



UNIVERSITY DEPARTMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY (UDICT)

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MGM University in Chhatrapati Sambhajinagar, established by the revered Mahatma Gandhi Mission Trust, a pioneer with four decades of excellence in education, research and service is now a Self-financed, State Private University, approved by Government of Maharashtra with the passing of MGM University Act 2019 by Maharashtra Legislative Assembly and Legislative Council. Setting a glowing milestone in the higher education history of Marathwada region of Maharashtra, Gandhiji's philosophy and the timeless values that he has taught have been the spirit and the ever-inspiring force of MGM.

MGM University comprises seven faculties of academics. These faculties have been conceived to bring allied disciplines within a broad framework of inclusive entities - Colleges, Institutes, Departments, Schools, Centers and Gurukul.

- 1. **Faculty of Engineering & Technology** University Department of Information and Communication Technology, Jawaharlal Nehru Engineering College, School of Engineering and Technology, Institute of Fire service Engineering, University Department of Pharmaceutical Sciences.
- 2. Faculty of Management & Commerce Institute of Management & Research, Institute of Hotel Management, Nath School of Business & Technology.
- **3. Faculty of Basic & Applied Sciences -** Institute of Biosciences & Technology, Dr. G.Y. Pathrikar College of Computer Science & Information Technology, School of Basic and Applied Sciences.
- **4. Faculty of Social Sciences & Humanities -** College of Journalism & Mass Communication, School of Film Arts, Department of MGM Photography, School of Legal Studies and Research, College of Fine Art, Institute of Indian & Foreign Languages, Institute of Social Sciences.
- **5. Faculty of Performing Arts -** Mahagami Gurukul center for Performing Arts.
- **6. Faculty of Design-** Leonardo Da Vinci School of Design.
- 7. Faculty of Interdisciplinary Studies School of Interdisciplinary Studies, Department of Library and Information Science, Department of Education, Department of Gandhian Studies, Department of Sports, Yog Science and Physical Education, University Department of Music & Theatre.



UDICT

The University Department of Information and Communication Technology (UDICT) is an offshoot of the Department of Information Technology of Jawaharlal Nehru Engineering College. The department now offers modern and state-of-the-art programs:

UG Programs

- (a) B. Tech. Information Technology (with specializations in IoT, Blockchain, and BDA), Intake: 180
- (b) B. Tech. Artificial Intelligence and Machine Learning, Intake: 60
- (c) B. Tech. Data Science, Intake: 60

PG Programs

- (a) M. Tech. Data Science, Intake: 18
- (b) M. Tech. Artificial Intelligence and Machine Learning, Intake: 18

Integrated Program (After 12th)

(a) MCA (4 Years Program), Intake: 60

Vision

The UDICT shall establish a center-of-excellence with social and global approaches for the development of trained human resources with professional approaches to innovation, entrepreneurship, and knowledge of emergent technologies for industry and research in diverse domains.

Mission

The UDICT shall

- 1. Empower students with human values, environment-friendly qualities and ethical approaches.
- 2. Create technocrats for a sustainable growth in the industrial sector with an interdisciplinary aptitude.
- 3. Hone their skills for becoming experts with state-of-art knowledge in social perspectives and research directions.



Why take up programs at UDICT, MGM University?

- The mandate of UDICT is to develop quality human resources trained in interdisciplinary soft and hard skills.
- UDICT extends the legacy of Mahatma Gandhi Mission since 1983 by introducing fresh initiatives in education.
- The University Department of Information and Communication Technology is an offshoot of the MGM Jawaharlal Nehru Engineering College (JNEC), which now independently offers state-of-art interdisciplinary undergraduate and postgraduate programs with modern and evolving contents such as IoT, Blockchain, Big Data Analytics, Data Science, Artificial Intelligence and Machine Learning.
- Three undergraduate and three postgraduate programs are now also being offered through Blended Learning in collaboration with SWAYAM, NPTEL, and NASSCOM campus license.
- The Innovation Incubation and Research Center (IIRC) has software suites for industry-oriented simulation technologies in collaboration with Hexagon Manufacturing Intelligence (USA). It is a part of an engineering-oriented campus with exclusive Drones/Unmanned Aerial Vehicles, Smart/Green Mobility & Rapid Prototyping, and Reverse Engineering Laboratories.
- EDC & Start Up Cell Provides incubation eco-system for business ideas of students to establish Startups while learning.
- Placements across a variety of industry sectors through centralized placement cell.
- Co-curricular opportunities such as Ankur innovative ideas/prototypes exhibition for First Year students and facilities for extra-curricular activities.
- MOUs with eminent industries.
- Six months Internship Program.
- Student Chapters of professional bodies.
- Hobby Clubs for nurturing talents.
- TEDx -Pioneer TEDx event in Marathwada region
- Co-curricular opportunities such as NSS Camps, Industrial Visits, NASA zonal convention, Ankur innovative ideas/prototypes exhibition for First Year students, Razzmatazz, Youth Conclave etc.



Engage Share Innovate

New Initiatives at MGM University:

- Open elective courses are offered by every department to students of other departments. This interdisciplinary approach of choosing open elective courses by students give them the opportunity to study a course as per their interest which is not available in their regular curriculum. It gives a chance for students to gain skills they feel they are lacking or need to improve. Hence it helps in enhancing their employability skills.
- Blended Learning Approach A uniquely designed Phygital (physical + digital) learning initiative of MGMU in collaboration with Coursera Campus License to build career-oriented latest skills through proctored online mentoring by globally acclaimed professors & offline laboratory sessions at MGMU with certification from world-class universities.
- Offers Outcome Based Education combination of hyper-specialized knowledge with cross-cultural capabilities through revolutionary curriculum.
- Value-Based Education creating professionals with social and environmental values through Gandhian Philosophy/ Sustainable Education practices.
- Problem-Based Learning through the co-designed and co-taught system.
- Engineering Exploration Lab ignites interest, expands curiosity, fosters creativity and builds a strong foundation at the first-year level.
- Multidisciplinary Programs simplifying academics through multidisciplinary short programs, minor degrees, honors degrees, integrated programs to maximize resources.
- Project-Based Learning through industry internships, Industry oriented and mentored PG Programs Global Tech Collaborations MSC Hexagon USA, Christiani Sharplin Tech. Training (Germany) etc. Industry supported Laboratories Endress+Hauser, Tech Mahindra & MOUs with eminent industries & TATA Technology's Ready Engineer Program.
- Internal Quality Assurance Cell (IQAC), The primary purpose of an IQAC is to develop a system for continuous improvement in the performance of institutions. IQAC focuses on ensuring and enhancing the quality of education and institutional processes.



National Education Policy 2020

Ministry of Human Resource Development

Government of India

NEP 2020 Key Points

NEP 2020 Key Points

- **Interdisciplinary Approach:** NEP encourages an interdisciplinary approach in engineering education, allowing students to choose a broad range of subjects beyond traditional engineering disciplines.
- **Multidisciplinary Specializations:** Engineering institutions are encouraged to offer multidisciplinary specializations to provide students with a holistic and well-rounded education.
- **Research and Innovation:** NEP emphasizes the importance of research and innovation in engineering education. It aims to establish a National Research Foundation to promote a research-oriented approach.
- Industry Collaboration: The policy encourages collaboration between educational institutions and industries to bridge the gap between academic learning and practical applications.
- Flexible Curriculum: Engineering institutions are expected to have a more flexible curriculum, allowing students to choose a
 combination of subjects based on their interests and career goals.
- **Emphasis on Skills:** NEP focuses on developing practical skills among engineering students, ensuring that they are well-prepared for the evolving needs of the industry.
- Ethical and Sustainable Engineering: The policy promotes the incorporation of ethical and sustainable practices in engineering education, emphasizing social responsibility and environmental consciousness.

Multiple Entry and Exit Options		
One Year UG Certificate in Engg. and Tech.	1	
Two years UG Diploma in Engg. and Tech.		
Three Years Bachelor's degree in Vocation (B.Voc.)		
Four Years Bachelor's degree (B.Tech) in Engg. and Tech. with Multidisciplinary Minor		
Four Years Bachelor's degree (B.Tech) in Engg. and Tech.with Honors and Multidisciplinary Minor		
Four Years Bachelor's degree (B.Tech) in Engg. and Tech. Honors with Research and Multidisciplinary Minor		
Four Years Bachelor's degree (B.Tech) in Engg. and Tech. Major Engineering Discipline with Double Minors	4	



The current industry expectations from fresh graduates are: analysis of scenarios, problem solving, ability to take lead and initiatives and working in inter-disciplinary teams. The UDICT takes this initiative from the very first year of undergraduate education. Through the years of education, it aims to hone the skills of the student in the areas of Data Mining, Data Science, Data Analytics, Testing, Smart Computing, Multimedia, Geographic Information Systems, Internet of Things, Artificial Intelligence, Machine Learning, Networking, Cloud Computing, Web Services and Mobile Applications etc., through collaborations with industry.

PROGRAMS OFFERED

The UDICT has taken a novel initiative in changing the paradigm of education in the recent scenario of Industry 4.0. In this scenario, there is a surge in the use of "Smart" technologies i.e., cloud computing, big data analytics, networked machines and processes. Several petabytes of data are now being generated and collected through surveys, stock markets, satellites, sensors and simulations. For such systems, physics is understood, but the mathematical or statistical model is required to make predictions, classifications or recommendations. Processing and extraction of meaningful information and knowledge from these datasets would require extensive use of graphical and tensor-based computing, statistical analysis and knowledge engineering for efficient estimation, prediction, forecasting, planning and decision support. This novel initiative in changing the paradigm of education in the scenario of Industry 4.0, will go a long way in paving the way for future trained and quality human resource requirements.

Ph. D. Program

Research Center in Information Technology offering Ph.D. program

The aim of the program is to expose the students to the horizontal and vertical expanse of the discipline. The graduates become aware of the responsibility to contribute to the growing need for sustainable and smart infrastructure in rural and urban scales, in terms of planning, designing, construction, audit, management and retrofitting. In that context, the student is presented with skills of mapping, sampling, quality and material testing, project execution, soft skills and management.



P.G. Programs

M. Tech (Data Science) - 2 years full-time program | 18 seats

The M. Tech. in Data Science program has been designed to cover up for the requirements of data analytics, modeling and decision support in various disciplines of Engineering and Technology, on a Choice Based Credit System. The masters program in data science first introduces the student to the basic requirements of data structures and database design, analytics, modeling and prediction using datasets from various disciplines. The program makes the students ready for positions in a wide array of industries and MNCs, as well as, opening the doors to the start-up universe. A lucid blend of fundamental and recent technologies is offered to the students for enhancing their skills for employability.

M. Tech (Artificial Intelligence and Machine Learning) - 2 years full-time program | 18 seats

The M.Tech in Artificial Intelligence and Machine Learning, offers an opportunity to the fresh Engineering Graduates of all disciplines to upgrade their skills in programming, data handling, data science and application of artificial intelligence to benchmark datasets and discipline specific use cases. Real-world case studies across disciplines will equip the student with capabilities to make predictions, classifications and decisions. The M.Tech. Program will open the gates of opportunities for students where the industry or research requirements are for Al and ML based techniques.

M.C.A. Integrated (after 12th) - 4 years full-time program | 60 seats

This comprehensive program is designed to equip students with a strong foundation in computer science and applications, preparing them for dynamic and challenging roles in the IT industry. The curriculum is crafted to provide a holistic understanding of software development, database management, networking, and emerging technologies. With a focus on both theoretical knowledge and practical skills, students at MGM University engage in hands-on projects and real-world applications to enhance their problem-solving abilities. The integrated approach ensures a seamless progression from foundational concepts to advanced topics, enabling graduates to thrive in the rapidly evolving field of information technology. Joining the MCA program at MGM University opens doors to a promising career in the digital era.



U.G. Programs

B. Tech. Information Technology (IoT, Blockchain, BDA) - 4 years full-time program | 180 seats

There is a need for trained human resources in the domains of IoT (networked machines and sensors), Blockchain (data integrity and security), and Big Data analytics (volume, variety, velocity, veracity and value). The program makes the students ready for positions in a wide array of industries and MNCs, as well as opening the doors to the start-up universe. A lucid blend of fundamental and recent technologies is offered to the students for enhancing their skills for employability.

B. Tech. (Artificial Intelligence and Machine Learning) - 4 years full-time program | 60 seats

Artificial intelligence and Machine Learning (Al and ML) are helping people and businesses achieve key goals, obtain actionable insights, drive critical decisions, and create exciting, new, and innovative products and services. Al and ML are techniques to help a user of the data to arrive at decisions based on the black box model arrived at through these techniques. Several real-world applications of Al and ML exist, which cross the silos of a single discipline of engineering and find applications in day-to-day life as well as for sustainable and safe planning, and decision making. The Bachelor of Technology Program intends to train the student not only in the techniques, but also in applying these techniques to several other disciplines like Civil, Mechanical, Electrical, Electronics, Chemical Engineering etc.

B. Tech. (Data Science) - 4 years full-time program | 60 seats

Through various interactions with experts in industry and academia, the UDICT has recognised the need for skills in data analysis, prediction and decision support. The data science programme caters to the need of mathematical modeling and statistical pattern recognition for various kinds of datasets being collected from diverse sources. The programme teaches the student to learn the tools of computing and applying it for efficient estimation, prediction, forecasting, planning and decision support. This programme intends to develop trained and quality human resources in these directions. The aim of this program is to prepare a professionally competent student with technological leadership skills ready to work in a multidisciplinary work environment across the globe. Furthermore, it will enable the students for several applications in the line of fraud detection, healthcare, image-based analytics, speech recognition and market-based applications. In addition, the student can also apply these techniques to several other disciplines like Civil, Mechanical, Electrical, Electronics, Chemical Engineering etc.



Salient Features

- · Highly qualified and experienced faculty.
- Collaboration and industry visits with MNCs for internship/sponsored projects.
- Industry oriented subjects designed in consultation with industry experts.
- · Blended learning approach.
- · Guest lectures by industry experts.
- Six months internship as a part of curriculum in the last semester in relevant industry in various IT domains like Artificial intelligence, Machine Learning, IoT, Blockchain, Big Data Analytics, AR/VR etc.
- Well-equipped Laboratories to undertake the projects in the domain of Artificial intelligence, Machine Learning, IoT, Blockchain, Big Data Analytics, AR/VR etc.
- Additional IT support through Innovation Incubation Research Center (IIRC) which caters to specialized computational needs to work on automotive & transport simulation projects using Advanced Driver-Assistance Systems (ADAS) machinery Studio.
- Collaboration with IIT Bombay Virtual Lab to provide virtual access to a variety of sophisticated software laboratories.
- Availability of advanced skill-oriented interdisciplinary courses.
- Professional body membership by faculty and students (IEEE, CSI, ACM, ISTE).



MINORS

UDICT allows students to pursue a range of supplemental courses either to explore personal interests or gain domain-specific proficiency to enhance their career opportunities. It certainly looks impressive on their resume that suits the most for the latest trends in the industry. The variety of minor programs that we offer, helps to explore personal interests and further to improve employment opportunities.

- Blockchain
- AIML

Honors Degree

Studying an undergraduate program in combination with Honors permits you to improve skills and knowledge, under the guidance of an experienced staff member, in your selected area. An Honors is a degree that provides an opportunity to explore one's passion and expertise before committing to any Master Degree or further higher education. The academic umbrella of UDICT offers a plethora of such programs:

· Full stack Development









Student Facilities

Let's stop looking for the light and become one instead!

This is what one experiences in UDICT with the help of an intellectual basket of courses along with participative methodology through our Educational Ecosystem.

We promote students to learn lifelong skills and an ability to apply in multiple ways with the help of our Future Ready Network.

INNOVATION INCUBATION AND RESEARCH CENTER (IIRC)

Innovation Incubation and Research Center, being the promoter of research attitude with entrepreneurship approach, is a gateway to infinite prospects for the student to take their knowledge to the next level and acquire industry-oriented skills.

The main objectives of this center are to provide numerous opportunities to the students by working on the latest industrial software, equipment and upgrade their knowledge as per their interest to work on live industry projects and provide solutions to the industries. The key facilities of the center include the Advance Industrial Automation, Mechatronics, Industrial Fluid Power, Industry 4.0, E-Vehicle and Computer Integrated Manufacturing lab in Association with Christiani Sharpline, Germany and SSIGMA, Pune.

ENTREPRENEURSHIP AND STARTUP CELL

MGM University provides a platform for youngsters to enhance vibrant ideas who have the potential to scale up their assignments, projects and ultimately businesses. Facilitating Startups means helping new businesses that are intended to grow large beyond the solo founder.

The MGM University has constituted Engineering, Agriculture, Arts, Healthcare, Environmental and rural Entrepreneurship Development Cell with an objective to inculcate entrepreneurship among students. University would facilitate and sharpen the ideas, innovative activities that are valuable as well as useful to society and offers incubation for the development of products, processes and services.



ENGINEERING EXPLORATION PROGRAM

The Engineering Exploration Program is the flagship initiative of the Jawaharlal Nehru Engineering College to produce future employable engineers with internationally accepted graduate attributes, it is necessary to design a curriculum which shall address the following:

- 1. Focus more on the practical aspect of engineering as an application of theoretical concepts.
- 2. Enable the candidate to conceptualize, design and implement end products based on societal and industrial needs
- 3. Modification of the evaluation system which encourages and guides the student to produce an end product, rather than focusing on grades or percentages.

With this intent, the M. Vishweshwaraiyya Engineering Exploration Program (MVEEP) has been formulated, wherein the outcomes are envisioned as follows:

- 1. Convert a given need statement into an engineering problem statement.
- 2. Create morphological models for various solutions.
- 3. Select the most feasible solution using comparison techniques.
- 4. Design the prototype for the most feasible solution using manual or computer aided modeling.
- 5. Use the various mechanisms, electronic components, sensors, motors etc. For the most feasible model.
- 6. Implement the model created after testing and re-modelling processes.

In the first year of the engineering Program, the students will do a mini project which will attempt to solve a problem based on an industrial, societal, or environmental need.



TRAINING AND PLACEMENT CELL

T&P Cell aims to:

- Bridge the gap between industrial needs and student skills and provide the best possible challenging career opportunities to students for exploring their capabilities.
- Develop the students through continuous training, counseling and enhancing their employability skills by inculcating the right attitude to meet corporate expectations.

ALUMNI

Anubandh, an annual alumni get together, truly seeks to explore myriad possibilities arising out of the synergy between alumni, current students and their alma mater.

MGMU HOSTELS

MGM University, over the past four decades, has established a culture of a safe and secure environment at its hostels, being governed by an administrative body that includes the warden, the assistant warden etc. The hostels are located within the campus & are at walkable distances. Each of the four hostels viz. Baa hostel, Ganga hostel, Indrayani hostel and Bapu hostel offers a variety of accommodation options viz. single, two, three and four-bed sharing rooms having options like AC/Non-AC rooms, with attached/shared toilets. The students have the choice to select as per their suitability. The plethora of committees and subcommittees, disciplinary policies help to reinforce the safe and healthy environment of each hostel campus. The overall human resources, infrastructure and ambience are such that any fresher gets easily absorbed into the atmosphere.







The University Department of Information and Communication Technology (UDICT) exhibited a year of unparalleled academic and extracurricular achievements in 2023-2024. The department hosted a plethora of events, featuring expert talks on cybersecurity, blockchain, and human-computer interaction. Noteworthy milestones included the inauguration of a cutting-edge Center of Excellence Lab in Cybersecurity and Digital Forensics and the establishment of an IEEE student chapter. Beyond academia, UDICT organized diverse activities like the Kalsubai trek, an anti-ragging orientation program, and a blood donation camp, fostering a holistic student experience. Workshops on AWS, cryptography, and face recognition empowered participants with hands-on skills, while the celebration of University Foundation Day showcased the department's commitment to innovation through AI Quiz Competitions, AI Poster Presentations, and AI programming Contest. The year encapsulates UDICT's unwavering dedication to excellence, providing a vibrant and comprehensive educational ecosystem for students.















IEEE Student Chapter Inauguration



Workshop on Logic Development Using C



Workshop on AWS



Workshop on Face Recognition using Python



Online Expert Talk on Blockchain Technology



Anti-Ragging Orientation Program



Expert talk on Cyber Security



Workshop on Cyber Security, Digital Forensic & VAPT



Expert Talk on Technology, Artificial Intelligence & Careers by Mr. Achyut Godbole

Al Quiz, Al Poster Competition, Al Programming Contest on the occasion of MGM University Foundation day





10 days STTP on Swift Programming & iOS App Development

Road Safety Street-Play by UDICT volunteers at NSS Special Camp Georai, Dist.-Beed



Fee Structure

The Fees Structure for all UG and PG Programs of University Department of Information and Communication Technology (UDICT), MGM University, Chhatrapati Sambhajinagar for the Academic Year 2024-25 is as Follows:

Sr. No.	Particulars	Amount	Remarks
1	Application Form and MGMU CET 2023	1500/-	One Time
2	Tuition Fees	150000/- UG/PG	Per Year
		80000/- MCA (Integrated)	Per Year
3	Eligibility Fees	5000/-	One Time
4	Examination Fees	5000/-	Per Year
5	Student Activities Fees	1000/-	Per Year
6	UMIS and Student Insurance	3000/-	One Time
7	*Caution Money Deposit	5000/-	Refundable

^{*}Caution Money is refundable only after the student finally leaves the college on completion of the course.

- The Fee is to be paid by Digital Payment mode only through MGM University ERP.
- For details about Terms & Conditions, please visit MGM University Website.

Scholarships Available for Deserving Students of MGMU for Academic Year 2024-25:

- Sports/Athletics Merit Scholarship
- Scholarships to the Wards of Martyrs
- Hon'ble Chancellor's Scholarships

- · Alumni Scholarship
- Ph. D. Research Assistant Fellowship
- Scholarships to the wards of MGM employees

Prominent Recruiters



Admission Process (Online)

Eligibility

B.Tech. IT, B.Tech. AIML and B.Tech. Data Science

Passed HSC or its equivalent examination from science stream and obtained at least 45% marks (at least 40% marks, in case of Backward class categories belonging to Maharashtra State only) and the candidate should have appeared and secured non zero score in MGMU-CET 2024/MHT-CET 2024/PERA-CET 2024/JEE Mains 2024.

Integrated MCA

Passed HSC with Mathematics/Statistics/Accountancy as one of the subjects (at 10+2 level) and obtained at least 45% marks in aggregate (at least 40% in case of candidates of backward class categories belonging to Maharashtra State only), and secured non zero score in MGMU-CET 2024.

M. Tech. Data Science and M. Tech. AIML

Passed Bachelor Degree in the BE/BTech (CSE/IT/Civil/ECT/Mech.) with at least 50% marks (at least 45% marks in case of candidates of Backward class categories belonging to Maharashtra State only). Obtained Non-Zero Positive Score in Graduates Aptitude Test in Engineering (GATE 2023/2024). In case of unavailability of GATE candidates, the vacant seat will be offered to the non-GATE candidates, as per merit, based on the marks secured in MGMU–CET 2024/PERA CET 2024.

Admission Via

MGMU - CET

2024

Entrance Exam for MGM University
Programs - UG & PG

Application Process Steps

- Apply on https://admissions.mgmu.ac.in/udict/
- 2 Click on Apply now button
- Fill up enquiry details
- Click on submit to proceed with application
- Fill application details
- Pay Application fees / MGMU CET 2024 fees Rs. 1500/-
- 7 Submit the application
- Attempt MGMU CET Exam or Check your name in Merit List (Available in UDICT Office, MGM Campus)
- Processed to pay the fees online
- Submit all necessary original documents in ERP as well as in admission office



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APPLY NOW

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