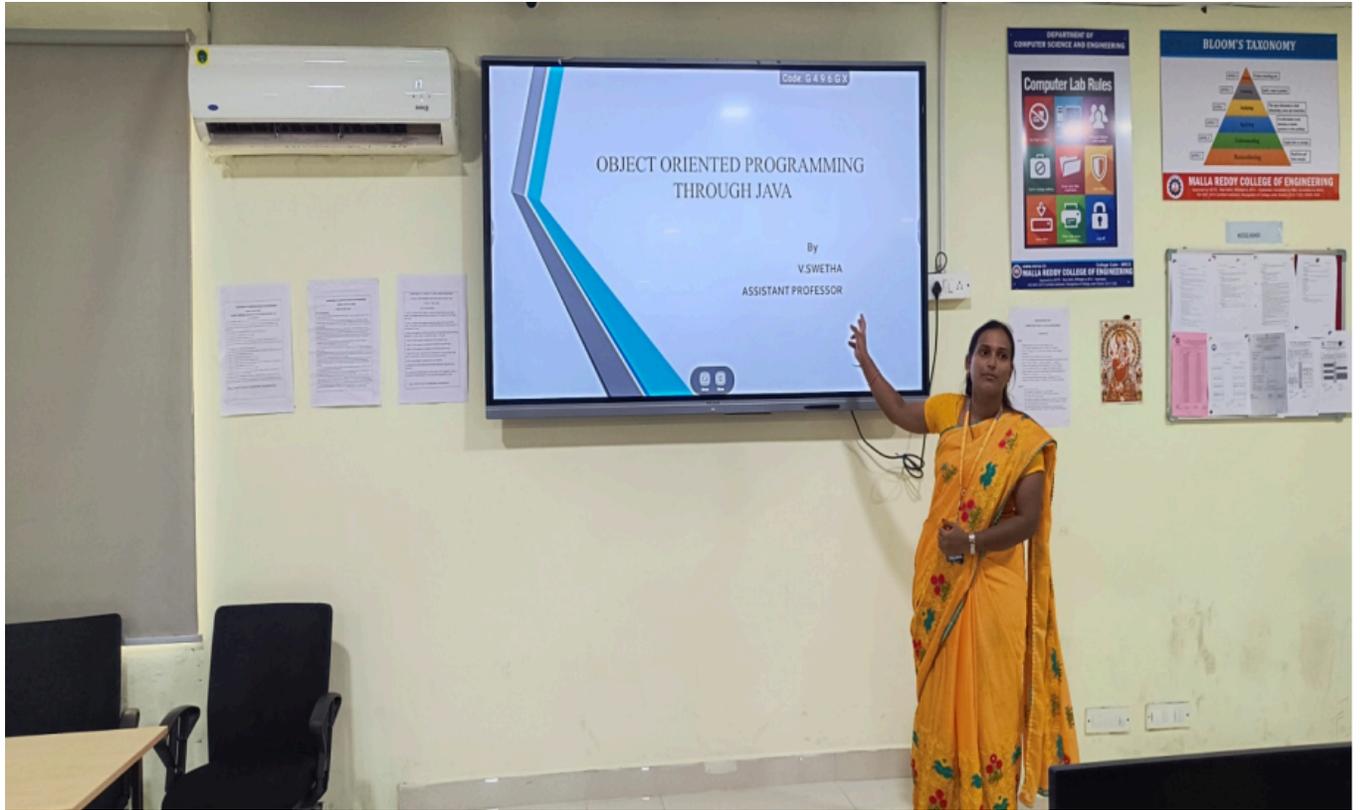
Mr. N. BALARAMAN

Subject Name: COMPUTER NETWORK

Summary:

The Computer Networks course provides a solid foundation in networking principles, beginning with network hardware, software, and the evolution of the Internet. It introduces the OSI and TCP/IP models, laying the groundwork for understanding communication protocols and network architecture.

IPv4/IPv6 addressing, and subnetting. The transport layer emphasizes reliable data transfer, congestion control, and TCP vs UDP, along with socket programming.



Mrs. V. SWETHA

Subject Name: OOPS THROUGH JAVA

Summary: This course provides a thorough foundation in Java programming, covering object-oriented concepts, core syntax, and advanced features.

Java is presented not just as a programming language, but as a platform that supports secure, portable, and robust application development

It explores exception handling, multithreading, packages, and interfaces for building scalable applications.

GUI development using AWT and Swing, along with applets and event handling, is also included for interactive application design.



Mrs. SK. SABA

Subject Name: PRINCIPLES OF PROGRAMMING LANGUAGES

Summary:

This course covers fundamental programming language concepts, including the reasons for studying programming languages, their design criteria, and evaluation methods. It explores syntax, semantics, and formal methods of language description. Topics include data types, scope, binding, expressions, control structures, subprograms, and concurrency mechanisms like semaphores and threads. The course also delves into functional and logic programming paradigms, with examples like LISP and Prolog, and scripting languages such as Python. Key areas like exception handling, subprogram implementation, abstract data types, and language design trade-offs are examined to provide a broad understanding of programming language theory and application.



Ms. E. VENKATESHWARAMMA

Subject Name: Computer Organization and Architecture

Summary: This course covers the fundamentals of digital computers, including computer organization, register transfer language, microoperations, microprogrammed control.

CPU design, instruction formats, addressing modes, and program control.

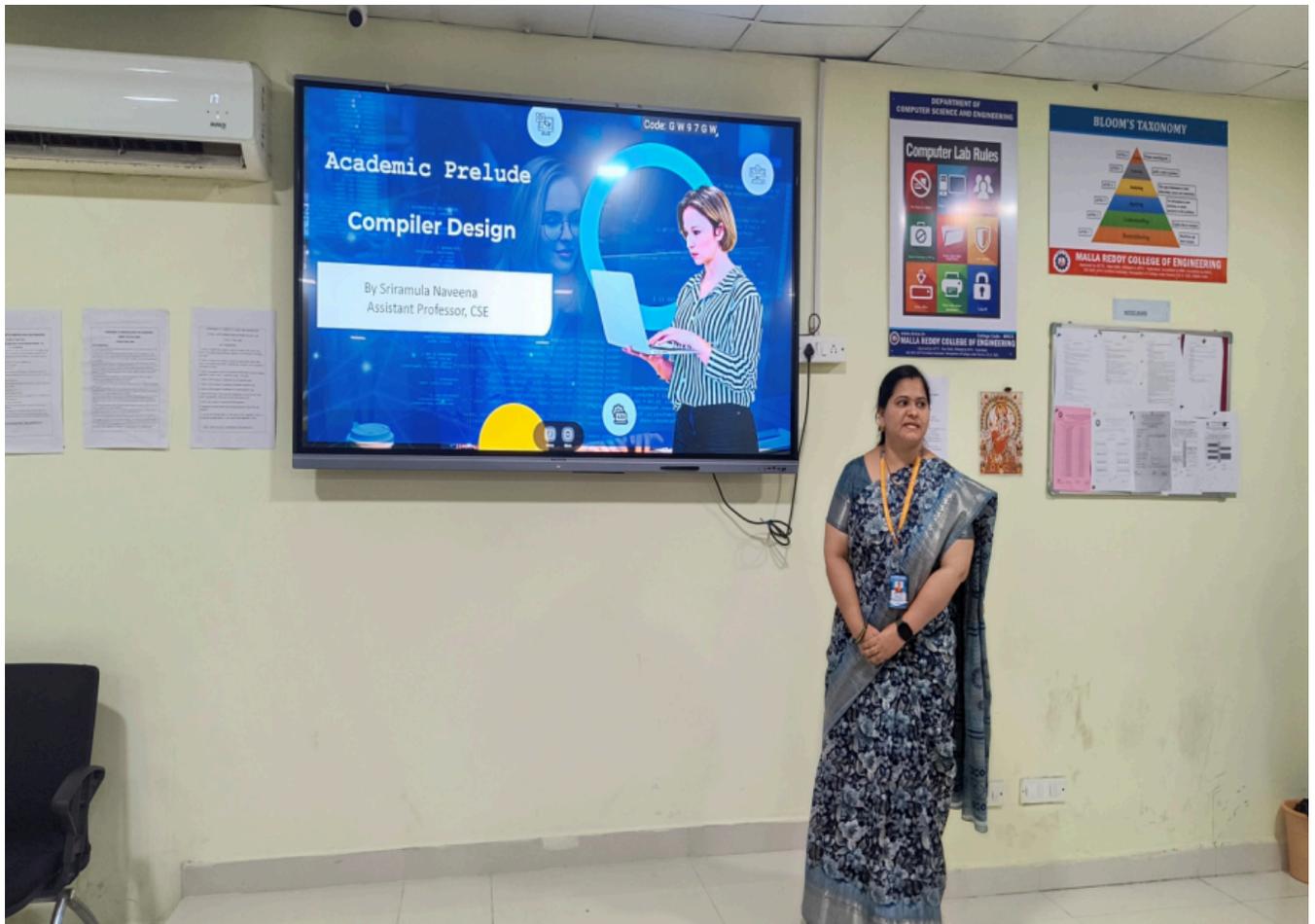


Mr. B. SHIVA KARTHIK

Subject Name: DEVOPS

Summary: This subject introduces DevOps principles, focusing on agile development, continuous delivery, and ITIL integration.

It explores software development models, architecture styles. Key project management practices are covered, including source code control systems. The subject emphasizes CI/CD integration using Jenkins. Finally, it discusses testing and deployment tools.



Mrs. S. NAVEENA

Subject Name: COMPILER DESIGN

Summary: Compiler Design is a foundational subject in computer science that focuses on how high-level programming languages are translated into machine-executable code.

It explores the various stages of a compiler such as lexical analysis, syntax analysis, semantic analysis, intermediate code generation, optimization, and final code generation.

Students learn how compilers process source code, check for correctness, optimize performance, and manage memory and runtime environments.

This course enhances understanding of programming language structure and builds practical skills in developing language processors.



Mr. K. KOTESWARA RAO

Subject Name: DEVOPS

Summary:

This course provides a comprehensive overview of DevOps, starting with its foundation and relationship with Agile and ITIL practices. It explores key processes like Continuous Delivery, Release Management, and methodologies such as Scrum and Kanban, emphasizing pipeline creation and identifying bottlenecks. In terms of project management, the course covers the evolution and importance of source code control, using tools like Git, Gerrit, and GitLab, while also touching on containerization with Docker. It introduces the pull request model for collaboration and code reviews.



Mr. CH. SAGAR

Subject Name: Computer Organization and Architecture

Summary: This course covers the fundamentals of digital computers, including computer organization, register transfer language, microoperations, microprogrammed control.

It focusses on data representation, computer arithmetic algorithms, input-output organization, transfer modes, interrupts, DMA, and memory hierarchy including cache and associative memory.



Mr. M. SRINIVAS NAYAK

Subject Name: CRYPTOGRAPHY & NETWORK SECURITY

Summary:

This subject provides a comprehensive understanding of network and secure communication protocols. It covers both symmetric and asymmetric encryption techniques, hash functions, key management, and transport-layer security. Additionally, it explores wireless and email security, IP security, and real-world cryptographic case studies.



Mr. K. ANIL KUMAR

Subject Name: Computer Organization and Architecture

Summary:

Its Covers RISC and CISC architectures, pipeline and vector processing techniques, and multiprocessor systems including interprocessor communication and cache coherence.

CPU design, instruction formats, addressing modes, and program control.



Ms. T. LAKSHMI TULASI

Subject Name: COMPILER DESIGN

Summary:

A compiler transforms high-level source code into efficient machine code through sequential phases—lexical and syntax analysis parse and structure the code, while semantic analysis and intermediate code generation embed meanings, build IR (e.g., three- address code, syntax trees), and verify types The backend handles runtime environments (stack, heap, garbage collection), target code generation (basic blocks, flow graphs, peephole optimization, register allocation). Finally, machine independent optimizations—data-flow



Mr. L. LAKSHMI REDDY

Subject Name: SCRIPTING LANGUAGE

Summary: Scripting languages are high-level programming languages used to automate tasks, control other applications, and create dynamic content.

Unlike compiled languages (like C or Java), scripting languages are typically interpreted, making development faster and more interactive.

They are widely used for: System automation, Web development, Data processing, Rapid application development.

Common scripting languages include: Python, Perl, Ruby, JavaScript, TCL

Scripting encourages writing concise, readable, and reusable code, which is ideal for solving real-world problems efficiently.



Mrs. J. RAVALI

Subject Name: INFORMATION SECURITY

Summary: Information Security is a critical discipline that deals with protecting data and systems from unauthorized access, misuse, or destruction.

This course introduces students to core principles of cryptography, authentication, data integrity, access control, and secure protocols.

The curriculum balances theoretical knowledge and practical applications to develop a security-first mindset.

The course explores both classical and modern cryptographic techniques and delves into key management, secure communication protocols, and cyber threat analysis.



Mr. B. VENKATESH

Subject Name : HUMAN COMPUTER INTERACTION

Summary :

Human-Computer Interaction (HCI) is the study of how people interact with computers and other digital devices. It helps us design computers, websites, apps, and machines that are easy and enjoyable to use.

It's about making technology user-friendly.

It focuses on how people use and communicate with computers.

It helps designers and developers build better software and systems.

Main Goals of HCI:

Make computers easy to use

Make systems that are comfortable and safe

Help users get things done quickly

Make technology work for everyone, including people with disabilities



Mr. V. RAVINDER

Subject Name : COMPUTER GRAPHICS

Summary :

Computer Graphics is a field of computer science that deals with creating, manipulating, and representing visual images and data using computers. It combines technology, art, and design to generate visuals ranging from simple 2D shapes to complex 3D environments, Image Processing, Animation, Rendering.

Entertainment – Movies, video games, virtual reality (VR), augmented reality (AR)

Design and Engineering – CAD (Computer-Aided Design), architecture, automotive design.

STUDENT EDITORIAL BOARD



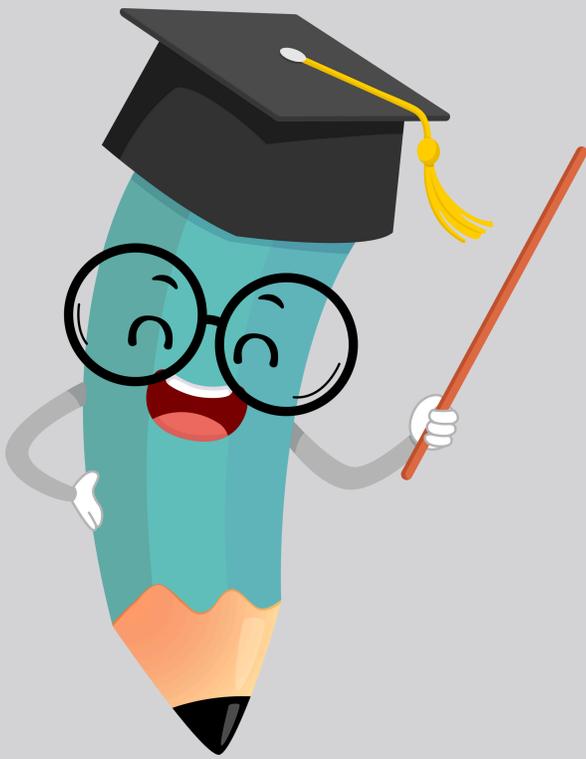
Niharika



Ch. Bhavitha



Preeti Auditto



“Academic Prelude 2.0 is an initiative where faculty present their subject insights to enhance teaching quality.”

