



**Dhirubhai Ambani
University**

Formerly known as
Dhirubhai Ambani Institute of
Information and Communication Technology

B.Tech. MATH Σ MATICS & COMPUTING



Academics

Service to Society

DAU

Research & Innovation



Admissions 2025

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 24 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
	MSc (IT)	2 years	- Industry oriented IT program
	MSc (Data Science)	2 years	- Hands-on program
	MSc (Agriculture Analytics)	2 years	- In collaboration with IIRS & AAU
	MDes (CD)	2 years	- Fusion of ICT and Design
	MDes (IUXD)	2 years	- Fusion of HCI and Design
UG	BTech (ICT)	4 years	- 1 st institute in India to offer unique program in ICT in 2001
	BTech (Hons in ICT; minor in Computational Science)	4 years	- 1 st institute in India to offer UG program in Computational Science
	BTech (Mathematics and Computing (MnC))	4 years	- Intersection of Computer Science & Applied Mathematics to solve complex problems
	BTech Electronics and VLSI Design (EVD)	4 years	

Sponsored Research Projects: 32

Consortia Projects (DST, MeitY): 4

Industry / Consultancy Projects: 2

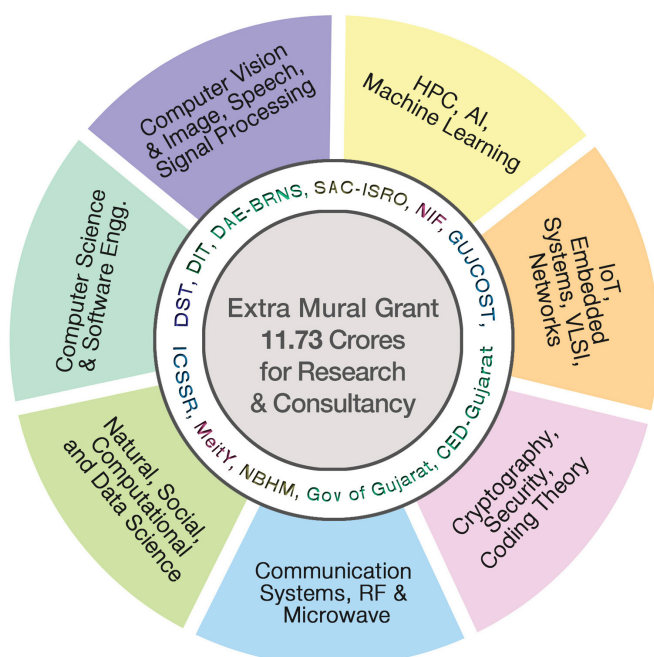
Major MOUs / LOUs

- Institut Superieur 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



Program Overview

Why a B.Tech program in MnC?

The past few decades have witnessed large scale technological advancements which have facilitated probing at scales that was not accessible earlier. No wonder, we have information like never before, however, unravelling the mysteries hidden in them remains a challenge. Industry, academia and innovators have realized that such problems cannot be looked at through the eyes of any single discipline, but rather, requires interdisciplinary and multidisciplinary approaches. The combined knowledge area of mathematics and computer science provides access to many different approaches that can be adopted for the exploration of such information and thereby creating new pathways for future scientific developments and innovation. Not surprisingly, graduates with a strong foundation in mathematics and computer science have created a unique niche for themselves and there has been an increasing requirement of graduates of these disciplines.

DA-IICT philosophy, vision and MnC

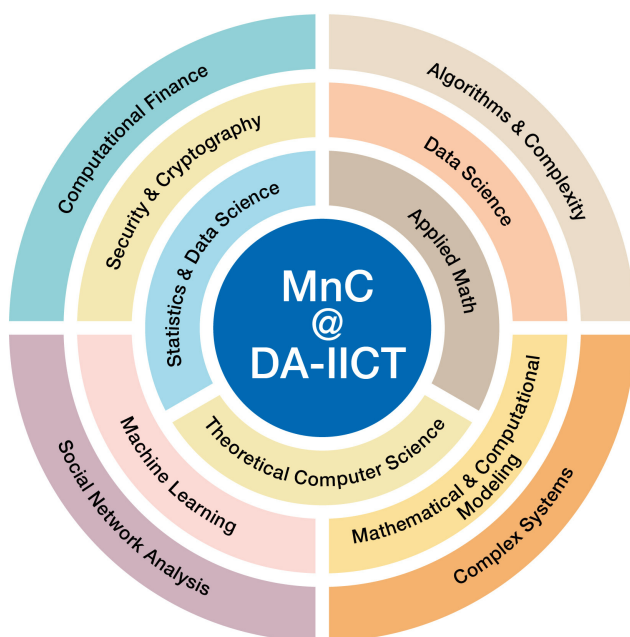
DA-IICT since its inception has been an institute of interdisciplinarity and contemporary domains. B Tech programs in ICT and ICT honours with minor in computational science are testimonials to this. With its experience and expertise at institutional innovation and knowledge reform, DA-IICT is well-poised to provide knowledge and training to young minds to provide solutions to the challenges mentioned earlier. The BTech program in Mathematics and Computing (MnC) at DA-IICT, started in 2020, is therefore a strong step in this direction.

MnC embodies the fusion of Mathematics and Computer Science. It is obtaining wide acceptance as a distinct discipline dealing with Mathematics as a fundamental intellectual tool in computing and with Computing as a primary component of mathematical problem solving. The curriculum focuses on expanding mathematical, algorithmic and computational thinking abilities of the students. A strong mathematical foundation will enable the students to study and analyse abstract concepts and to model many real life problems as mathematical problems. Algorithmic thinking will enable them to solve these mathematical problems in an automated way while computational thinking will enable them to evaluate the efficiency of these solutions. The rigour in curriculum's content will provide an adequate and solid foundation as well as opportunities for skill development in MnC. The wide variety of competence acquired through the curriculum will make the students eligible to apply for a whole range of occupations and for research and managerial careers in later life.



Program Overview

MnC program at DA-IICT has been carefully designed in consultation with leading experts from industry and academia from India and abroad. The curriculum blends together foundational aspects of mathematics and computer science with emerging areas in contemporary science and technology. The core course component in the first two years aims to build a solid foundation in mathematics, computer science and humanities and social sciences. Emphasis here is on both technical and communication and creative skills. Core courses in humanities also bring in the role and importance of ethics in technological developments. Elective courses provide exposure in several related disciplines and enable the students to choose and pursue the path of their interest. Overall, the curriculum is a syllabus of courses that ensures competence, quality and adaptability of the graduates.



Salient Features of the program

- The program is designed keeping in mind the emergent areas in modern science and technology.
- The program structure is contemporary with blend of courses in traditional as well as new emergent areas.
- A rigorous program that also provides flexibility in learning. It has a strong foundation and at the same time inculcates interdisciplinary thinking and provides the required skill.
- The program core consists of 42% courses in computer science, 36% in mathematics and 22% in humanities and social sciences and combined knowledge areas of math and computing
- MnC electives in the broad areas of theoretical computer science, applied math and statistics and data science.
- Open electives in the areas of engineering arts and design, humanities, social science & management.
- Independent projects, rural, industrial and research internships that help the students to expand their knowledge base and pursue the path of their own interest.

Careers

Apart from the available prospects in traditional computer science and IT, graduates of the BTech (MnC) program from DA-IICT will be suitably prepared for jobs in emerging niche areas in data science, computational finance, mathematical modelling and large-scale computer simulation. Our graduates will also be able to pursue career paths in higher education in areas of applied maths, computer science and computational sciences.



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Course Curriculum

Semester-1

Mathematical, Algorithmic, & Computational Thinking
Computer Organization and Programming
Discrete Mathematics
Digital Logic Design
Language and Literature

Semester-2

Functions of Single Variable and ODEs
Object Oriented Programming
Data Structures and Algorithms
Linear Algebra
Approaches to Indian Society

Semester-3

Probability and Random Processes
Operating Systems
Design and Analysis of Algorithms
Functions of Several variables and PDEs
Database Management Systems
Science, Technology, Society

Semester-4

Mathematical Statistics
Theory of Computation
Parallel and Distributed Algorithms
Real and Complex Analysis
Numerical and Computational Methods
Environmental Studies

Semester-5

Mathematical Optimization
Modelling and Simulation
Algebraic Structures
Principles of Economics
MnC Elective-1
MnC Elective-2

Semester-6

Machine Learning
Open Elective – 1
MnC Elective – 3
MnC Elective – 4
MnC Elective – 5
Independent Project – 1/ MnC Elective – 6

Semester-7

MnC Elective – 6 / Independent Project – 1
MnC Elective – 7
MnC Elective – 8
Open Elective – 2
MnC Elective – 9
Independent Project – 2 / MnC Elective – 10 /BTP – 1

Semester-8

MnC Elective – 10 / BTP-1
BTP-2

Representative list of electives

Graph Theory and Algorithms	Data Mining and Visualization	Stochastic Simulation
Approximation Algorithms	Human Computer Interaction	Dynamical Systems
Computational Complexity	Natural Language Processing	Computational Number Theory
Randomized Algorithms	Network Science	Fluid Dynamics
Quantum Computing	Time Series Analysis	Game Theory
Introduction to Cryptography	Software Engineering	Queuing theory
Block Chain and Cryptocurrencies	Hypothesis Testing	Operations Research
Adversarial Machine Learning	Multivariate Statistics	Functional Analysis
Machine Learning and Security	Bayesian Analysis	Stochastic calculus for finance
Introduction to coding theory & Applications	Financial Data Analysis	Computational finance
Compilers	Machine Learning in Finance	



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Admissions

Total Seats: 60

33% of the seats are reserved under Gujarat Category. Seats under Gujarat Category will be filled as per the guidelines of ACPC. The candidate has to apply to ACPC, GoG, separately.

Eligibility Criteria

The minimum academic qualification for admission to the programs is that the candidate must have passed or appearing in 2025 in the final examination of 10+2 (Class XII) or its equivalent with Mathematics, Physics and any one of Chemistry/Bio-technology/Computer Science/Biology.

Selection Process

Admission to the B. Tech (ICT) program will be based on the All India Rank of Joint Entrance Examination 2025 (JEE-2025) Main, which is conducted by the National Testing Agency, Government of India.

The short-listed candidates will be offered admission (confirmed/waitlisted) in order of their merit (based on the All India Ranking of JEE Main 2025) and preferences selected.

How to Apply

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

Fees Structure*

Tuition Fee: Rs. 1,78,500 per Semester

**This Fee Structure is submitted to the Appellate Committee of the State Government for consideration.*

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

Important Dates

Online application website opens	:	3 rd April 2025
Last date for submission of online applications	:	9 th June 2025

Scholarships

UG Institute Fellowships: A few students admitted to the program are awarded fellowships equivalent to full tuition fees. Fellowship is for best JEE rank holders, best GUJCET rank holders, 12th class toppers from different states and girls students.

UG Merit Scholarships: A few students admitted to the program are awarded merit scholarships equivalent to full tuition fees based on their semester results.

UG Merit-cum-Means Scholarships: A few students admitted to the program are awarded upto 70% of tuition fees as a merit-cum-means scholarships based on their semester results and family's annual income.

**Mukhya Mantri Yuva Swavalamban Yojna,
Government of Gujarat**

**Hon. Chief Minister Scholarship Scheme,
Government of Gujarat**

Digital Gujarat Portal, Government of Gujarat

National Scholarships Portal, Government of India

Cybage Khushboo Scholarships

Education Loan:

The Institute will facilitate the students to avail educational loan from selected banks.

For Inquiries

Email: ug_admissions@daiict.ac.in | Voice call: 079 69 08 08 08

For more details please visit: www.daiict.ac.in