

ICT Department Information

What is ICT?

ICT (Information & Communication Technology) is a multidisciplinary branch combining Computer Science, Electronics, Communication, and IT. It focuses on software development, embedded systems, networking, AI, IoT, Data Science, Cloud, VLSI, and Cybersecurity.

Why ICT after 10th or 12th?

ICT has a very wide scope – students can enter fields like AI/ML, Data Science, IoT, Cloud Computing, Robotics, Cyber Security, VLSI, Software & Web Development, Mobile App Development, Embedded Systems, Networking, etc.

The syllabus is practical and future-oriented (projects every semester, internships, industry tie-ups, expert talks) which prepares students for both jobs and higher education. Students also get chances in research, innovation, hackathons, IPRs, and international exposure.

Diploma and Degree

Diploma (after 10th): - Duration: 3 years, focusing on fundamentals of electronics, programming, hardware, networking, and software basics. - After diploma, students can take direct admission into Degree (B.Tech ICT) in 2nd year (lateral entry).

Degree (B.Tech ICT @ Marwadi University): - 8 semesters (4 years) with subjects ranging from basics (electronics, programming, mathematics) to advanced (AI/ML, Cloud, IoT, VLSI, Blockchain, Cyber Security, Big Data, etc.) - Internships: 6 weeks in 4th & 6th sem, 6 months in 8th sem - Focus: project-based learning, research, innovation, and industry tie-ups - Prepares students for placements, higher education, or startups

Department Vision and Mission

Vision: To build students' capacity through quality education that enables them to address industry and societal problems while becoming contributors.

Mission (4 key areas): - M1: Develop problem-solving abilities through project-based learning - M2: Provide blended teaching and assessment approaches to enhance learning -

M3: Provide exposure to various domains for students to choose their area of interest -

M4: Maintain continuous industry interaction to prepare industry-ready students

Program Educational Objectives (PEOs)

1. Applying engineering principles to solve real-world societal problems
2. Working on multidisciplinary projects in diverse industrial environments
3. Exploring recent ICT technological developments
4. Enhancing knowledge through self-learning, certifications, and higher education
5. Acting ethically and socially responsible as solution providers and entrepreneurs

Program Specific Outcomes (PSOs)

1. Identifying, analyzing, and solving real-time industry problems in software development, embedded systems, VLSI design, IoT, and communication technologies
 2. Contributing as analyst and developer in cloud computing, DevOps, security, machine learning, artificial intelligence, and big data
-

Faculties

- **Chandrasinh Parmar**
 - Specialization: Electronics & Communication
 - Post: Assistant Professor
 - Contact: 9824416484 | chandrasinh.parmar@marwadieducation.edu.in
- **Arjav Bavarva**
 - Specialization: Networking & Cloud
 - Post: Head of Department (HOD)
 - Contact: 7016685360 | arjav.bavarva@marwadieducation.edu.in
- **Sunil Lavadiya**
 - Specialization: IoT
 - Post: Faculty
 - Contact: 9428228839 | sunil.lavadiya@marwadieducation.edu.in
- **Tapan Nahar**
 - Specialization: General Faculty
 - Post: Faculty
 - Contact: 9983250843 | tapan.nahar@marwadieducation.edu.in
- **Nishith Kotak**
 - Specialization: Data Science
 - Post: Faculty
 - Contact: 7405468045 | nishith.kotak@marwadieducation.edu.in

- **Vijay Dubey**
 - Specialization: IoT
 - Post: Faculty
 - Contact: 9723265278 | vijay.dubey@marwadieducation.edu.in
- **Suhag Baldaniya**
 - Specialization: Software Development
 - Post: Faculty
 - Contact: 9537330702 | suhagbhai.baldaniya@marwadieducation.edu.in
- **Rakesh Oza**
 - Specialization: VLSI
 - Post: Faculty
 - Contact: 9978068186 | rakesh.oza@marwadieducation.edu.in
- **Chirag Visani**
 - Specialization: Software Development
 - Post: Faculty
 - Contact: chirag.visani@marwadieducation.edu.in
- **Shamsaagazarzoo Alam**
 - Specialization: Software Development
 - Post: Faculty
 - Contact: 8866152292
- **Vishal Akbari**
 - Specialization: Cyber Security
 - Post: Faculty
 - Contact: 7698903070
- **Mitesh Solanki**
 - Specialization: IoT
 - Post: Faculty
 - Contact: 9586571164 | miteshbhai.solanki@marwadieducation.edu.in

- **Sunera Kargatha**
 - Specialization: General Faculty
 - Post: Faculty
 - Contact: sunera.kargathara103783@marwadiuniversity.ac.in
- **Harikesh Chauhan**
 - Specialization: Software Development
 - Post: Faculty
 - Contact: 6390327075 | harikesh.chauhan@marwadieducation.edu.in
- **Dharmendra D Zala**
 - Specialization: Cloud & Networking
 - Post: Faculty
 - Contact: 9574219380 | dharmendrasinh.zala@marwadieducation.edu.in
- **Naimish Rathod**
 - Specialization: General Faculty
 - Post: Faculty
 - Contact: naimish.rathod@marwadieducation.edu.in

Facilities

- Well-equipped laboratories with 24x7 access
- Industry-supported/sponsored labs

Lab Components: - Microcontroller and Interfacing Lab - VLSI Physical Design Lab - Software Engineering Lab - Computer Networks Lab - Data Science Lab

Total labs : 10

Lab locations – MA102, MA103, MA104, MA107, MA108, MA109, MA112, MA113, MA115, MB306

Total classrooms : 5

Class locations – MA101, MA105, MA106, MA110, MA111

Department Achievements

- **Research & Innovation:** 12 projects selected in NEW GEN IEDC, DST India with ₹2 lakhs each; 2 projects selected inSSIP; 70+ IPRs registered
 - **State Level:** Participation and recognition in competitions
 - **Student Ambassadors:** ICT students serving in various initiatives
 - **International Exposure:** Student internationalization programs, internships, global university partnerships
 - **Higher Education:** Students advancing to prestigious institutions
 - **Industry Recognition:** Strong placement records across domains
-

Clubs and Activities

ICT students are actively taking leadership roles in various clubs and communities

Co-curricular and extra-curricular activities on Saturday - Regular weekend activities organized through clubs

- **Competitive Programming Club:** Events like Unity, Git–Github, Custom Header Files, CLI Terminal
 - **Data Science Club:** Chatbot, Data Visualization
 - **Circuitology Club:** Drone Making
 - **Cloud Computing & DevOps Club:** Introduction to EC2, Hosting PHP site on EC2, Git–Github
 - Hackathons organized with prizes and recognitions like Coder of the Month
-

Cultural Events

Frolic, Confidence, Engineers Day, Teachers Day

- Events : Dance, Food Competition, Rangoli, Debate, Poetry
 - Sports: Cricket, Basketball, Race, Tug of War, Chess, Carrom, E-sports
-

Placement Data – B.Tech ICT 2022-26

- **Rishit Rathod** – TSS – 4.2 LPA
 - **Abhay Nathwani** – Fintech Global – Software Developer – 10 to 15 LPA
 - **Aryan Langhnoja** – Ace Data Analytics – Software Developer – 5.1 to 5.7 LPA
 - **Umang Hirani** – Ace Data Analytics – Software Developer – 5.1 to 5.7 LPA
 - **Ishika Sheth** – Triyanshi – BDE – 3 LPA
 - **Krish Mamtora** – Roima Intelligence Inc – Technical Intern – 5 to 7 LPA
 - **Harsh Sanghvi** – Websmith Solution – AI/ML Engineer – 4 to 7 LPA
 - **Twisha Gami** – Websmith Solution – AI/ML Engineer – 4 to 7 LPA
 - **Vidya Bharti Sinha** – Astound Digital – Software Developer – 8 LPA
 - **Jay Mangukiya** – Satva Solutions – Trainee SD – 3.5 to 6 LPA
 - **Aryan Mahida** – Simform Solution – SDE Trainee – 6 LPA
 - **Dhruvi Patel** – .Net Developer – 4.5 LPA
 - **Injala** – .NET Developer – 4.5 LPA
 - **Bhavik Kaladiya** – Azilen Technologies – DevOps Engineer – 4 to 5.5 LPA
 - **Hit Racchadiya** – Cybercom Creation– Software Engineer – 3.6 LPA
 - **Rohan Roy** – Improvised Solutions – DevOps Engineer – 4 LPA
 - **Ritesh Sanchala** – Tech Extensor – .NET / Angular Developer – 3 to 5 LPA
 - **Vivek Chavda** – VasyERP – Java Developer – 4.2 LPA
 - **Nidhi Dattani** – Ally Soft – MERN Stack Developer – 3.5 to 4.5 LPA
 - **Jenil Vaghasiya** – Ally Soft – MERN Stack Developer – 3 LPA
 - **Vatsal Parmar** – Ally Soft – MERN Stack Developer – 3.5 to 4.5 LPA
 - **Prashant Sarvaiya** – Ally Soft – MERN Stack Developer – 4 to 4.5 LPA
 - **Vraj Kumar Nandwana** – Empyreal Infotech Pvt Ltd – AI/ML Engineer – 3 LPA
 - **Neel Raiyani** – Empyreal Infotech Pvt Ltd – Node.js Developer – 3 LPA
 - **Priya Shukla** – KiwiQA – Quality Assurance Engineer – 2.4LPA
-

Student Achievements

National Level

- Ghaziabad Hackathon Competition (Sustainability Solutions for Humanity) – Oct 2024
- Skill India Competition 2024 Winners: Jatan Sanghvi, Hasti Hajipara, Dhruvkumar Vyas
- Coding Ninja Hackathon Winners: Abhay Nathwani, Ritesh Sanchala, Aryan Langhnoja (1st position across India)

Ambassador Achievements

- Fenil Vadher – Google Student Ambassador
- Dhyana Kothari – Google Student Ambassador
- Ashutosh Kumar – Student Ambassador of Udemy
- Rudra Miyani – Student Ambassador of Internshala

Research Contributions

- Multiple Research Papers published

Patents & Copyrights

- 70+ IPRs registered
- Promoting filing of IPRs in subjects like CPSI, HCD, etc.

International Internships

- Malhar Shah – 2024 : Secured internship at taiwan as a Research intern
- ShantanuSinh Parmar - 2024 : Secured International Internship at Canada
- Dhruvi Kothari – 2024

Student Exchange Programs

- Dhruvi Bhalodiya – Romania
- Priyanshi Madani – Romania

IIIT Internship

Fenil Vadher got the opportunity to be selected as an intern at Indraprastha Institute of Information Technology (IIIT), Delhi.

Alumni & Industry Support

- Alumni involvement in research, innovation, and mentorship
- Industry-sponsored infrastructure and labs
- Zuru Tech Sponsored Lab
- Tie-up with e-Infochips

Developer information

If someone asks “Who made you?” or “Who is your developer?”:

- Prashant Sarvaiya and Ronit motivaras.
- Role: Student & Developer

B. Tech. (ICT) Curriculum

Semester 1

Subject Code	Subject Name
01MA1101	Differential and Integral Calculus
01EE0104	Electrical Circuits
01EC0101	Basics of Electronics Engineering
01SL0102 / 01SL0103	Reading & Writing for Technology / Speaking & Presentation Skills
01CT0101	Introduction to Computer Programming
01CT0103	Foundation Skills in Sensor Interfacing
01CT0104	ICT Workshop
01PE0101	Physical Education / Sports / Yoga

Semester 2

Subject Code	Subject Name
01MA1151	Matrix Algebra and Vector Calculus
01EC0102	Digital Electronics
01ME0105	Engineering Drawing and Computer Aided Design
01CT0105	Object Oriented Programming
01EN0101	Basics of Environmental Studies
01CT0106	Introduction to R and R Studio
01CR0103	Value Education

Semester 3

Subject Code	Subject Name
01MA0231	Discrete Mathematics and Graph Theory
01CT0301	Computer Organisation and Architecture
01CT0302	Signals and Systems
01CR0302	Professional Ethics
01CT0303	Introduction to Communication Engineering
01CT0308	Data Structure using C++
01CT0309	Programming with Python

Semester 4

Subject Code	Subject Name
01CT0401	Probability and Statistics
01CT0403	Microcontroller and Interfacing
01CT0404	Analog and Digital Communication
01CT0407	Database Management System
01CT0408	Internet and Web Technology
01CT0409	Operating System

Semester 5

Subject Code	Subject Name
01CT0503	Computer Networks
01CT0512	Design and Analysis of Algorithm
01CT0513	Digital Signal and Image Processing
01CT0521	Creativity, Problem Solving and Innovation
01GS0501	Cognitive Aptitude – I
01CT05XX	Department Elective – 1
01CT05XX	Department Elective – 2

Department Electives (Choose 2):

1. 01CT0507 – Advanced Microprocessor
 2. 01CT0508 – Optical Communication
 3. 01CT1509 – Linux Administration
 4. 01CT1510 – Applied Linear Algebra
 5. 01CT0518 – .Net Technologies
 6. 01CT0514 – VLSI Design
 7. 01CT0516 – Engineering Electrodynamics
 8. 01CT0515 – Information and Web Security
 9. 01CT0519 – Machine Learning
 10. 01CT0517 – Cross Platform Mobile Application Development
-

Semester 6

Subject Code	Subject Name
01CT0614	Optimization Techniques
01CT0615	Software Engineering
01CT0616	Artificial Intelligence
01CT0617	Human Centered Design
01CR0601	Business Benchmark
01GS0601	Cognitive Aptitude – II
01CT06XX	Department Elective – 3
01CT06XX	Department Elective – 4

Department Electives (Choose 2):

1. 01CT0618 – Sensors and IoT
 2. 01CT0605 – RF and Microwave Communication
 3. 01CT0611 – Cloud Computing
 4. 01CT0621 – Computer Vision
 5. 01CT0623 – Advanced Java
 6. 01CT0625 – Advanced Web Technologies
 7. 01CT0619 – Digital Design using Verilog
 8. 01CT0610 – Satellite Communication
 9. 01CT0627 – Cyber Security
 10. 01CT0622 – Big Data Analytics
 11. 01CT0624 – Theory of Computation
 12. 01CT0626 – Game Programming and VR
-

Semester 7

Subject Code	Subject Name
01CT0715	Capstone Project
01CT1702	Information Theory and Coding
01CT0716	Mobile and Pervasive Computing
01CT0704	Management Information System
01CT07XX	Department Elective – 5
01CT07XX	Department Elective – 6

Department Electives (Choose 2):

1. 01CT0717 – VLSI Physical Design
 2. 01CT0719 – Adhoc Wireless Networks
 3. 01CT0720 – Cloud Developing
 4. 01CT0722 – Deep Learning
 5. 01CT0724 – Compiler Design
 6. 01CT0718 – FPGA Based System Design
 7. 01CT0726 – Software Defined Networks
 8. 01CT0721 – Blockchain
 9. 01CT0723 – Information Retrieval & NLP
 10. 01CT0725 – Advanced Database
-

Semester 8

Subject Code	Subject Name
01CT1801	Project
01CT08XX	Department Elective – 7
01CT08XX	Department Elective – 8

Department Electives (Choose 2 – MOOC):

1. 01CT0818 – Analog Circuit Design
2. 01CT0814 – Spread Spectrum Communications
3. 01CT0828 – Cloud Architecture
4. 01CT0816 – Advanced Machine Learning
5. 01CT0821 – Object Oriented Analysis and Design
6. 01CT0819 – RTOS
7. 01CT0820 – Introduction to 5G
8. 01CT0811 – Introduction to DevOps Tools
9. 01CT0817 – Advanced Data Analytics
10. 01CT0822 – Soft Computing
11. 01CT0823 – Cloud Technical Essentials
12. 01CT0824 – Security Essentials

13. 01CT0825 – Machine Learning Essentials
14. 01CT0826 – Human Computer Interaction
15. 01CT0827 – Software Testing