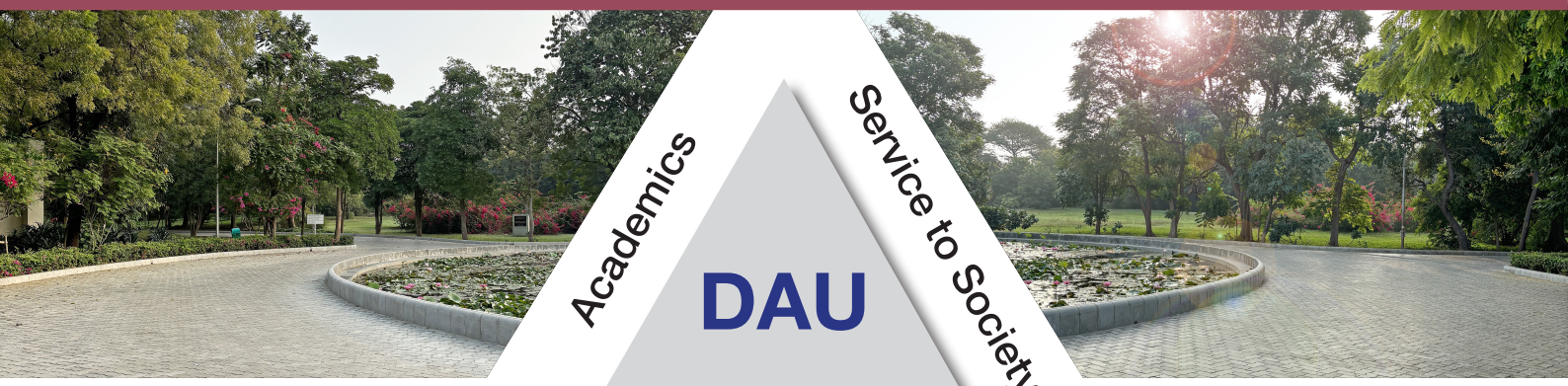
Dhirubhai Ambani University

Formerly known as
Dhirubhai Ambani Institute of
Information and Communication Technology

M.Tech. (ICT)
with specialization in
Wireless Communications and Signal Processing



Admissions 2025

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DAU at a Glance

DA-IICT was founded in 2000 as a unique university devoted to the cutting-edge interdisciplinary area of Information and Communication Technology (ICT). ICT was emerging as the technology of the future bringing in the fourth Industrial Revolution. Well known and highly qualified faculty members joined DA-IICT and developed a curriculum and research program steeped in all aspects of ICT, societal, scientific, and technical. This spirit has been nurtured for the last 23 years and DA-IICT wants to continue its excellence in interdisciplinary teaching and research well into the future.

The Act No. 6 of 2003 of the Gujarat Legislature provided for the establishment of the DA-IICT and conferred on it the status of a University. On 30 November 2004, the DA-IICT was included in the list of Universities maintained by the University Grants Commission under Section 2(f) of the UGC Act, 1956. DA-IICT is a member of the Association of Indian Universities (AIU) as approved by the AIU at its 84th Annual Meeting held during 12-14 November 2009. The National Assessment and Accreditation Council, Government of India has accredited DA-IICT with an **A^+ Grade in 2023**.

The Legislative Assembly of Gujarat passed the DA-IICT Amendment Act Bill on 28th February 2024 and the DA-IICT Act (Amendment) 2024, which paved the way for the formation of the Dhirubhai Ambani University, and came into force by the announcement in the Gujarat Government Gazette dated 13th May 2024. Consequent upon the said amendments, the institute transforms itself into a multi-disciplinary university of new and emerging technologies and will establish institutions in other disciplines such as law, management etc.

Vision and Mission

The vision of the institute is to become a globally recognized institution that offers innovative programs, outstanding faculty, an atmosphere of innovation, a responsive administration, a vibrant campus and a collaborative learning environment that continuously adapts to the changing landscape of research and innovation and the future of work. Toward this, we plan to design and deliver academic programs in both disciplinary and multidisciplinary domains to prepare students for a rapidly evolving work environment.

Govt. of Gujarat conferred the status of **Centre of Excellence** in January 2022

NAAC (Accreditation): A+ Grade (Year- 2023)

Gujarat State Institutional Rating Framework (GSIRF) awarded **Five-Star Rating in the last three years**

Selected as one of the **Nodal Institutes to mentor Innovators** by the Industries Commissionerate, Govt. of Gujarat

Alumni who have excelled as **entrepreneurs** (founded and co-founded over 100 companies), **technocrats** (CTO, CEO), **bureaucrats** (IAS, IRS, IPS, IES), **academicians** (NUS, University of Chicago, University of Toronto, IIT Madras)

Annual Student Scholarships: INR 4-5 Crores

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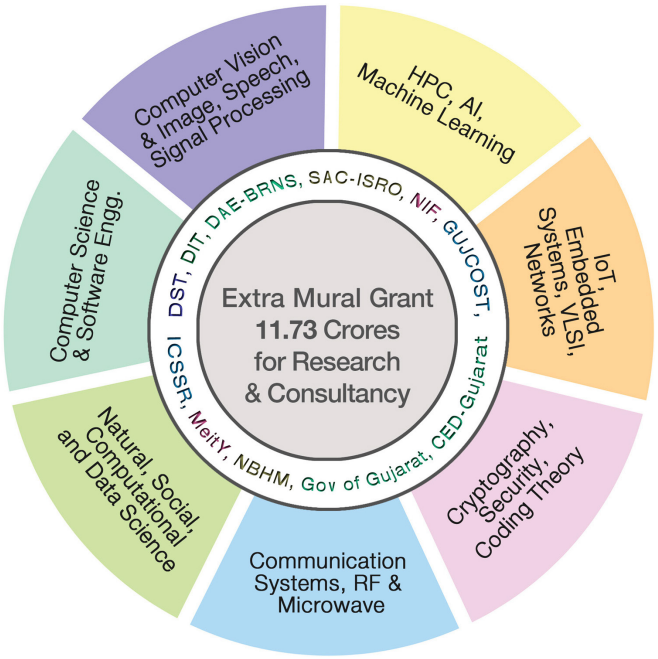
Academics and Research at DAU

Interdisciplinary and Multidisciplinary Research Oriented Academic Programs

Program Level	Name of the Program	Duration	Unique Features
Doctoral	**PhD**	4-6 years	- Entry through national level entrance test & interview
PG	**MTech** (ICT)	2 years	- Thesis and Project mode - Industry oriented IT program - Hands-on program - In collaboration with IIRS & AAU - Fusion of ICT and Design
	MSc (IT)	2 years	
	MSc (Data Science)	2 years	
	MSc (Agriculture Analytics)	2 years	
	MDes (CD)	2 years	
UG	**BTech** (ICT)	4 years	- 1st institute in India to offer **unique program** in ICT in 2001 - 1st institute in India to offer UG program in Computational Science - Intersection of Computer Science & Applied Mathematics to solve complex problems
	BTech (Hons in ICT; minor in Computational Science)	4 years	
	BTech (Mathematics and Computing (MnC)	4 years	
	BTech Electronics and VLSI Design (EVD)	4 years	



Sponsored Research Projects: 32

Consortia Projects (DST, MeitY): 4

Industry / Consultancy Projects: 2

Major MOUs / LOUs

- Institut Superrieur D'electronique De Paris (ISEP), Catholic University of Paris, France
- Springer Science-Business Media Singapore
- Oregon University, USA
- University of Evora, Portugal
- Texas A & M University
- University of Milano, Italy
- University of Hildesheim, Germany

Conferences/ Workshops/ Summer Schools Organized : 25

Publications: **600** *h* - index: 48

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Program Overview

Why a M.Tech. (ICT) program in WCSP?

This MTech (ICT) WCSP program covers a range of advanced topics related to wireless communications and signal processing, including associated enabling technologies. It provides an excellent opportunity for you to develop the skills required for careers in some of the most dynamic fields in WCSP. The group conducts pioneering research in a number of state-of-the art research areas in the domain of wireless communication and signal processing such as 5G and beyond wireless communication, speech technology, signal and image processing to name a few. The group has well-equipped laboratories with equipment and computational facilities. This program provides in-depth training in design, analysis and engineering skills relevant to the theory and practice of the wireless communications and signal processing industry.

As an MTech student in the WCSP specialization, you will have opportunity to interact with the faculties of the specialization having wide experiences in Academia and Industry. During the first year of your degree program you will take the courses being taught by the faculties of WCSP specialization. Here, you will come to know them and their research areas. Thereafter, you will have freedom to choose the faculty advisor for your MTech Minor and Major research projects.

Many of our recent graduates have obtained job offers from the companies such as Qualcomm, Perfect Wireless, Micron, etc. There is a 100% rate of employment of our alumni who maintained their CPI (Cumulative Performance Index) above a threshold during the degree program.

Both the WC (Wireless Communication) and the SP (Signal Processing) are at the forefront of the technological advances that the entire human society will experience over the next ten years. The coming-together of the wireless communication and signal processing is an exciting convergence and this degree program will enable you to stand at the forefront of this joint domain. This degree will allow you to position yourself at the right place at the right time.

The specialization is the key in today's competitive job market. As an example, those entering the medical college today are seldom content with a basic degree in medicine – they insist on specializing, since greater their specialization, the greater their ability to stand apart from the crowd and, more importantly, to contribute toward solving a specific set of problems that very few have expertise for. When you graduate from this program, unlike many of your contemporaries, you will become an expert in the communication technologies and signal processing – this is a unique specialization which will be highly coveted by the industries over the next at least ten years.

Apart from the practical and pragmatic career-oriented considerations such as the above, there is a more fundamental reason for studying courses on WCSP. The ability to communicate we humans possess is not disconnected from our ability to do signal processing intelligently – the intelligent agents are naturally highly skillful communicators and signal processors and vice versa. Similarly, to become an expert in the machine intelligence, one has to learn the theory of communication and signal processing. The expertise in the former cannot be achieved without mastering the latter. The evidence of this lies in today's modern communication device --- be it the cellphone, the computer connected to Internet, or the satellite TV. As these machines become increasingly intelligent, they also become superior communication and signal processing devices.

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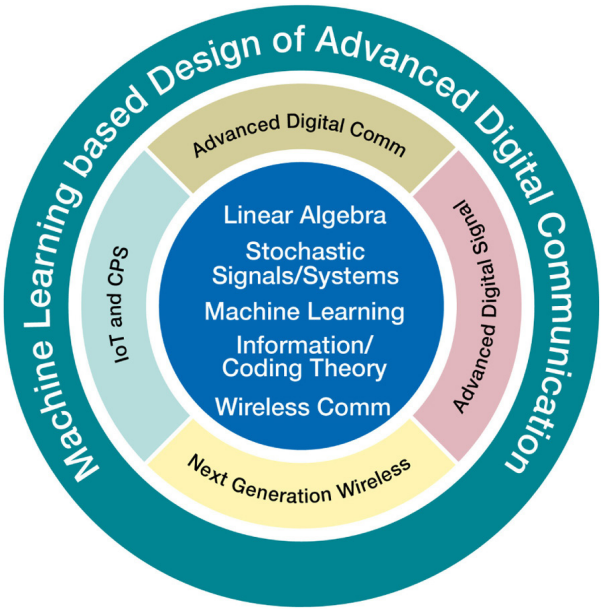
The smartphone is “smart” not only because it offers many Apps, but more fundamentally because it actively helps its owner --- without the owner’s awareness --- in the process of communication.

The messages (audio, video, images, etc.) are “understood” by the communication device and are compressed before the transmission (similar to how the essence of a lengthy speech by a politician is often summarized by a journalist before it is succinctly published in the newspaper).

The smartphone also intelligently overcomes the effect of noise and interference during the message transmission (this is similar to how your brain can infer the message even though it hears only a few of the words spoken by your friend in a party room when the rest of his/her words are drowned in the loud music playing in the background). The result is that the we – the end-users of the smartphones – hear clean, uninterrupted, speech or watch videos that do not buffer even though the communication links may be highly noisy. The magical (though taken-for-granted) ability of our communicating brains that allows us to read between the lines or understand the meaning even when we do not hear part of the conversation is a signal processing skill which is highly sought after in the machine learning community.

This is a unique degree program in which you will study both the wireless communication and signal processing in an integrated and unified manner – the manner in which our brains work shows that this is the natural approach toward a study of these two theories.



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Course Curriculum

SEMESTER-I (Autumn Semester 1st Year)

Course Name		Credit Structure
Core	Communication Skills and Technical Writing	2
Lab	Matlab, Python and C++	3
Sp. Core	Introduction to Wireless Communication	4
Gen. Elect. (Technical)		3 or 4
	Wireless System Design	
	Detection and Estimation Theory	
	Any other relevant course	
Gen. Elect. (Math)		3 or 4
	Probability and Random Variables	
	Linear Algebra	
	Graph Theory	
	Optimization	
	Any other relevant course	
Total Credits		**15 or 17**

SEMESTER-II (Winter Semester 1st Year)

Course Name		Credit Structure
Sp. Core	Advanced Digital Signal Processing	4
Sp. Electives I		
	Advanced Wireless Communication	4
	Application of ML to Wireless Comm Systems	4
Sp. Elective II		
	Speech Technology	4
	Digital Image Processing	4
Minor Project I		3
Total Credits		**15**

Summer: Start of Major Project 1

SEMESTER-III (Autumn Semester 2nd Year)

Course Name		Credit Structure
Sp. Electives III and IV		
	Adaptive Signal Processing	4
	Next Generation Communication Systems	4
	Cyber-Physical Systems and Internet of Things	4
	Any other relevant course	
Major Project I - Continuation		
Total Credits		**14**

SEMESTER-IV (Winter Semester 2nd Year)

Major Project II or Industry/Research Internship	12
Total Credits	**12**

Total Program Credits: (Tentative) 56

The composition of the elective baskets is representative and subject to change

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Admissions

All India Category: Total Seats: 7

GATE 5 & Non-GATE 2

Gujarat Category: Total Seats: 3

Eligibility Criteria

GATE Qualified candidates

A candidate with a qualifying degree in any one of the following:

- BE/BTech (CS/IT/EL, ECE, Electrical, Instrumentation)
- M.Sc. degree in Computer Science / Electronics / Mathematics / Statistics
- M.Sc. degree of DA-IICT
- M.C.A. degree (3 year program)

The aggregate marks in the qualifying degree should not be less than 60% or equivalent as per the norm set by the degree awarding Institute/University.

Non-GATE candidates

- MSc (CS), MCA, BE/BTech (CS, IT, CSE)

The aggregate marks in the qualifying degree should not be less than 65% or equivalent as per the norm set by the degree awarding Institute/University.

Candidates appearing in their final degree examination and expecting to complete it by July 2025 may also apply. However, their final admission will be subject to the condition that they obtain an aggregate of marks required based on mode of admission i.e. GATE/Non-GATE, or its equivalent as per the norms set by the degree granting Institute/University. All admitted candidates have to submit their degree certificates or proof of completion of degree, before 30 October 2025 failing which their admission is liable to cancellation.

Age: There is no age limit applicable to this program.

Selection Process

Admission to All India category of M. Tech. (ICT) with specialization SS, ML, VLSI&ES and WCSP will admit candidates through two channels: GATE and NON-GATE.

Admission through GATE Channel:

Candidates who have a valid GATE score in the disciplines of Electronics & Communication Engineering (EC), Electrical Engineering (EE), Computer Science & Information Technology (CS), Instrumentation Engineering (IN) and Data Science & Artificial Intelligence (DA), only can apply.

The final merit list for admission will be prepared on the basis of valid GATE score only.

Specialization GATE Discipline

- Machine Learning (CS/EC/EE/DA)
- Software Systems (CS)
- VLSI and Embedded Systems (EC/EE/IN)
- Wireless Communication & Signal Processing (EC)

Admission through Non-GATE Channel:

The selection of candidates in Non-GATE category will be based on the entrance test to be conducted at selected centers all over the country. The tentative list of centers is: DAIICT Gandhinagar, Ahmedabad, Bhopal, Benguluru, Chennai, Mumbai, Hyderabad, Patna, Jaipur, Kolkata, New Delhi, Pune, Rajkot, Surat, Udaipur, Bhavnagar, Bhilai, Bhubaneswar, Chandigarh, Guwahati, Jammu, Kochi, Lucknow, Pant Nagar, Porbandar, Ranchi and Vijayawada. The final merit list for admission will be prepared on the basis of the aggregate score in the entrance test.

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The candidates can give up to two preferred specializations based on their eligibility conditions. Counseling for allotment of the specialization will be done online. Applicants are advised, from the date of announcement of first merit list, to check for e-mail communications from the Institute to learn about the admission status and steps they need to take to continue with the counseling process.

Note: The decision of the Competent Authorities of DA-IICT regarding eligibility and selection of any candidate shall be final.

How to Apply

Candidates submit an online application by clicking on the link given on the Institute website.

Admission Offer

The short-listed candidates will be offered admission (confirmed/waitlisted) in order of their merit.

Important Dates

Online application website opens
18th March 2025

Last date for submission of online applications
20th May 2025

Entrance test for Non-GATE Category
15th June 2025

For Inquiries
Email: pg_admissions@daiict.ac.in
Voice call: 079 69 08 08 08
For more details please visit: www.daiict.ac.in

Fees Structure*

At the time of admission an amount of Rs. 1,15,000 (Rs.90,000 towards Tuition Fee for the First Semester and Rs. 25,000 towards Caution Deposit) is to be paid. The registration fee is payable at the time of registration and hostel rent on allotment of the hostel room.

Tuition fee	Rs. 90,000 per Semester
Registration Fee	Rs. 2,500 per Semester
Caution Deposit	Rs. 25,000 (Refundable at the end of the program)
Hostel Rent	Rs. 35,000 per semester
Food	On actuals. There are multiple food options available in the campus (The expense will be approximately Rs.5,500 pm)

***Subject to revision every Academic Year from 8 to 10%.**

Education Loan

The Institute will facilitate the students to avail educational loan from selected Banks. The bank officials will be present on campus at the time of registration of admitted students so as to enable the students to obtain details on procedures and terms and conditions of the loan. The students can also avail loan from banks of their choice and in either of the case; the Institute will extend support in completing the loan documentation process.

Financial Assistance

- **GATE Admitted Students:** Eligible for a monthly stipend of Rs. 15,000 in the form of a Teaching Assistantship during the first semester.
- **Non-GATE Admitted Students:** Eligible for a monthly stipend of Rs. 12,500 in the form of a Teaching Assistantship during the first semester.
- **Subsequent Semesters:** Continuation of the stipend depends on meeting the academic requirements.