



## UNIVERSITY DEPARTMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY (UDICT)





MGM University in Chhatrapati Sambhaji Nagar, 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.

- **Faculty of Engineering & Technology** - University Department of Information and Communication Technology, Jawaharlal Nehru Engineering College, Institute of Fire service Engineering, School of Engineering and Technology.
- **Faculty of Management & Commerce** - Institute of Management & Research, Institute of Hotel Management
- **Faculty of Basic & Applied Sciences** - Institute of Biosciences & Technology, Dr. G.Y. Pathrikar College of Computer Science & Information Technology, University Department of Basic and Applied Sciences
- **Faculty of Social Sciences & Humanities** - College of Journalism & Mass Communication, MGM Film Arts, MGM Photography, Institute of Fashion Design, College of Fine Art, Institute of Indian & Foreign Languages, Institute of Social Sciences
- **Faculty of Performing Arts** - Mahagami Gurukul
- **Faculty of Design** - School of Design
- **Faculty of Law** - School of Legal Studies and Research





### 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, Block-chain, and Big Data Analytics, (b) B. Tech. in Artificial Intelligence and Machine Learning, (c) B. Tech. Data Science,

#### PG Programs

(a) PG Diploma in AI and ML, (b) M. Tech. Geo-informatics, and; (c) M. Tech. Data Science.

### 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

- Empower students with human values, environment-friendly qualities and ethical approaches.
- Create technocrats for a sustainable growth in the industrial sector with an interdisciplinary aptitude.
- 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?

### 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, in the field of 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 post graduate courses with modern and evolving contents such as IoT, Blockchain, Big Data Analytics, Data Science, Artificial Intelligence, Machine Learning and Geoinformatics.
- Three undergraduate and three post graduate programmes are now being offered through Blended Learning in collaboration with Coursera Campus License, NPTEL, and NASSCOM.
- **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**.
- **Hobby Clubs** for nurturing talents.
- TEDx JNEC -Pioneer TEDx event in Marathwada region
- Co-curricular opportunities such as NASA zonal convention, Ankur innovative ideas/prototypes exhibition for First Year students, Razzmatazz etc.





### • ENGAGE • SHARE • INNOVATE

#### New Initiatives at MGM University since 2021:

- **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-education 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 Cell is responsible for ensuring that the quality assurance policies and procedures of the university are robust and effective in maintaining and monitoring the standards of its academic awards and in supporting the enhancement of teaching, learning and research experiences in the university.





## Programs Offered

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.





## Programs Offered

### 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 | 30 seats**

Artificial intelligence and Machine Learning (AI 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. AI 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 AI 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 | 30 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 modelling 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.



## P.G. Programs

### **PG Diploma (Artificial Intelligence and Machine Learning) - 1-year full-time program | 20 seats**

The PG Diploma Program 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 PG Diploma Program will open the gates of opportunities for students where the industry or research requirements are for AI and ML based techniques.

### **M. Tech (Geoinformatics) - 2 years full-time program | 18 seats**

Geoinformatics is an interdisciplinary field integrating Civil Engineering, Electronics and Telecommunications, Computer Science and Information Technology. It involves the science of collecting geospatial data, interpreting and analyzing them, making maps on the desktop and transmitting them over the internet (e.g. Google Maps, Bing Maps, Apple Maps). With several sensors and satellites collecting large volumes of data, it has become extremely relevant to process these with modern algorithms and techniques and help the administration in making predictions and sustainable decisions.

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

The M. Tech. in Data Science programme has been designed to cover up for the requirements of data analytics, modelling and decision support in various disciplines of Engineering and Technology, on a Choice Based Credit System. The masters programme in data science first introduces the student to the basic requirements of data structures and database design, analytics, modelling 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.

## 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.



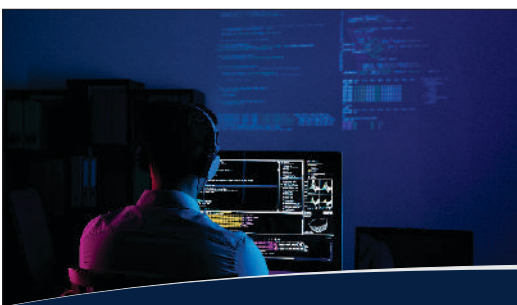


## Salient Features

## 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.

- Artificial Intelligence and Machine Learning
- Full Stack Web Development
- Design Thinking
- Remote Sensing and GIS
- Additive Manufacturing Technology
- Mechatronics and Industry 4.0
- Product Design and Development
- Industrial Engineering and Supply Chain Management
- Automotive Technology
- Entrepreneurship
- Biotechnology
- Internet of Things (IoT)
- Industry 4.0
- Electronics Engineering
- Renewable Energy Systems
- Electric Vehicles
- Smart Grid and Renewable Energy
- Electrical Engineering

## Honors Degree

Studying 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.

- Data Science
- Blockchain
- AI and Robotics





## Student Facilities

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

This is what one experiences in JNEC 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 ChristianiSharpline, 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. Vishweshwariyya Engineering Exploration Program (MVEEP) has been formulated, wherein the outcomes are envisioned as follows:

- Convert a given need statement into an engineering problem statement.
- Create morphological models for various solutions.
- Select the most feasible solution using comparison techniques.
- Design the prototype for the most feasible solution using manual or computer aided modelling.
- Use the various mechanisms, electronic components, sensors, motors etc. For the most feasible model.
- 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, counselling 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.



## Events at MGM University

- **ANKUR 2.1** - Engineering exploration project exhibition
- **Razzmatazz** - Annual Cultural Event TEDx- Independently organized and hosted unique annual TEDx conference
- **Swayambhu** - Annual multidisciplinary national level technical festival
- **NASA** - Participation for National Association of Students of Architecture Conventions at National and Zonal level
- **International Science Day** - Annual Celebration and promotion of scientific ideas of first year students.

## Global Technology Collaborations

UDICT has global technology collaborations for lab setup, projects, internships and startups



India's First Technology Excellence Center by MSC Software, USA



BMW Lab under Skill Next Program of BMW India



Flow Tech Measurement Lab by Endress + Hauser



Redhat Academy provides technology and support to offer Red Hat Courses and Exams



MSME Innovation Program Associate for Industry Projects



Mechatronics & Industry 4.0 Training Center, Germany

## Fees Structure

The Fees Structure for all UG and PG Programs of University Department of Information and Communication Technology (UDICT), MGM University, Chhatrapati Sambhaji Nagar for the Academic Year 2023-24 is as Follows:

### Tuition Fees for Academic Year 2023- 2024:

Sr. No.	Particulars	Amount	Remarks
1	Application Form and MGMU CET 2023	1500/-	One Time
2	Tuition Fees	150000/- UG/PG 100000/- PG Diploma	Per Year 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

The Fee is to be paid by Digital Payment mode only through MGM University ERP.

Scholarships Available For Deserving Students of MGMU for Academic Year 2023-2024

**For details about Terms & Conditions, please visit MGM University Website**

- Merit Scholarships
- Sports/Athletics Merit Scholarship
- Scholarships to the Wards of Martyrs
- Hon'ble Chancellor's Scholarships
- Alumni Scholarship
- Post-graduation Internship
- Scholarships to the wards of MGM employees

Admission Via

**MGMU - CET**

**2023**

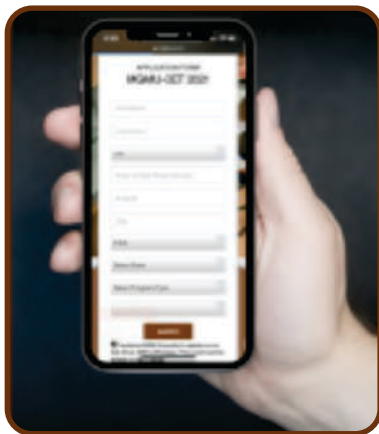
Entrance Exam for MGM University  
Programs - UG & PG



### APPLICATION FOR

MGMU - CET	2023
Entrance Exam for MGM University Programs - UG & PG	

- 1 Apply on [www.mgm.ac.in](http://www.mgm.ac.in) > [mgmu.ac.in/admissions/MGMU-CET.php](http://mgmu.ac.in/admissions/MGMU-CET.php) obtain unique login details for Entrance Exam related communications



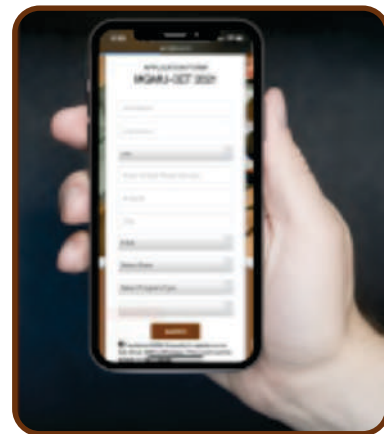
- 2 Choose Program and Pay the Application for Admission & the Entrance Exam Fees Rs.1500/-
- 3 Await Entrance Exam schedule and other intimations



### APPLICATION FOR

### UG FIRST YEAR OR PG PROGRAMS

- 1 Apply on <https://mgmu.ac.in/admissions/> follow eligibility criteria and other guidelines



- 2 Check your name in Merit List on <https://udict.mgm.ac.in/>
- 3 Counseling Round
- 4 Confirm Program of your choice
- 5 Proceed to pay the Tuition Fee online
- 6 Submit all necessary original documents
- 7 Upload the fee payment receipt
- 8 Fill up and upload anti-ragging affidavit (student & parent) & University eligibility form
- 9 Collect admission confirmation report through your login





## UNIVERSITY DEPARTMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY (UDICT)

### APPLY NOW

<https://mgmu.ac.in/admissions/>



**Dr. Sharvari C. Tamane**

(Professor and HoD UDICT)

e-mail id: [hodudict@mgmu.ac.in](mailto:hodudict@mgmu.ac.in)

Contact : +91 9404494299

### FOR MORE DETAILS VISIT

[mgmu.ac.in](http://mgmu.ac.in),  
[udict.mgmu.ac.in](http://udict.mgmu.ac.in)

**Mr. Mayur K. Jadhav**

(Asst. Prof. UDICT)

e-mail id: [mjadhav2@mgmu.ac.in](mailto:mjadhav2@mgmu.ac.in)

Contact : +91 8446060383

## MGM UNIVERSITY

MGM Campus, N-6, CIDCO, Chhatrapati Sambhaji Nagar - 431003, Maharashtra, India