INNOVATING THE DIGITAL FRONTIER

TECHNOVA

NEWS LETTER

MAY, 2023

Department of Computer Science and Engineering

MALLA REDDY ENGINEERING COLLEGE FOR WOMEN

Autonomous Institution – UGC, Govt. of India

Accredited by NAAC with 'A' Grade

Programmes Accredited by NBA

Maisammaguda, Dhulapally, Secunderabad – 500 010, Telangana

FOUNDER CHAIRMAN'S MESSAGE

I congratulate the Department of CSE, MRECW, for bringing out the prestigious **TECHNOVA** Newsletter for the academic year 2022-23. I am confident that the magazine will provide a valuable platform for both students and faculty to expand their technical knowledge and hone their hidden literary talents, contributing to the all-round development of the students. I hope that this small piece of literary work will not only encourage a love for reading among students but also foster a sense of belonging to the institution. I extend my congratulations to the editorial board for effectively handling this challenging task and wish them all the best for the success of this endeavor.

Ch. Malla Reddy
Founder Chairman, MRGI
Hon'ble Minister, Telangana

PRINCIPAL'S MESSAGE

I would like to extend my heartfelt congratulations to the Department of CSE, MRECW, for publishing the esteemed **TECHNOVA** Newsletter for the academic year 2022-23. This newsletter provides an excellent opportunity for both students and faculty to expand their technical knowledge and showcase their hidden literary talents. I am confident that it will play a significant role in the holistic development of our students. I believe this initiative will not only inspire a passion for reading but also strengthen the sense of pride and belonging within our institution. My sincere appreciation goes to the editorial board for their dedication and effective execution of this task. I wish them continued success in this valuable endeavor.

Dr. Y. Madhavee Latha
Principal

HOD'S MESSAGE

It is with great pride and satisfaction that the Department of CSE, MRECW, brings out the issue of the yearly department TECHNOVA Newsletter for the academic year 2022-23. It gives me immense pleasure to note that the response to the magazine has been overwhelming. The wide range of articles reflects the creative potential and original thinking that our students and faculty possess in abundance. Each article is engaging, thought-provoking, and captivating. I applaud the contributors for their insightful thoughts and the diverse perspectives they have shared through their contributions.

Dr. C.V.P.R PRASAD
HOD-CSE

ABOUT THE DEPARTMENT

The Department of Computer Science and Engineering (CSE) at Malla Reddy Engineering College for Women offers a B.Tech program with an intake of 240 students, along with M.Tech programs in Computer Science and Engineering. The department is committed to ensuring that students meet the highest industry standards through its comprehensive academic programs. Equipped with state-of-the-art infrastructure, the department features well-equipped laboratories with the latest hardware and software. Specialized labs for programming, networking, and project development further enhance the learning experience. Research and development are key priorities, and both students and faculty are encouraged to engage in research projects, attend conferences, and publish their findings. Strong ties with the industry are maintained through collaborations, internships, workshops, and guest lectures. These partnerships provide students with practical exposure and keep them updated on industry trends.

The department also fosters student involvement by establishing student chapters of prestigious organizations such as CSI, IEEE, and ISTE. Under these chapters, the department organizes national and state-level technical symposiums, including *Future Sastra* and *Medha*, as well as various student development programs. To enhance both technical and soft skills, the department organizes activities such as coding competitions, hackathons, seminars, and technical clubs. A dedicated placement cell works actively to secure job opportunities for students in reputed companies, offering placement drives, training sessions, and career guidance to ensure students are industry-ready.

The department also offers various certification programs, including IBM-Cognitive, TCS-IoN, Coursera, NASSCOM, Oxford Achievers Certification (in collaboration with Oxford University Press, India), Cambridge C1 Level Certification (in association with Cambridge University), Microsoft, Cisco, and Oracle certifications. These are provided through partnerships with leading organizations such as the Center for Development of Communication Skills, Microsoft Innovation Center among others. Additionally, the department offers project-based training for students in their areas of interest across all years of study.

The department is also committed to faculty development, organizing international and national conferences, workshops, and refresher courses on new technological disciplines. Many faculty members have received patents, awards, and have published books and numerous papers in reputed international/national journals and conferences. In summary, the Department of CSE at Malla Reddy Engineering College for Women is dedicated to producing competent professionals who can make valuable contributions to the field of technology.

Vision

- o To produce globally competent professionals in the field of Computer Science and Engineering.
- o To attain academic and research excellence in advanced technologies of Computer Science and Engineering by promoting a creative environment for learning and innovation.

Mission

- o To impart holistic technical education using the best of infrastructure, outstanding technical and teaching expertise, training students into competent and confident engineers with excellent communication skills, to face the global challenges of the future technological advancements.
- o To evolve into centre of excellence of computer science and engineering through creative and innovative practices in teaching-learning, promoting academic excellence to produce world class professionals, making the students psychologically strong and emotionally balanced with social consciousness, ethical values and trans-disciplinary research capabilities.

Programmable Educational Objectives - PEOs

PEO1 - Professional Enhancement

Provide the students with strong fundamental and advanced knowledge in Mathematics, Science and Engineering with respect to Computer Science and Engineering discipline with an emphasis to solve Engineering problems.

PEO2 - Core Competence

Prepare the students through well - designed curriculum to excel in various programmes in Computer Science and Engineering, to meet the needs of the industry and for higher education pursuit.

PEO3 - Technical Accomplishments

Train the students with intensive and extensive engineering knowledge and skill to analyze, design and create novel products and solutions in the field of Computer Science and Engineering.

PEO4 - Professionalism

To inculcate in students professional attitude, multidisciplinary approach, ethics, team work, communication, ability to relate computer engineering issues with societal needs and contribute towards nation building.

PEO5 - Learning Environment

To provide students with an academic environment that inculcates the spirit of excellence, creativity, innovation, leadership, lifelong learning, ethical codes and guidelines to become a successful professional in Computer Science and Engineering.

Program Specific Outcomes – PSOs

- o **PSO1 -** The ability to analyse, design, code and test application specific or complex engineering problems in Cryptography and Network Security, Design and Analysis of Algorithm, Computer Networks, Data Mining, Cloud Computing, Mobile Computing, Cloud Computing, Internet of Things (IoT), Data Science, Artificial Intelligence, Machine Learning, Cyber Security, Block chain Technology, and Big Data by applying the knowledge of basic sciences, engineering mathematics and engineering fundamentals.
- o **PSO2 -** The ability to adapt for rapid changes in tools and technology with an understanding of societal and ecological issues, relevant to professional engineering practice through life-long learning.
- o **PSO3 -** Excellent adaptability to function in multi-disciplinary work environment, good interpersonal skills as a leader in a team, in appreciation of professional ethics and societal responsibilities.

Program Outcomes

PO1

Engineering knowledge

An ability to apply knowledge of Mathematics (including Probability & Statistics and Mathematical Foundation of Computer Science), Science, and Engineering.

PO2

Problem analysis

An ability to design and conduct experiments, as well as to analyze and interpret data including hardware and software components

PO3

Design / development of solutions

An ability to design a complex computing system or process to meet desired specifications and needs.

PO4

Conduct investigations of complex problems

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.

PO5

Modern tool usage

An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

PO6

The engineer and society

An ability to understanding of professional, health, safety, legal, cultural and social responsibilities.

PO7

Environment and sustainability

The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and demonstrate the knowledge need for sustainable development.

PO8

Ethics

Apply ethical principles, responsibility and norms of the engineering practice.

PO9

Individual and team work

An ability to function on multi-disciplinary teams.

PO10

Communication

An ability to function on multi-disciplinary teams.

PO11

Project management and finance

An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multi-disciplinary environments

PO12

Life-long learning

A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning

Student chapter events organized for the A.Y 2022-23

- ❑ **CSI - Future Sastra-2K23 (Technical Symposium)**: A national-level technical symposium held on 20th April 2023, with events like C-Cracker, Java Guru, Appify, Runtime Py-Error, Ai War-DataDustup, Cyber Siege, WebHunter, Speed Math Magic, Master of English, and CrackInterview.

- ❑ **IEEE - Future Sastra-2K23 (Technical Symposium)**: Another national-level technical symposium held on 20th April 2023, featuring events like Young Engineer, Trail Blazer, Young Manager, and Young Innovator.

- ❑ **CSI - Medha-2K22 (Technical Symposium)**: A state-level technical symposium held on 22nd October 2022, featuring events like C CODE WARRIOR, Genius of Java, Empiric of Data, Cipher DCode, AI Brains, and IoT Tech Smart.

- ❑ **IEEE - Medha-2K22 (Technical Symposium)**: A state-level technical symposium held on 22nd October 2022, with events like Paper Presentation, Py Codejam, Logic Mantra, MAT Queen, Circuit Innovation, Project Expo, Idea Presentation, and Hackathon.

- ❑ **ISTE - Medha-2K22 (Technical Symposium)**: A state-level technical symposium held on 22nd October 2022, featuring Mock Interview, Speak to Lead, and Product Launch.

- ❑ **ISTE - Technical Events for I.B.Tech**: A state-level event held on 10th December 2022, featuring C-Quiz, Science Quiz, Picture Perception, and General Quiz.

FUTURE SASTRA-2K23 TECHNICAL SYMPOSIUM

Coding Contests and Hackathons conducted for A.Y 2022-23

❑ **KAVACH 2023 (Intracollege Hackathon)**: An institute-level hackathon held on 20th March 2023.

❑ **National Level Hackathon**: A national-level hackathon held on 27th and 28th January 2023.

❑ **MSME 2.0 IDEA Hackathon (Internal)**: An internal institute-level hackathon held on 12th November 2022.

❑ **Hackathon Programme**: A state-level hackathon held from 3rd to 6th August 2022.

❑ **IDEA PRESENTATION-III Year**: An institute-level idea presentation event held on 29th April 2023.

❑ **IDEA PRESENTATION-II Year**: An institute-level idea presentation event held on 3rd December 2022.

Webinars conducted for Academic Year 2022-23

❑ **Webinar on Effective Communication Skills**: A webinar on effective communication skills was held in August 2022.

❑ **Webinar on Secrets of the Super Interviewer**: A webinar on mastering interview skills, titled "Secrets of the Super Interviewer," took place on 27th August 2022.

Guest Lectures conducted for Academic Year 2022-23

❑ **Expert Lecture on Internet of Things and Deep Learning Networks**: Dr. M. Sabarimalai Manikandan from IIT Palakkad delivered a lecture on 23rd February 2023.

❑ **Expert Lecture on Research Opportunities in Digital Ecosystems**: Dr. L. Pratap Reddy, Professor at JNTUH, gave a lecture on 17th February 2023.

❑ **Tech Talk on Cybersecurity & Upskilling by Hitachi Vantara**: A tech talk on cybersecurity and upskilling was conducted on 10th January 2023.

❑ **Guest Lecture on Swarm Intelligence & its Applications**: Dr. Suresh Chandra Satapathy delivered a lecture on 16th December 2022.

❑ **Guest Lecture on IoT & Blockchain Technology**: Dr. E. Suresh Babu from NIT Warangal conducted a lecture on 11th June 2022.

❑ **Guest Lecture on Artificial Intelligence & Machine Learning**: A guest lecture on AI & ML was held on 10th June 2022.

❑ **Guest Lecture on Cyber Security & Ethical Hacking**: Mr. Santosh Chaluvadi, Founder & CEO of Supraja Technologies, gave a lecture on 9th June 2022.

❑ **Guest Lecture on Data Science**: Ms. Ch. Mohana Ravi, from SmartBridge Hyderabad, delivered a lecture on 7th June 2022.

Workshops conducted for Academic Year 2022-23

- ❑ **Workshop on Web Designing**: A workshop on web designing was held on 3rd and 4th February 2023.
- ❑ **Workshop on Cyber Security by Mr. Santosh Chaluvadi**: A workshop on cybersecurity was held from 17th to 21st October 2022, conducted by Mr. Santosh Chaluvadi, Founder & CEO of Supraja Technologies.
- ❑ **Workshop on Cloud Computing & Practical Exposure on AWS**: A workshop on cloud computing with practical exposure on AWS was held on 9th and 10th September 2022.
- ❑ **Workshop on Advanced Data Structures**: A workshop on advanced data structures was held on 26th and 27th August 2022.

Industrial Visits for Academic Year 2022-23

- ❑ **National Remote Sensing Centre-ISRO, Jeedimetla, Hyderabad**: An industry visit to the National Remote Sensing Centre-ISRO was conducted in January 2023.
- ❑ **TCS, Hyderabad**: An industry visit to TCS in Hyderabad took place in September 2022.

NSS Activities organized for the year A.Y 2022-2023

- ❑ **International Yoga Day Celebrations**: Held on 21st June 2023 at Gundlapochampalli Village Community Hall for village students.
- ❑ **World Health Day Awareness Programme**: Held on 7th April 2023 at ZPHS Gundlapochampalli.
- ❑ **Anti-Plastic Campaign**: Held on 11th March 2023 at Indiramma Colony.
- ❑ **Village Survey Programme**: Held on 11th February 2023 at Gundlapochampalli Village.
- ❑ **State Level National Youth Day**: Organized by JNTU Hyderabad at Maisammaguda Village on 12th January 2023.
- ❑ **Dental Camp**: Conducted on 18th December 2022 under NSS Units at Gundlapochampally Village.
- ❑ **Awareness Programme on Energy Conservation**: Held on 14th December 2022 in Indiramma Colony for the rural community.
- ❑ **Swachh Bharat Abhiyan Cleanliness Program**: Held on 1st December 2022.
- ❑ **Awareness Program on Importance of Vacation for Children**: Collaborated with Allied Health Sciences, Malla Reddy University, held on 22nd November 2022 at Gundlapochampally Village.
- ❑ **Awareness Camp on Anti-Plastic & Cleanliness**: Held on 19th November 2022 at ZP High School, Gundlapochampally.
- ❑ **NSS Day Celebrations**: Held on 24th September 2022.
- ❑ **Meditation Program**: Held from 22nd to 27th August 2022, in collaboration with Shri Ram Chandra Mission Heartfulness Centre.
- ❑ **Swathantra Bharata Vijayotsavalu**: Held on 15th August 2022 in Maisammaguda Village with Prabhata Bheri & Flag Hoisting.
- ❑ **Samoohika Jatheeya Geethaalapana**: Held on 12th August 2022.
- ❑ **Enlightened Nutrition Program**: Held on 6th August 2022, focusing on discovering secrets for optimal health for youth.
- ❑ **Health Fitness Program - Aerobics**: Held on 4th August 2022.
- ❑ **Go Green Plantation Program**: Held on 2nd August 2022.

Global Education and Career Guidance Cell Activities organized for the year A.Y 2022-2023

- ❑ **Awareness on Master's Programs in the U.S. & Career Opportunities**: An awareness session on pursuing a Master's in the U.S. and career opportunities was held with Brenda Rain on 14th June 2023.
- ❑ **Orientation Program by TOMCOM**: TOMCOM officials conducted an orientation program on 28th March 2023.
- ❑ **Master Class on Applied Mathematics & Data Science**: Dr. Keith J from the University of Wisconsin-Stout hosted a master class on applied mathematics in data science on 10th February 2023.
- ❑ **Tech Talk on Cyber Security & Upskilling**: Mr. Prasanth Nidamarthy from Hitachi Vantara gave a tech talk on cybersecurity and upskilling on 10th January 2023.
- ❑ **Alumni Talk on Data Analytics Careers**: Ms. Haseena Begum, Senior Cloud Analyst at Accenture, shared insights on data analytics careers on 17th December 2022.
- ❑ **Inauguration of Global Education Cell (G-CELL)**: Shri Navin Mittal (IAS) inaugurated the Global Education Cell on 14th December 2022.
- ❑ **Higher Education Awareness by Lawrence Tech University**: A session on higher education abroad by Lawrence Tech University was conducted on 7th November 2022.
- ❑ **Career Talk in DuPont Technologies**: Mr. SaiKiran Mahendraker from DuPont Technologies discussed career opportunities on 13th October 2022.
- ❑ **Interaction Program by L&T Technology Services Ltd**: Ms. Deeksha Jain from L&T Technology Services Ltd led an interaction program on 14th September 2022.
- ❑ **Career Orientation by Wipro Technologies**: Dr. Ambala Lavanam from Wipro Technologies conducted a career orientation program on 20th September 2022.
- ❑ **Career Talk in Publicis Sapient**: Mr. Shruthi Kumar from Publicis Sapient shared career insights on 27th August 2022.
- ❑ **Career Talk in Cognizant Technology**: Mr. Yeswanth Pendyala from Cognizant Technology held a career talk on 8th July 2022.

INAUGURATION OF G-CELL(in association with GECF, Govt. of Telangana)

Shri. Naveen Mittal (IAS) garu

ON CAMPUS STUDY ABROAD FAIR

Cultural Events of A.Y 2022-23

- **Aahlad 2K23**: Held on 17th June 2023.
- **ESPARANZA-2K22 Interaction Day Celebrations**: Held on 5th November 2022.
- **Tarang-2K22 Cultural Fest**: Held on 22nd October 2022.
- **Rendezvous Get-Together Celebrations**: Held on 24th September 2022.
- **Swathantra Bharata Vijayotsavalu**: Held on 15th August 2022.
- **Musical Show by Playback Singers Mr. Sri Teja & Ms. Valli Gayathri**: Held on 11th June 2022.
- **Sankranthi Celebrations**: Held on 12th January 2023.
- **New Year Celebrations**: Held on 31st December 2022.

Sports Events of A.Y 2022-23

- **Tech Trophy 2023 - State Level Sports Meet**: Held on 24th February 2023.
- **Intra College Sports Meet - 2023**: Held on 25th January 2023.
- **Sportech Trophy 2K22 - Intra College Sports Meet**: Held on 17th December 2022.

Students Achievements for A.Y 2022-23

❑ Runner up in KAVACH 2023 (Intra college Hackathon) - An institute-level hackathon held on 20th March 2023.

❑ 62 teams got paper publications in various Conferences and Journal's.

❑ 232 of 2019-23 batch students got successfully placed in various reputed companies.

❑ Kum. P.S Sashi Kanthi won first prize in 24th A.V Savithri Light Music Competition on 28th November 2022 held at Hyderabad by Navya Nataka Samiti.

❑ G. Sowjanya student of IV CSE, stood as Runner-Up in the Kho - Kho tournament of CHERISH - 2K23, a state-level fest held by CMR Engineering College from March 27th to 31st, 2023.

Company Name	No of Students Placed	Package (in Lakhs)
Accenture	99	4.61
Cisco	1	12.21
Cognizant	31	6.7
DBS	1	8.5
Dell	2	8.47
Deloitte	4	4
Dupont	5	7.23
DXC	19	4.2
E2Open	1	8
HCL	32	4.25
Hitachi	2	5.2
IBM	3	4.5
L&T	1	4
Lowes	1	11.5
Pepsico	1	5.09
Prolifics	2	4
Publicis Sapient	4	4.48
PWC	3	6
Qualizeal	5	4
TCS	5	7
TCS-Ninja	8	4
Tech Mahindra	1	4
Tejas Networking	1	10
Total	**232**	

Summary of Student Participations

Event Name	No. of Participations
Student Publications	62
Outside the State - Participations	30
Outside the State - Winners	14
With in the State - Participations	58
With in the State - Winners	26
Hackathons Participations	482
Coding Challenges Participations	708
Workshops Participations	222
Webinars Participations	491
Total Awards / Merits / Appreciations /Participations	**2093**

Internships

Name of the Company	No. of Students
Cisco Network Academy	99
Cognizant	110
Dell	2
Dupont	5
E2Open	1
PWC	3
Qualizeal	5
Tech Fort	9
Tejas Networking	1
Total	**235**

Faculty Development Programmes for A.Y 2022-23

❑ **AI & ML and Its Applications**: Held from 6th to 10th February 2023, organized by MRECW, with faculty Dr. G. Kalpana and Dr. Smitha.

❑ **Effective Teaching Strategies & Methods**: Held on 27th and 28th December 2022, organized by MRECW, with faculty Dr. C.V.P.R. Prasad.

❑ **Human Values & Professional Ethics**: Held from 27th March to 1st April 2023, organized by MRECW, with faculty Dr. D.B.K. Kamesh.

Faculty Achievements for A.Y 2022-23

❑ Faculty members achieved notable success with a total of **121 research publications**, including 112 in UGC journals and 9 in prestigious SCOPUS/WOS/SCI/Springer journals.

❑ In addition to their journal publications, faculty members also contributed significantly to academic literature, **publishing 35 books and book chapters.**

❑ **Mrs. V. Yasawini** was awarded **Ph.D degree** in CSE from Pondicherry University (Central University) on April 2023.

❑ **Consultancy Projects:**
  o Optimized Deep Learning Models for Medical Image Analysis and Disease Classification: Funded by SAK Informatics, with an amount of ₹3,42,000.
  o Cloud-Based Framework for Real-Time Data Analysis in Smart Cities: Funded by Precise in Technologies, Ameerpet, Hyderabad, with an amount of ₹4,55,000.
  o High-Performance Computing Techniques for Climate Change Prediction Models: Funded by KR Engineering & Technology Consultants, with an amount of ₹3,25,000.

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