

USHARAMA

COLLEGE OF ENGINEERING AND TECHNOLOGY
AUTONOMOUS

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TECH BYTES

JAN-JUN

ACADEMIC YEAR:2021-22



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WHAT IS CSE...!??

At Usha Rama College, the Department of Computer Science and Engineering (CSE) offers a dynamic learning environment aimed at equipping students with technical expertise, creativity, and leadership skills essential for thriving in today's fast-evolving tech landscape. The department blends academic rigor with hands-on experience, ensuring students are proficient in areas such as artificial intelligence, data science, cybersecurity, and software engineering through lectures, workshops, and seminars.

To reinforce theoretical learning, the department emphasizes practical knowledge through lab sessions, research projects, and industry visits. These experiences help students apply concepts to real-world scenarios and stay updated with emerging technologies. Students are encouraged to develop problem-solving abilities by participating in coding competitions, hackathons, and technical quizzes that promote critical thinking and innovation.

Beyond the classroom, the department offers a wide range of co-curricular activities, including workshops on advanced programming languages, algorithms, and development tools. The annual technical fest provides a platform for students to showcase projects, participate in coding events, and interact with industry professionals. Partnerships with leading tech companies enable students to secure internships that offer valuable industry exposure and hands-on training.

The CSE department also promotes the overall development of students through extracurricular activities. Participation in sports, cultural events, and college fests nurtures teamwork, creativity, and confidence. Technical clubs and societies—such as those focused on coding, robotics, or cybersecurity—allow students to deepen their expertise, collaborate on projects, and build professional networks.

Career readiness is a major focus of the department. It offers placement training, resume-building workshops, mock interviews, and networking opportunities with industry leaders to prepare students for successful careers. These initiatives help students understand current job market trends and refine their professional skills. Close industry collaborations ensure that students gain exposure to real-world work environments and establish valuable connections.

In addition to professional development, the department emphasizes social responsibility. Through participation in the National Service Scheme (NSS), students engage in community outreach, volunteer initiatives, and social impact projects. These activities foster leadership, empathy, and a sense of civic duty—qualities essential for responsible global citizens.

Vision



To emerge as a skilled Technocrats on global scale in Computer Science and Engineering through quality education, innovation, collaborative researchers and entrepreneurs with moral values.

Mission



DM1: To impart quality education to the students.

DM2: To pursue creative research and new technologies in Computer Science and Engineering.

DM3: To encourage entrepreneurship skills among students and inculcating moral and ethical values to serve for the society.

Program Educational Objectives Statements (PEOs)

PEO 1: Our graduates will establish themselves as effective professionals in industry, academia and entrepreneurship.

PEO 2: Our graduates will become profound researchers in multiple domains.

PEO 3: Our graduates will act as a leader in society.

Program Outcomes (POs)

1.Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2.Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3.Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4.Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5.Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6.The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8.Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9.Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10.Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11.Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12.Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO1: Illustrating a Comprehensive understanding of fundamental Computer system Principles encompassing both hardware and software components to cultivate strong conceptual skills in processing and assigning computation solutions.

PSO2: Demonstrate and design proficient and technical abilities in algorithms, networking, web design, Cloud Computing and data analytics enabling the development of innovative solutions to complex real-world problems while identifying and addressing emerging research gaps.

IOT AND SECURITY WORKSHOP



Three-Day Workshop on IoT and Security

The Department of Computer Science and Engineering at Usha Rama College of Engineering and Technology successfully organized a 3-day workshop on “IoT and Security” from 18th to 20th May 2021 Co-ordinated by **Ch.Phani kumar** , aimed at providing students with hands-on experience and practical insights into the rapidly growing field of the Internet of Things (IoT) and the essential security measures needed in connected environments.]

◆ Day 1 – Introduction to IoT and Hardware Basics

Focus: Understanding the foundations of IoT and familiarization with essential components.

Highlights:

Introduction to IoT, its applications, and real-world relevance

Overview of IoT architecture and communication models

Hands-on session with Arduino, NodeMCU, and basic sensors (DHT11, IR, Ultrasonic)

LED blinking, sensor integration, and data collection basics

Outcomes:

Students gained a clear understanding of IoT fundamentals

Built simple circuits and interacted with hardware components

◆ Day 2 – IoT Communication & Cloud Integration

Focus: Learning how IoT devices communicate and store data securely.

Highlights:

Introduction to MQTT protocol and HTTP REST APIs

Interfacing sensors with NodeMCU to transmit data wirelessly

Cloud integration using platforms like ThingSpeak and Blynk

Real-time data visualization and dashboard creation

Outcomes:

Students successfully pushed data from sensors to the cloud

Understood how IoT systems communicate securely and efficiently

◆ Day 3 – Security in IoT Systems

Focus: Addressing the vulnerabilities in IoT systems and introducing security practices.

Highlights:

CODE RELAY



A Code Relay is an exciting and fast-paced team-based coding competition that emphasizes problem-solving, teamwork, and quick thinking event conducted on 27th May 2021 Co-ordinate by **B.V Praveen kumar** . Unlike individual coding contests, where participants solve problems independently, a Code Relay requires team members to work in sequence, passing coding tasks to each other. The team that completes all tasks in the shortest time emerges as the winner. The team that completes all tasks in the shortest time emerges as the winner. The competition begins with teams of 3-5 members, where each participant contributes to solving different parts of the problem. The first team member starts coding and, after a set time or upon solving their part, hands over the task to the next teammate. This continues until the final task is completed. A Code Relay is not just about writing correct code; it also requires excellent coordination and communication. Each team must develop a strategy to delegate tasks efficiently, ensuring smooth transitions between members. Understanding the strengths of each participant helps in assigning the right tasks to the right person, which can significantly impact overall performance. This competition offers numerous benefits. It enhances teamwork by promoting collaboration and joint problem-solving. It also improves problem-solving skills, as participants must think quickly and adapt to new challenges. Additionally, it teaches time management by encouraging efficient coding under strict time constraints. Moreover, it simulates real-world coding environments, where developers often work in teams, build on each other's work, and troubleshoot issues together.

In conclusion, a Code Relay is more than just a competition—it's a thrilling way to develop coding skills, strengthen teamwork, and experience the excitement of solving problems under pressure. Code Relay enhancements and strategic considerations :

- Enhance Code Relay by optimizing team coordination, ensuring smooth transitions between participants, and implementing clear handoff protocols.
- Establish standardized coding practices with enforced style guidelines and automated linters.
- Encourage strategic planning by assigning roles based on strengths and setting clear objectives for each phase.
- Integrate real-time collaboration tools to streamline communication and issue tracking.

Foster a collaborative environment to enhance teamwork and overall efficiency. Leverage version control systems to track changes seamlessly and prevent code conflicts. Promote knowledge sharing through documentation and briefings before and after each relay segment. Encourage adaptability by preparing backup plans and alternative strategies in case of unexpected challenges. Utilize performance metrics to assess individual and team contributions, ensuring continuous growth and improvement. Finally, build a culture of support and mentorship to strengthen team dynamics and enhance overall problem-solving capabilities.

CYBER SHIELD

Challenge the Hack. Channel the Shield.



The Department of Computer Science and Engineering (CSE) at Usha Rama College of Engineering and Technology is proud to organize the Cyber Security Awareness Quiz on 11th June 2021 Co-ordinated by **T.Naga Mounika**, an interactive and educational event aimed at enhancing cybersecurity knowledge among students and professionals.

About the Event:

In today's digital world, cybersecurity has become a critical skill for every individual, whether they are students, professionals, or technology enthusiasts. This quiz is designed to educate participants on the latest cybersecurity threats, best practices, and protective measures. Through this event, we aim to foster a culture of cybersecurity awareness and responsibility.

Event Format:

The quiz will consist of four rounds, each covering crucial cybersecurity topics with questions ranging from easy to difficult levels. Each round will have 20 questions that test participants' knowledge and analytical skills in cybersecurity.

Rounds and Topics Covered:

- ◆ Round 1: Basics of Cyber Security (Easy Level)
 - Introduction to cybersecurity
 - Importance of strong passwords and authentication
 - Phishing, social engineering, and email scams
 - Safe browsing and identifying malicious websites

◆ Round 2: Network and Web Security (Moderate Level)

Fundamentals of network security (firewalls, VPNs, IDS/IPS)

Web security threats (SQL injection, XSS, CSRF)

Secure web browsing and HTTPS implementation

Public Wi-Fi risks and cybersecurity policies

◆ Round 3: Cryptography and Operating System Security (Advanced Level)

Encryption techniques (symmetric vs. asymmetric encryption)

Hashing algorithms and secure data storage

OS security features (Linux vs. Windows)

Secure access control and privilege escalation risks

◆ Round 4: Threats, Vulnerabilities, and Incident Response (Difficult Level)

Emerging cyber threats (ransomware, malware, zero-day exploits)

Ethical hacking and penetration testing methodologies

Incident response and forensic analysis

Cyber laws, ethics, and major cyber-attack case studies

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◆ Round 4: Threats, Vulnerabilities, and Incident Response (Difficult Level)

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Ethical hacking and penetration testing methodologies

Incident response and forensic analysis

Cyber laws, ethics, and major cyber-attack case studies

In a world where cyber threats are more prevalent than ever, it's crucial that we all play a part in safeguarding our digital environments. Whether you're securing your personal data or protecting the integrity of corporate systems, cybersecurity awareness is key to making the internet a safer place for everyone.

This quiz is not just about testing your knowledge; it's about developing a mindset of security awareness that will serve you throughout your career and personal life. By the end of the quiz, you'll be better equipped to spot risks, mitigate threats, and make informed decisions in your digital interactions.

APP DEVELOPMENT WORKSHOP

In today's technology-driven world, app development is a crucial skill for every aspiring developer. This 3-day i.e., from 27th to 29th July 2021 intensive bootcamp was designed to give students hands-on experience with the complete app development lifecycle—from conceptualization to deployment. Whether a beginner or an enthusiast, participants gained a strong foundation in programming, UI/UX design, front-end and back-end development, and testing. Co-ordinated by **P.Bhagya Sri**

◆ Day 1 Foundations of App Development

Introduction to App Development

Overview of mobile and web applications

Understanding platforms (Android, iOS, Web)

Programming languages and tools used

Setting up the development environment

UI/UX Design & Prototyping

Principles of user interface and user experience design

Tools like Figma, Adobe XD, or Canva

Creating wireframes and interactive prototypes

Emphasis on user-centric design



◆ Day 2 – Front-End & Back-End Development

Front-End Development

Exploring frameworks like React and Flutter

Implementing responsive UI designs

Hands-on interface building and navigation

Back-End Development

Introduction to databases and server-side programming

Understanding APIs (REST, GraphQL)

Basics of authentication and security

Hands-on with Node.js, Firebase, or Django

◆ Day 3 – Integration, Testing, and Deployment

Full-Stack Integration

Connecting front-end and back-end components

Debugging and performance optimization

Testing & Deployment

Testing strategies and industry best practices

Deployment workflows and hosting options

Final Project Showcase

Student-led project presentations

Q&A session with mentors and experts

The workshop concluded on an enthusiastic and inspiring note, igniting a passion for app development among students. It encouraged them to turn their ideas into real-world applications and provided the technical tools and confidence to do so.

Participants left with a deeper understanding of development workflows, collaboration techniques, and the importance of user-centric design. With hands-on guidance and exposure to cutting-edge tools and frameworks, the workshop bridged the gap between classroom learning and industry practices.

SOFT SKILLS WORKSHOP

Soft Skills Development Workshop – 3-Day Overview

To help students gain vital interpersonal and professional skills for the tech industry, the Department of CSE organized a 3-day Soft Skills Development Workshop on 4th and 5th of August 2021 Co-ordinated by **K.Bhavani**. The sessions focused on communication, teamwork, self-growth, and career preparedness through interactive activities and expert guidance.

◆ Day 1 – Communication & Teamwork

Focus: Strengthening communication and collaboration in tech environments.

Highlights:

- Icebreaker activities for team bonding
- Workshop on verbal/written communication, active listening, and non-verbal cues
- Intro to tools like Slack, Trello, GitHub
- Group Task: Web development challenge using HTML & CSS with Git-based collaboration

Outcomes:

- Enhanced communication skills
- Hands-on teamwork experience using tech tools

◆ Day 2 – Personal Growth & Networking

Focus: Boosting self-awareness, digital presence, and industry connections.

Highlights:

- Personal branding & resume building
- Optimizing GitHub and LinkedIn profiles
- Networking session with alumni and professionals
- Activity: Creation of a personal portfolio webpage (HTML, CSS, JS)

Outcomes:

- Stronger personal brand
- Improved professional networking strategies
- Live portfolio for showcasing skills

◆ Day 3 – Career Readiness & Soft Skills

Focus: Preparing students for tech careers through skill mapping, interviews, and soft skills.



Highlights:

- Tech Career Paths Overview: An insightful session exploring roles like Frontend Developer, Backend Developer, and Full-Stack Developer, helping students understand the skillsets and responsibilities associated with each path.
- Mock Interviews: Students participated in simulated technical and behavioral interviews to gain real-world experience, improve their responses, and receive constructive feedback.

Soft Skills Workshop: Focused training on essential workplace skills:

- Effective communication in team and client settings
- Productive teamwork and conflict resolution
- Time management and task prioritization
- Creative problem-solving and adaptability
- Goal setting and accepting feedback for continuous improvement

Outcomes:

- Students gained increased confidence in handling both technical and HR interviews through hands-on practice and feedback.
- Developed a practical understanding of soft skills crucial for thriving in tech roles—such as collaboration, adaptability, and critical thinking—bridging the gap between academic knowledge and industry expectations.

Conclusion:

The workshop successfully helped students enhance their interpersonal abilities, sharpen their career focus, and prepare for the dynamic demands of the tech industry. By blending technical awareness with emotional intelligence and teamwork, the Department of CSE reaffirms its commitment to nurturing well-rounded, job-ready professionals for the future.

STAFF ACHIEVEMENTS

Empowering Educators: Advancing Faculty Excellence in CSE

S.No	Faculty Name	Workshop/Training Program	Organization
1	B.V. Praveen Kumar	Celonis Training	Edu Skills
2	M. Samba Siva Rao	Universal Human Values (UHV) FDP	AICTE
3	T. Naga Mounika	Universal Human Values (UHV) FDP	AICTE
4	Ch. Phani Kumar	AWS Academy Cloud Foundation	Edu Skills
5	Ch. Phani Kumar	AWS Solutions Architect	Edu Skills

Our faculty members are the pillars of academic excellence and innovation at Usha Rama College of Engineering and Technology. With unwavering dedication to teaching, research, and community engagement, they not only impart knowledge but also serve as mentors and role models, shaping the next generation of engineers and innovators. Their continued pursuit of excellence has earned them recognition at state, national, and international platforms, adding immense value to our institution's academic fabric.

The Computer Science and Engineering (CSE) Department stands at the forefront of faculty development, actively encouraging professional growth through participation in Faculty Development Programs (FDPs), workshops, and industry-recognized certifications. These initiatives ensure that our educators stay aligned with global technological trends and pedagogical best practices.

Several faculty members have recently taken significant strides in their professional journey. For instance, Mr. B.V. Praveen Kumar successfully completed training in Celonis, a cutting-edge process mining tool, enhancing his capability to integrate process optimization concepts into academic projects. Mr. M. Samba Siva Rao and Ms. T. Naga Mounika participated in an FDP on Universal Human Values (UHV), conducted by AICTE, promoting a value-based education model and holistic teaching approaches. In the realm of cloud computing, Mr. Ch. Phani Kumar has completed certifications in AWS Academy Cloud Foundation and AWS Solutions Architecture, bridging the gap between theoretical learning and real-world application.

Moreover, the department actively collaborates with reputed organizations such as AICTE, EduSkills, and NPTEL to ensure faculty are constantly exposed to the evolving tech landscape. These programs not only upskill educators but also translate into enriched classroom experiences for students.

Such consistent participation in developmental initiatives exemplifies the department's vision of nurturing a culture of continuous learning, academic rigor, and innovation. By investing in faculty development, the CSE department ensures that students receive an education that is both technologically relevant and intellectually transformative.

STUDENT ACHIEVEMENTS

NAGA VENKATA AKHIL PADAMATA	HACKER RANK	NATIONAL	Participated
SAI CHARITHA SRI KOTTAPU	CODE COMBAT	NATIONAL	Participated
ODUGU PREM KUMAR	PRESENCIA	NATIONAL	Participated
NARRA ABHINAYA	PRESENCIA	NATIONAL	Participated
MIRZA SHARIB ALI	JAM	NATIONAL	Participated

The students of the Computer Science and Engineering (CSE) department at Usha Rama College of Engineering and Technology have demonstrated remarkable achievements in academics, innovation, and industry-oriented training. Many students have secured top ranks in academics, with Naga Sandhya Motepalli earning a Gold Medal for her outstanding performance, and Sai Krishna Kesineni receiving a Silver Medal during the 2015-16 academic year

In addition to academics, CSE students have been involved in innovative projects, such as the development of a Smart Mirror, showcasing their creativity and technical skills

. To bridge the gap between theoretical learning and practical application, students frequently participate in workshops, industrial visits, and technical training programs. The department has collaborations with leading tech companies like IBM, offering students valuable exposure to industry practices

These achievements highlight the excellence and dedication of CSE students at Usha Rama College, preparing them for successful careers in technology and innovation.



Sheets of EXCELLENCE



TOPPERS OF THE YEAR



2ND YEAR

A. SANTOSH

(20NG1A0566)-9.51

G .UJWALA

(20NG1A0516)-9.48

3RD YEAR

M.THARUNA SREE

(19NG1A0597)-9.27

R. MOUNIKA

(19NG1A055)-9.01

4TH YEAR

P.D.V.SATHVIKA REDDY

(18NG1A0537)-8.87

K.N.S SUNDARI

(18NG1A0591)-8.61

Together Against COVID: Vaccinating Our Campus Family

The NSS Unit of our college successfully organized an in-campus COVID-19 vaccination drive to ensure the safety and well-being of students, faculty, and staff. By arranging the drive within the college premises, the NSS team made it more convenient and accessible for everyone to get vaccinated without the need to travel. This initiative was carried out in coordination with local health authorities, ensuring all guidelines and safety protocols were strictly followed. The effort demonstrated our institution's proactive approach to health and safety during the pandemic



"Hands That Help, Hearts That Care"



The in-campus vaccination program saw the active participation of NSS volunteers who managed everything from registration desks and queue management to guiding individuals throughout the process. The volunteers also helped in spreading awareness about vaccine safety and encouraged hesitant individuals to take part. Their dedicated efforts helped create a safe and organized environment within the college, making the drive a smooth and impactful experience for all involved.

STAFF SPORTS



Uniting Staff Through Sports and Recreation



STUDENT SPORTS



Sports form an integral and indispensable part of student life, contributing significantly to the holistic development of an individual. They play a vital role in promoting physical fitness, mental alertness, emotional well-being, and a strong sense of discipline among students. At our college, great emphasis is placed on encouraging students to actively participate in a wide spectrum of sports and games, including cricket, kabaddi, volleyball, badminton, athletics, and a variety of indoor games such as chess, carrom, and table tennis. This inclusive approach ensures that every student, regardless of skill level, finds an opportunity to engage in physical activity and discover their sporting potential.

The institution organizes regular training sessions under the guidance of experienced and dedicated coaches, enabling students to refine their skills and maintain peak physical condition. Annual sports meets, intra-college competitions, and intercollegiate tournaments provide platforms for healthy competition and help students develop confidence, teamwork, and sportsmanship. Through consistent participation and rigorous practice, many of our students have achieved remarkable success, bringing pride and recognition to the college by excelling in district, state, and university-level competitions. The college is equipped with excellent sports infrastructure, including well-maintained playgrounds, courts, and indoor facilities, which create a supportive environment for athletic growth. Beyond physical benefits, participation in sports instills essential life skills such as leadership, time management, perseverance, and the ability to handle success and failure with grace.

T&P

Our college is committed to providing exceptional training and placement opportunities to ensure students are well-prepared for successful careers. The Training and Placement Cell conducts regular workshops, technical training sessions, and soft skills development programs to enhance students' employability. Industry experts and alumni frequently interact with students through seminars and mentorship programs, bridging the gap between academia and industry requirements. We have strong collaborations with leading companies, ensuring ample internship and job opportunities across various domains. Our dedicated placement team works tirelessly to facilitate campus recruitment drives, mock interviews, and resume-building sessions, helping students secure positions in top organizations.

18NG1A0501	Allu Jahnavi
18NG1A0507	Chakka Rupadevi
18NG1A0506	Charishma devi Burle
18NG1A0540	Charishma Sai Sri Putti
18NG1A0512	Chinmai Moulya Dandamudi
18NG1A0522	Inturi Likhitha
17NG1A0529	Kukkamalla Mahima
18NG1A0532	Nannapaneni Sai Chandana
18NG1A0505	Rahul Sai Bantumalli
18NG1A0548	Sahithi Talupula

“ we’re changing
the world with
technology “
–Bill gates