NEHRU COLLEGE OF ENGINEERING AND RESEARCH CENTRE

PAMPADY, THIRUVILWAMALA, THRISSUR, 680588
NAAC Accredited with 'A' Grade | ISO 9001 - 2015 Certified
(Approved by AICTE, Affiliated to APJ Abdul Kalam Technological University)

MCA
NEWSLETTER

2023

NEHRU GROUP OF INSTITUTIONS
TAMILNADU ● KERALA
ISO 14001-2004 CERTIFIED INSTITUTIONS

Moulding True Citizens

MCA

The MCA Department of NCERC continues to thrive as a hub of innovation and academic excellence, fostering a dynamic learning environment where technology meets creativity, empowering students with cutting-edge knowledge, practical skills, and a passion for problem-solving, while consistently nurturing future-ready professionals through quality education, collaborative initiatives, and a strong commitment to excellence in the ever-evolving world of computer applications.

Tribute to
our beloved **Founder**
Chairman

"With our eyes fixed on the future but recognizing the values of education we will reach our destiny to be the shining Group of Institutes for the benefit of all mankind."

With this being the aim, our honorable Chairman, Late.P.K.Das, constituted the Nehru College of Educational & Charitable Trust in the year 1968 to deliver world class quality in education and to impart training in a structured manner to the students community. He was a Philanthropist and a man of great vision, stood as a paradigm for charity. It was not only his people but the whole society was benefitted by his charity & Trust. Through his initiatives, every year the Trust donates wheel chairs, tailoring machines and tricycles to the physically challenged, provide free education and medical treatment to the economically backward students and families. The Trust also constructs houses and give it free to the financially backward widows and also provides daily meals to the needy people. The Trust also adopts children from orphanages and gives them free education. It was so impressive that even in the last week of his life he was kind enough to encourage and award more than 1000 school children from 100 schools in and around Coimbatore. Apart from being a Philanthropist, he was a visionary, philosopher, friend, guide, innovator and demonstrator for many of his admirers and a man of commitment to his mission and vision. Though he is not with us today, he is and will be the guiding star in all our future progress. Our Chairman, wherever he is, shall find more peace than he ever had before.

Message from the Chairman & Managing Trustee

As the world shrinks into a global village and the identity of each profession is getting more and more pronounced by the specifics, and not the general. The covid pandemic situation redesigned the education and teaching methodology. Never before in the history has the need for quality education been as critical as now. As a result a new breed of computer professionals, from managers to programmers trained as per the international norms is the immediate need of the industry.

In this context, Application oriented programs like MCA becomes more significant and practical. Master of Computer Applications programme is a perfect blend of intensive theory and practical work, which enables the students to get familiar with the updated Computational conventions using latest programming methodologies and large number of Applications.

College education is the foundation for all future possibilities in the life of a student. Also, quality education is a passport to its steep rise in life and creates practical avenues to attain career goals. To achieve this goal, several add on courses, trainings in placement, personality development, communication skills, and other soft skills are provided by our Career Guidance Cell. The placement scenario is also quite commendable as several premier companies visit our campus for recruitment.

I am sure that Nehru College of Engineering and Research Centre with its placement cell and world class infrastructure and qualified staff will contribute positively towards moulding a new generation of computer professionals worthy of serving the industry in the emerging scenario and participate in the process of nation building.

I, therefore, invite young students to be a partner with us in this meaningful endeavour. I am sure your education and training here will equip you for a promising and rewarding career.

Adv.Dr.P Krishnadas
Chairman & Managing Trustee, NGI

From the Desk of Principal

Nehru College of Engineering and Research Centre (NCERC) Pampady, a dream child of our Founder Chairman Late Sri.P.K.Das, who is fondly remembered as a philanthropist and educationalist, is one of the pivotal pillars of Nehru Group of Institutions in the arena of technical education. The campus, a distinctive landmark that cuts above the rest, is built aesthetically on a hilly and greenish landscape that encompasses the banks of the holy river Nila.

NCERC, well-known center for innovative learning, professional expertise and academic excellence, is an ISO 9001:2015 certified institution, approved by the All India Council for Technical Education (AICTE), re-accredited by National Assessment and Accreditation Council (NAAC) with **A** grade and National Board of Accreditation (NBA) accredited programmes (Computer Science & Engineering and Mechatronics Engineering). It is an approved research centre that caters to the needs of higher education and research.

NCERC has a strong team of dedicated and eminent staff, both teaching and non-teaching, who wholeheartedly endeavor to enlighten the minds of the student fraternity by imparting knowledge and professional training. To ensuring the perfect acquisition and improvisation of practical knowledge the college is extremely proud to have the latest lab facilities for all branches of engineering and a well-equipped language lab to develop the communication skills of the students. Realizing that the emerging unarticulated needs and realities need a new approach both in terms of thought as well as action, NCERC has an excellent training and placements centre, headed by a team of committed and duty bound faculty to ensure the placements of the graduating students.

Our college cares for the individual development of each and every student. We follow 'mentor system' under which each class is put into the multi-prolonged web of a teacher. We accord prime importance to the behavioral discipline, moral integrity and cognitive developments of our students. To inculcate the spirit of social commitment and selfless service as a part of highly disciplined personality formation, the college runs efficient functioning units of NCC and NSS and has Innovation and Entrepreneurship Development Centre (IEDC). A perfectly designed infrastructure with all facilities, creating a conducive ambience for peaceful and intellectual activity, NCERC stands high above all spreading the sparks of knowledge and rays of enlightenment. The college has professional membership in ISTE, IEEE, IETE and SEEM. For accomplishing the dreams of our Founder Chairman Late Sri.P.K.Das, we all need to tread the path shown by him wholeheartedly and move earnestly towards perfection and excellence.

I heartily welcome you to this temple of learning to pursue your studies and mould yourselves into successful professionals and true human beings who can render their selfless and wholehearted service for the betterment of the humanity.

Principal
Dr.Karibasappa Kwadiki
B.E, M.E, Ph.D

From the Desk of HoD - MCA

It is with great pride and pleasure that I extend a warm welcome to all students, parents, alumni, and stakeholders to the MCA Department of Nehru College of Engineering and Research Centre (NCERC). The MCA department stands as a vibrant center of academic excellence, innovation, and professional growth, committed to shaping competent and responsible IT professionals for the ever-evolving digital world. Our department offers a well-structured and industry-aligned curriculum that balances strong theoretical foundations with hands-on practical exposure. We emphasize emerging technologies, problem-solving skills, and critical thinking to ensure that our students are well-prepared to meet current industry demands and future technological challenges. With the guidance of a dedicated and experienced faculty team, we strive to create a learner-centric environment that encourages curiosity, creativity, and continuous learning. The MCA department actively promotes holistic development through seminars, workshops, industrial visits, certifications, projects, and co-curricular activities that enhance technical competence, communication skills, leadership qualities, and ethical values. Our focus on research, innovation, and collaborative learning helps students develop a professional mindset and adaptability, which are essential in today's competitive IT landscape.

As the Head of the Department, I am confident that with our continuous efforts, committed faculty, enthusiastic students, and supportive management, the MCA department at NCERC will continue to grow as a center of excellence. I encourage our students to make the best use of the opportunities provided, uphold the values of integrity and professionalism, and strive for excellence in all their endeavors.

I wish every member of the MCA fraternity great success and a rewarding journey ahead.

HoD - MCA
Dr Sudheer S Marar

VISION

To create a school of distinction for the PG students, prepare them to be industry- ready, and achieve Academic excellence by continuous endorsement of the Faculty team in terms of Academics, Applications & Research.

MISSION

The Department of Computer Applications strives to provide quality and competency- based education and fine-tune the younger generation through Curricular, Co-Curricular and Extracurricular
activities so as to encounter the Professional and Personnel challenges ahead with Pragmatic skills & courage, thereby 'Creating the True Citizens'.

We intend to facilitate our students to assimilate the latest technological know-how and to imbibe discipline, culture and spiritually, and to mould them into technological giants, dedicated research scientists and intellectual leaders of the country who can spread the beams of light and happiness among the poor and the underprivileged.

M1. To provide quality and competency- based Education
M2. To fine-tune the younger generation through Curricular, Co-Curricular and Extra-curricular activities
M3. To encounter the Professional and Personnel challenges ahead
     with Pragmatic skills & courage, thereby 'Creating the True Citizens'.

MCA
Master of Computer Applications

Master of Computer Applications programme is a TWO-YEAR course of intensive theory and practical work. It is spread over a period of four semesters which enables the students to get familiar with the usage of Computer using latest programming languages and large number of Applications. The course also develops the capabilities of the students in preparation of System software. The students undergo at least one minor project to familiarize with software development processes. They also present at least One General Seminar to embrace with novel technological patterns. The placement cell helps students in finding suitable placements. During the 4th semester, students generally network with the industries and implement a real time project which is directly useful to the organization concerned.

OFFICIALS IN POSITION

ADV.DR.P KRISHNADAS	CHAIRMAN &MANAGING TRUSTEE
DR.P KRISHNAKUMAR	CEO & SECRETARY
DR.PROF KARIBASAPPA KWADIKI	PRINCIPAL
DR.SUDHEER S MARAR	HOD

FACULTY PROFILE

Faculty Name	Designation	Qualification	Experience
Dr Sudheer Marar	Professor & HoD	MCA, MBA, MTech, MA, PhD	14 yrs
Pramod K	Sr. Asst Professor	MCA	17 yrs
Dr. Deepa A	Asst Professor	MCA, MPhil, PhD	15 yrs
Dr. Vinitha K R	Asst Professor	MCA, MPhil, PhD	6 yrs
Ashish L	Asst Professor	MCA	7 yrs
Divya P	Asst Professor	MCA	3 yrs
Sumy M	Asst Professor	MCA	3 yrs

RESOURCES FOR STUDIES, INFORMATION ON STUDY MATERIALS

LIBRARY

The libraries of our college have been developed into real centers of learning. They contain the traditional collections of books, journals, periodicals and other printed materials besides audio, visual and electronic services. Students have access to library books and periodicals from 08.00 am to 08.00 pm. Electronic information service, media workshops and PC networks are also available in the library. It is kept open for over 80 hours in a week. The libraries are equipped with facilities to get online access. Moreover facilities to get access through our website have already been provided. Thus the students get total access in retrieving any information from the library.

DIGITAL LIBRARY

Digital library of NCERC is developed to meet the most advanced information requirement of the academic community and is fully automated with software for easy and fast access. The library has a collection of 42,000 odd books under different topics to meet the ever growing demand of the students and faculty in the filed of science and technology. There are 322 international/national journals and periodicals besides there are educational CD's of about 3000 in the library. This library is acting as a nodal centre for all digitalized information. Online library with links to all the leading libraries and Universities in India and abroad is also available in our college.

INTERNET

NCERC is equipped with high speed lease line of 64 MBPS internet connectivity. This is done In order to enable the students to explore the widest range of information for their studies through internet.

Prayaana

MCA 21-23 BATCH

MCA @ NCERC

Technical Talk

NeCTAR International Conference

Industrial Visit

Social Extension Activity

DEPARTMENTAL ACTIVITIES

Your education goes well beyond your course-work. Extracurricular activities can form a vital part of your experience, here at MCA-NCERC, creating unique opportunities for friendship and learning. The department believes that, the co-curricular & extra-curricular activities complement the studies. The Department houses 5 major Clubs, viz. Readers Club, Celluloid Club, Publication Bench, Travel Club, and Social Extension Activities Club. Each Club mentored by Senior Faculty member devices activities which makes a strong impact in the character molding of the student community. Readers Club organizes activities related to Readership Assimilation among the students. The club designs talk shows, discussion forums and Book sharing environments with a defined mission to spread the love of reading and enhance the student insight to the literary world.

Celluloid Club emerges as the Most Significant Bit in the current scenario where the Video, Audio and all Media, makes its marvel through digital techniques. The club initiates Multime-dia based projects with some creative value. Students get a chance to discuss their ideas on creative filming and take up all activities as in-house projects. The club has already produced 5 successful projects, including a Documentary, a Music Album, A feature Film and an award winning DoccuFiction. The club initiates the Nehru Campus Film Festival, launching a screening venue for some Classic Campus-Films of India.

Electric Vehicle Technology – AIRISH BABY

Electric vehicle technology advanced significantly in 2023, driven by environmental concerns and government policies. Improvements in battery technology increased vehicle range and reduced charging time. EV adoption continued to rise globally.Automotive manufacturers invested in research to develop efficient and affordable electric vehicles. Charging infrastructure expanded, supporting long-distance travel and urban mobility. Smart charging systems improved energy management.Despite progress, challenges such as high initial costs and battery recycling remained. Continued innovation and policy support were essential to achieving sustainable transportation goals.

Metaverse Development in 2023 – ANJU BABU

The metaverse continued to evolve in 2023, offering immersive digital environments for interaction and collaboration. Virtual spaces were used for gaming, education, training, and remote meetings. Companies experimented with virtual offices and events.Advancements in virtual reality and augmented reality enhanced user experiences. Improved hardware and software made virtual environments more realistic and interactive. Digital economies emerged through virtual assets and services.Despite innovation, adoption remained gradual due to high costs and accessibility issues. Privacy and security concerns also required attention. The metaverse remained a long-term technological vision.

Augmented Reality Innovations – ANOOP B K

Augmented Reality gained momentum in 2023, blending digital elements with the real world. AR applications enhanced learning, retail experiences, and industrial training. Users benefited from interactive and visual information. In education and training, AR improved understanding through immersive simulations. Retailers used AR to enhance customer engagement and product visualization. Industrial sectors adopted AR for maintenance and design tasks.Hardware improvements and software development drove AR adoption. Challenges related to device affordability and content creation continued to influence growth.

Virtual Reality in Professional Training – ARUNIMA O

Virtual Reality technology advanced significantly in 2023, especially in professional training applications. VR simulations provided safe and controlled environments for skill development. Industries such as healthcare and aviation benefited greatly. Training programs used VR to reduce risks and costs associated with real-world training. Learners gained practical experience through immersive scenarios. Performance assessment improved through data-driven insights.However, VR adoption required investment in hardware and content development. Continuous innovation aimed to make VR more accessible and cost-effective.

Big Data Analytics Trends – ATHUL M

Big data analytics played a vital role in organizational decision-making in 2023. Businesses analyzed large datasets to identify trends, optimize operations, and improve customer experience. Data-driven

strategies enhanced competitiveness. Advanced analytics tools and AI integration improved data processing speed and accuracy. Predictive analytics enabled proactive decision-making. Visualization tools made insights more accessible to stakeholders. Data privacy and governance became critical considerations. Organizations implemented compliance measures to ensure ethical data usage and protection.

Automation and Robotics – BASIL JIJI

Automation and robotics transformed industrial operations in 2023. Robots performed repetitive and precision-based tasks efficiently. Productivity and quality improved across manufacturing sectors. Service industries also adopted automation for customer support and logistics. AI-powered robots enhanced flexibility and adaptability. Operational costs were reduced significantly. However, workforce reskilling became essential due to changing job roles. Education and training programs focused on preparing employees for automation-driven environments.

Digital Payment Technologies – DHANUSH U

Digital payment systems expanded rapidly in 2023, reducing reliance on cash. Mobile wallets and online payment platforms improved convenience and accessibility. Financial inclusion increased significantly. Advanced encryption and authentication enhanced transaction security. Contactless payments gained popularity in retail and public services. Digital payment ecosystems supported economic growth. Concerns related to fraud and data security remained. Continuous innovation focused on strengthening trust and reliability in digital transactions.

Health Technology Innovations – MELVIN VINCY

Health technology advanced significantly in 2023, improving patient care and accessibility. Telemedicine platforms enabled remote consultations and diagnosis. Digital health records improved efficiency. AI-assisted tools supported medical imaging and treatment planning. Wearable devices monitored vital signs in real time. Healthcare delivery became more personalized and proactive. Data privacy and regulatory compliance were major concerns. Secure systems and ethical standards guided health technology adoption.

Educational Technology Evolution – PRAVEENA K R

Educational technology expanded rapidly in 2023, transforming teaching and learning methods. Online platforms enabled flexible and accessible education. Personalized learning systems improved student engagement. AI-powered tools supported assessment and feedback. Virtual labs and simulations enhanced practical learning experiences. Digital classrooms became more interactive. Challenges such as digital divide and accessibility persisted. Continuous investment aimed to ensure inclusive education through technology.

Ethical and Responsible Technology Use – RANJITHA MENON K G

Ethical considerations became central to technology development in 2023. Issues such as data privacy, algorithmic bias, and digital inclusion gained attention. Responsible innovation guided policy decisions. Organizations adopted ethical frameworks to ensure fairness and transparency. Technology developers emphasized accountability and user trust. Regulations supported ethical compliance. Balancing innovation with societal responsibility remained a key challenge. Ethical technology use shaped the future of digital transformation.

Data Privacy and Protection Technologies – RASEENA K K

In 2023, data privacy became a major concern due to the increasing volume of digital data generated worldwide. Organizations collected vast amounts of personal and sensitive information, making data protection a critical responsibility. Regulations and compliance frameworks encouraged responsible handling of user data. Technological solutions such as encryption, access control, and secure authentication mechanisms were widely implemented. Privacy-enhancing technologies helped organizations minimize data exposure while maintaining usability. Businesses adopted privacy-by-design principles in system development. Despite these efforts, challenges persisted due to cyber threats and evolving regulations. Continuous monitoring and user awareness became essential. Data privacy remained a foundational aspect of digital trust.

Open-Source Software Development – SHIBIN SHANTY

Open-source software continued to grow rapidly in 2023, supporting innovation and collaboration across the technology sector. Developers worldwide contributed to open platforms, improving software quality and reliability. Open-source tools became essential for startups and enterprises alike. Organizations benefited from reduced development costs and faster innovation cycles. Open-source frameworks supported cloud computing, AI development, and web technologies. Community-driven development accelerated problem-solving. However, managing security vulnerabilities and licensing compliance remained important. Organizations invested in governance strategies to ensure safe and sustainable open-source usage.

Natural Language Processing Advancements – SUBITHA P

Natural Language Processing technologies advanced significantly in 2023. NLP systems improved machine understanding of human language. Applications expanded in chatbots, translation, and sentiment analysis.Language models supported multilingual communication and accessibility. Businesses used NLP to analyze customer feedback and automate support services. Human-computer interaction improved substantially.Challenges included bias, context understanding, and ethical language generation. Continuous research focused on improving fairness and accuracy in NLP systems.

teamMCA@NCERC
Friday Activity
Debate Session

MCA
Events

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