ICT

Information and Communication Technology

Career opportunities

- Software Development
- Machine Learning
- Android/iOS Application
- Robotics
- Sensors & IoT
- Data Analytics
- Embedded Software
- Wireless Technologies
- Network & Security
- VLSI Chip Design

Marwadi University

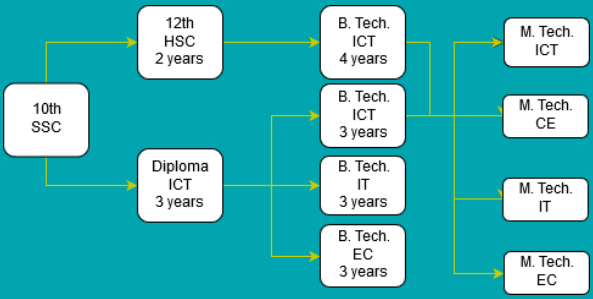
About ICT

Information and Communication Technology is an engineering branch that came into existence with a mission to provide a wider perspective on the nature, use and applications of technologies to the living world. The ICT epitomizes the conjunction of Computer and Communication systems which is one of the most rapidly flourishing and evolving disciplines of engineering. The ICT course explores the combined study of Hardware and Software engineering related subjects . In the present era of technological advancement, it is a need of time to explore technique to manage the bulk of information (data), analysis of data, fast and secure communication of information, machine intelligence for prediction of futuristic events from available information. Simultaneously, modern hardware technologies demand knowledge of minimization in size, energy efficient and secure communication devices for a single node or network of systems. The course structure gives flexibility to students so that they can choose subjects of their interest from the pool of software programming, electronics hardware, network and security, communication systems and data science. In Gujarat, the ICT course is offered in various institutions like DAIICT, PDPU, ADANI, GTU, Marwadi University, etc.

Courses Offered

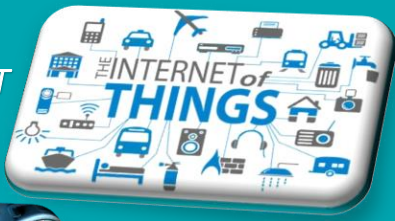
- Diploma in Information & Communication Technology - 60 Seats
- B.Tech in Information & Communication Technology – 60 Seats

Career Path for an ICT Engineer



Scope for ICT Engineers

Sensors and IoT



Machine Learning

Embedded Software

Software Development

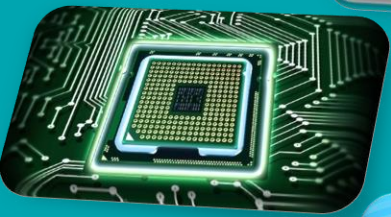
Network & Security

Scope for ICT Engineers

Data Analytics

Robotics

Android/iOS App.



VLSI Chip Design

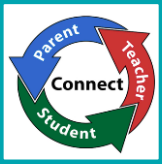
Wireless Technologies

ICT @ MU

Well equipped laboratories with 24X7 access

Faculties with 10+ years of average experienced educated from NIT, DAIICT, NIRMA Uni...

Choice based flexible structure for subject selection



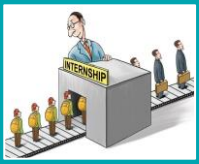
Active interaction students-parents-teachers

Adjunct faculties from industries

Excellent student satisfaction ratio

Encouragement and guidance for the state and national level competitions

Summer internships
4th sem: 6 weeks
6th sem: 6 weeks
8th sem: 6 months



Co-curricular and extra-curricular activities on Saturday

Active teaching-learning methodologies

- PBL
- LHC/LHD
- OBE
- Workshop
- Expert talk
- Industry Internship
- Industry visit
- Learner centric approach

Teaching-Learning Process

Project Based Learning

- Human centric projects
- 2-3 Mini projects in each semester
- Interdisciplinary projects
- Encourage to cultivate Startup mindsets
- Problem solving ability

The best part @ ICT, MU for me is project based learning. We are encouraged to think about how to address our societal problems in our subject projects. I have developed a mathematical function that helps in connecting GPS, controller and mobile app. for child tracking that can be monitored by parents. I have done 7 mini projects for different subjects and have secured cash prizes in various competitions at the national level including 500 USD which boost our confidence. Inspired by this PBL culture, I have also applied to NewGen IEDC-DST, India proposal for prototyping an innovative idea related to the ICT applications in Health Care, and fortunately have received the grant of Rs. 2 Lacs INR.

Kishan Shingala, Sem VI, Rajkot

Since my schooling time, I like to learn through projects. As my right brain is activated more than left my learning is happening through my ability of imagination/visualization. In analytical problem solving, I am medium pace learner but in projects my inner sensations gets activated. I have implemented a driving pattern monitoring system; further which I have modified the same for the competition of IET India. PBL helps me to co-relate the principles and concepts of the subjects.

Krupal Jivrajani, Sem IV, Jetpur

Teaching-Learning Process

Long Hour Coding/design

- Acquire skills in engineering tools
- Teamwork
- Troubleshooting ability
- Enhance coding proficiency
- Awareness of industry work culture

Being an ICSE board student, in secondary and higher secondary education, I feel myself synchronized with first year engineering assessments which were more about logical, conceptual and outcome based. Studying at the ICT in MU is more on experiential through various active learning methodologies. Being dreaming programmer, we have been cultivated through intense coding assignments by our University and industrial mentors. Personally, I realized the feeling of "I CAN DO" through the long hour coding sessions. In LHC we have been given a fragmented task list, which on compiling and combining, creates a module. We have made EVM voting machine using JAVA, 4 bit ALU in Quartus, Transistor amplifier design using Multisim, statistical analysis using R programming. It boosts our confidence, teamwork and troubleshooting abilities. These sessions inherit the qualities of teamwork, team management, coding skills and thinking out of the box. I feel that my decision to stick with the ICT branch was absolutely correct and it is helping me to grow enough in every direction, fruitful for my career, under the guidance of all the faculty members.

Aayushi Pandya, Sem IV, Rajkot

Teaching-Learning Process

Outcome based exam pattern

- Practical exam
- Open book test
- Take home test
- Project based assessment
- Continuous evaluation
- Case studies

As having 6161 merit rank. I had many options to choose colleges and branches but I had chosen ICT@MU for experience of a 360 degree education. A healthy environment for career advancement, student centric teaching learning and the concept of learning by doing things practically gave me the most unforgettable experience of college life in this span of 1 year. These factors helped to develop distinct skills into me. Also, different exam patterns specifically the concept of open book exam tests the skills of designing and analytical approach which mapped to higher order Bloom's taxonomy. We are inspired to solve GATE questions in order to secure good marks in subject exams which indirectly helps to prepare for future competitive exams.

Kiran Tanwani, sem IV, Surat

Best of my learning happens through innovative exam patterns which diversified to test our analytical, logical and practical skills. Specifically, take home test provides a distinct case study to solve using available resources, that burns our midnight oil. Proudly sharing my confidence working in the industry in 4th semester summer break which is only possible through practical based approach of our University.

Harshal Faldu, sem VI, Rajkot

Hands-on Workshops

- Software & Hardware skills
- Troubleshooting skills
- Engineering tools
- Collaborative work
- Bridging gap for industry needs

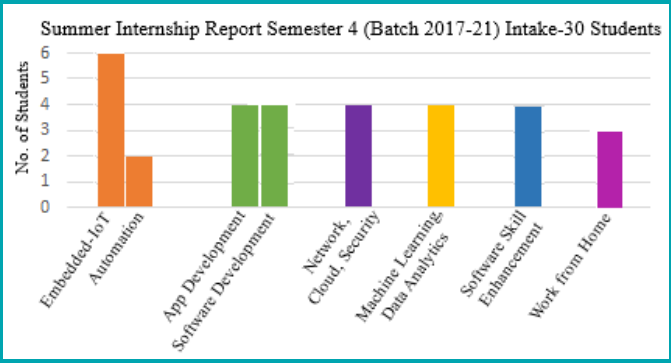
Hands-on is my favourite since schooling, where I have worked on Raspberry-Pi, Linux and Python. I thoroughly enjoyed learning in the ICT, MU that provided me with the platform of maximum hands on experiences. The impact of workshops offered to us was most noticeable when we had participated for Hackathon where we had a critical time of 36 hours to solve a problem statement. The things we learned from the workshops were applied in this and it helped us a lot during the whole competition. As being the youngest participant in mega event Hackathon; judges and other viewers appreciated us. Just loved it.....

Yash Ahir, Diploma Sem IV, Anjar (Kutch)

Being a Cambridge board student, I used to study with learning by doing. ICT @ MU is my second home as I use to stay most of my time in the laboratories for hands-on. We have been provided many workshops by industry experts. Based on this approach we have learned many new things for our Hackathon project of designing a dynamic advertisement system which can be used for adv. content controlled from a remote place. Feeling confident when received compliments from Industrialists for competent approach like fresher Er.

Bhavik Kalpesh, Sem IV, Nampula, Mozambique, Africa

Industry Internship 2018-19



Being just an above average student, I didn't have the privilege of the institute such as IITs, NITs, DAIICT; but at that moment I came across the ICT branch at MU, which is the perfect amalgamation of the engineering field that will provide me the platform to develop my interested set of skills. The strong teaching initiatives taken by the department have provided me the best option to hit the targets in the on going industrial internship in my area of interest in data science. Working within the industry in semester breaks helps in training our mindset for the future. These steps will definitely help change the ancient technique of engineering practices where learning for grades was a trend. I am proud to say "I am an ICTian!!"

Marlin Shah, Sem VI, Ahmedabad

Industry Internship 2019-20

Sr. No.	Domain	Industry Mentor
1	Software Development	72cubes Honing Consultant, Macymind
2	Chip Design (VLSI)	Qualcom e-Infochip Sankalp Semiconductor
3	ML / AI, Big Data	Leadingindia.ai Shaadi.com
4	Embedded System Design	Western Digital Sophos, Hella HP, Dell, Siemens
5	Security, Cloud Compt./ DevOps	Notsosecure Ninit Tech
6	Python & MEAN stack Training	TECUNIQUE

Expert Talks

- 15+ expert talks
- International speakers
- Industry speakers
- Panel discussion
- Inspirational talks
- Modern skill awareness

Technical and inspirational expert talks provides us clear picture of our future and it gives us trigger for best practices while studying. To the best of my memory, was one day expert session “inspire” where a panel of experts from diversified field of app development, software development, chip design, embedded and IoT and network security were invited. The success stories of engineers realized us the way we have to deal with problem solving approach and the question answer session explored in and out the gaps between industry and academic and with solution how to overcome it to get industry ready fresher.

Belvinraja Nadar, Diploma Sem IV, Gondal

Key Speakers

- Dr. Iana Gabriel, Professor, University of Pitesti, Romania
- Mr. Niraj Trivedi, Director ,product management, Qualcomm, USA
- Dr. Anthony A. Maciejewski, Professor, Colorado State University, USA
- Mr. Mehul Parmar, Intel , California, USA
- Mr. Rutul Lunagariya, Senior Engineer, Tata Elxsi, Bengaluru
- Jaivik Shah, Escalation Engineer, CISCO, Bengaluru

Teaching-Learning Process

Learner centric approach

- Diversified teaching-learning approach to address different kind of learners characteristics
- Dynamic exercises for extended hours

My experience of learning at the ICT, MU is exciting as we have been engaged in different active task turn by turn through which we learned the basics of engineering subjects and its application in real field. The best part I would like to share is teaching methodology, practice problems and project definitions which are centric to learner's ability. As being TFW candidate, I was worried whether I would get healthy competitive environment? I found students with high level of understanding, are challenged with questions of national level examinations to boost their confidence and challenge national level competitors.

Harsh Sidhhapura, Sem IV, Bhavnagar

Each student has varied learning ability and grasping power. But the Learner centric approach adopted by the ICT dept. provides each student equal opportunity to learn and get aligned with the subject concepts. Our dept. has implemented batch system that bifurcates students based on their learning abilities rather than grades, which helps us, being a medium paced learner, to stand besides my class at the end of the semester. The teaching and practicing methodology motivates us to study hard to reach the height adopted by the fast learners. By this approach, our coding ability has been reasonably improved in the II sem

Abhi Depani-Neev Daraniya, Sem IV, Manavadar

Mentoring

- SWOT analysis
- Goal setting
- Action plan
- Moral support
- Support in frustration

Here, in Marwadi University, the environment is so much homely and supportive. Faculties not only give educational knowledge, but they also teach how to solve real life problems and deal with critical situations. Each one of us have been provided a mentor. There is approachability, availability and the ability to listen is always for us. Mentors are always available for us whenever we are puzzled. They always motivate students to apply full potential. All faculties are so much dedicated towards students and give 100% of their efforts.

Devanshi Joshi, Sem VI, Rajkot

Leaving home and coming here from Mumbai at Marwadi University in teenage, We were slightly nervous but now we feel comfortable here @ MU, considering it as our 2nd home. In our University, we have been provided a margdarshak (mentor) who shows the correct path and approach to deal with the situation. We are free to meet our mentor any time and seek their help and our mentors also give us positive feedback and guide us on how we can improve not only our results but also our skills. They study our in and out progress and interest and suggests us which skill we need to develop especially for the future aspects. We always feel relaxed and stress free once we meet our mentors.

Manan Nagda-Neer Gosrani, Diploma Sem IV, Mumbai

I believe, every individual, requires a faculty with whom they can be transparent enough to share their view points and carry out their own SWOT analysis. The mentoring program here at MU is something which was really new for me in which every student is allocated a faculty mentor who helps them, sits with them, discuss problems and brings out the feasible solutions. I believe, a mentor acts as a lantern in the dark path of the student.

Bhaumik Muliya, Sem IV, Surendranagar

International opportunities

- 1 month mobility
- 1 semester mobility
- 1 year mobility
- European Universities

Josh Trivedi has being studying semester 3rd and 4th at University of Lodz, Polend

Marwadi University has always provided the support when I needed. The ICT department has been very close to my heart since the department is with full of power and energy. During my 2nd year of Bachelor degree, I had a very priceless opportunity to study one semester abroad in ERASMUS+ programme at University of Pitesti (UPIT), Romania. I was very fortunate to get this fantastic experience. From beginning to end, I learned a lot. My stay in Pitesti, Romania and study in UPIT was memorable for a variety of experiences. After completion, I can observe the upgraded version of myself because ERASMUS+ changed the whole perspective. This programme helped me to build a better me, who can handle unfavorable scenarios. The five star beauty of ERASMUS+ is that you meet new people all over the world, which also allows you to learn about new countries and discover their cultures. It was fully funded by ERASMUS+. Golden duration of three months at UPIT will always have a place in my heart.

Manan Patel, Sem VI, Rajkot

Manan Patel studied semester III at University of Pitesti, Romania

Teaching-Learning Process

Foundation for entrepreneur

- Design thinking
- Human centered design
- Reverse engineering
- Laser cutting machine and 3D printer for prototype
- Interaction with young entrepreneurs

I was firm to take admission in the ICT branch but there was a confusion between PDPU and MU. But I preferred MU because of its learning by doing approach and project based learning. Having received the strong foundation for basic subjects in 2 semesters, I have been fortunate to get opportunity to work in the SSIP funded project. ICT that too in MU is a ladder to make your dreams come true.

Janvi Davda, Sem IV, Rajkot

Life skills

- Motivational Talks
- Village visits
- Time management workshop
- Trekking camp
- Sports activities
- Cultural activities

We have visited Saputara for Out bound Training in 4th semester where we enjoyed various activities like tent assembling, rock climbing, night trekking and down trekking under the guidance of professional trainer was best ever experience to learn from nature in my life. We got thrilling experience during zippling and rappling which was full of adventurous. Camp fire, playing games and antakshari with class mates is a life time memory.

Hitarth Thakar, Sem VI, Bharuch

Student's Voice

Harshil Thummar
Diploma Sem IV
Rajkot

Firstly, I am highly excited for getting admission in this lush green and mega campus of Marwadi University, which has all the facilities that a world class campus requires like a very huge library which has Guinness Book of World Record, canteen, music room, sports department, multiple playing grounds, etc. to provide us platform to fit with physic, sharp in mind and enjoy diversified cultural. I am joyfully learning at the ICT department due to mentoring support, learning by doing approach and more over many projects building opportunities. The ICT at Marwadi University for me is bucket of diversified experiences which made me confident in one year of diploma study.

Chitrak Bhatt
Sem IV, Junagadh

Being a student of the ICT is like getting a superpower for me because our department provides us the facilities for being a student along with that we get chance to work in both hardware and software aspects. In the very first year, we have got Industrial mentors who guide us with the state of art, practice at industry level for logical and coding practices, which makes us industry ready. Our faculties are amazing and helpful, who always stands by our side in difficulties. This creates a perfect learning environment. I've developed so many skills in a year and I think this is something rare. "Learning never stops and Neither Do we, it is a 24x7 experience"

Meet Tank
Sem IV, Rajkot

It was tough time for me while got merit number 4865 and started to choose branch and college. I had very profound reference of my senior batch ICT student about students centric teaching approach of the ICT department at Marwadi University. Here exam is not about mugging up and putting it on paper but going deep into the concepts and exploring the subject, realizing the core importance of the subject. With project of multidisciplinary team where I am working with my seniors of ICT and CE branch. It is one of the best experience of my one year tenure at Uni, where I am part of NewGen IEDC, DST funded project where my team has got 2lacs rupees fund for handwriting recognition using smartpen. Our senior ICTians have set high reference for us in terms of their performances in academics, industry internships and winning prizes in mega competitions.

Parent's Voice

Parents teacher interaction

- Parents-teacher meeting in every semester
- Monthly progress report
- Mentor-parents meeting at students home

My son had opportunity to study in government college but joining Marwadi University was the best decision due to the supportive and cooperative nature of faculties and their approach. My son has grown more in practical aspects and even now he has developed an engineering workshop at home. He prefers to learn new things even in the vacation duration.

Mrs. Anita Buddhadev, Electrical Er., Rajkot

I feel Marwadi University is one of the unique Universities, where the students do not get admissions only to enjoy college life but the goal of teaching by the experienced team is to shape every student as a complete human being. Regular attendance, follow up and practical training helps students to learn rather than becoming bookish. Very interesting study environment with proper guidance and regular follow up to complete very difficult projects. By securing admission at Marwadi University, I feel that my son is in safe hands and right place.

Mr. Hemal Doshi, AO, Incometax Dept., Rajkot

Parent's Voice

Parents teacher interaction

Marwadi Campus is excellent in terms of college building, Hostel, Sports ground, laboratories, etc. Food quality is also good in hostel. Methodology of teaching @ the ICT, MU is also excellent. They focus more on practical and give equal opportunity to all students to perform. Faculties here are well educated and cooperative. Participating in other curriculum activities is more and meaningful, Overall education at Marwadi is excellent.

Mr. Manoj Pariya, Businessman, Ahmedabad

We feel our decision to take admission in the ICT department is the best due to experienced and supportive faculties. My daughter got full support to rebuilt her self confidence in difficult situations by continuous communication with the mentor and moral support.

Mrs. Jyoti Gajera, Housewife, Rajkot

The ICT department has planned unique learning process for each and every student very well that builds their skills, talent and interest. The constructive step was taken by the department to provide internship in this early stage of engineering. Thereby, I feel proud to have my son studying in this dept. For giving best learning opportunities and make them feel confident.

Mr. Upendra Teraiya, Civil Er., Bhavnagar

Achievements

4 teams from 1st year qualified for final round of GUJARAT HACKATHON 2017/18 (Result awaited)

2nd Rank worth 500 USD in IEEE Myosa held at Delhi. Participants are from IIT, BITS, NIT, DAIICT etc.

3rd rank worth 10,000 INR cash price in Project display at ITM University

2nd rank at GTU Techfest, zonal level by 1st year students in Relay Coding

3rd rank and 9500 INR cash/voucher price in Project Presentation and Exhibition organized by WIE Affinity Group, IEEE Student Branch, DA-IICT

2nd and 3rd rank: CODEFEST
3rd rank: CIRCUITRIX event
GTU Techfest, zonal level

SSIP
Education Department Government of Gujarat
NewGen IEDC

Runners-up in KHEL MAHAKUMBH

5 projects selected in NEW GEN IEDC, DST India with fund of 2 lacs INR each
2 projects selected in SSIP, Marwadi University

1st, 2nd and 3rd rank at GTU Techfest, zonal level by 1st year students in HACKDUINO

Achievements & association

1st Rank in all girls team category in Smart City Hackathon Rajkot Cash price Rs. 30000/-

2nd Rank in GTU tech fest by 1st semester students

aws educate

CODING BLOCKS

TATA

TATA CONSULTANCY SERVICES

INTERNSHALA

internships that matter

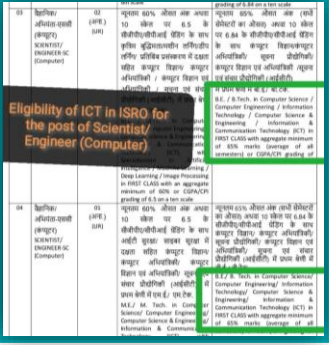
PrepBytes

AICRA

Government Job

As per the advertisement from ISRO, ICT engineers can apply for the post of Computer Engineer as well as Electronics Engineer.

Eligibility of ICT in ISRO for the post of Scientist / Engineer (Electronics)



Eligibility of ICT in ISRO for the post of Scientist/ Engineer (Computer)

Useful links

ICT Facebook Page

ICT YouTube Channel

ICT Instagram Page

ICT LinkedIn Page

ICT Students Website

Contact Details:

Prof. C. D. Parmar
HOD, ICT Dep., MU.
M:+91 98244 16484
M:+91 95740 67299

Address:

Marwadi University
Rajkot-Morbi Highway
Road, Gauridad,
Rajkot- 360003, Gujarat

Degree Syllabus

Diploma Syllabus

Department of Information & Communication Technology

Marwadi University

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