Ahmedabad University

MTech

Master of Technology

COMPUTER SCIENCE AND ENGINEERING

Master the Future with MTech in CSE (AI and Data Science)

Innovate. Code. Transform

www.ahduni.edu.in/seas

Ahmedabad University

About Us

- Established in 2009
- Leading private, non-profit research university
- Liberal education focused on interdisciplinary learning, practice orientation, and research thinking
- Prepares critical thinkers who are analytically equipped, practically oriented, and contextually aware global citizens
- Six schools and nine centres bringing liberal arts, sciences, and the professions to engage together in knowledge creation for addressing complex challenges of the society
- Curriculum offering majors that merge the boundaries of disciplines to prepare students for the new economy

School of Engineering and Applied Science

The school delivers undergraduate and graduate engineering programmes with extensive student-centric pedagogies to achieve excellent learning outcomes. Our project-based educational approach helps shape dynamic and proactive graduates with capabilities for lifelong learning, complex problem-solving, design and innovation, and adaptation of technology towards meeting the needs of society. We not only teach technology but actively guide and nurture its use in ways that may be unattainable with conventional approaches.

Amrut Mody School of Management ▪ Bagchi School of Public Health ▪ School of Arts and Sciences
School of Engineering and Applied Science ▪ Undergraduate College ▪ The Graduate School

Ahmedabad Design Lab ▪ Centre for Heritage Management ▪ Centre for Learning Futures
Global Centre for Environment and Energy ▪ International Centre for Space and Cosmology
Sahyog: Centre for Promoting Health ▪ Stepwell Centre for Asian Futures ▪ The Climate Institute
VentureStudio ▪ The Institute of Manufacturing and Economy

Message from the Dean

Ahmedabad University is committed to providing an education that prepares students to think critically and creatively enabling them to emerge as independent thinkers and compassionate leaders. The School of Engineering and Applied Science has created curricula that help students grow intellectually, personally, and professionally so that they may thrive themselves and also help others thrive.

The School's infrastructure, comprising contemporary advanced facilities, well-equipped laboratories, and a large and well-stocked library, fosters a conducive environment for learning. Our students are also supported and mentored by faculty, who are active researchers and engage students in their academic pursuits. Additionally, the school promotes holistic development and participation among students through workshops, conferences, and other extracurricular events organised on campus. We deliver a sound engineering education and a nuanced approach for tackling real-world challenges.

Professor Sunil Kale

Dean
School of Engineering and Applied Science
PhD (Stanford University)

Why Study

MTech in Computer Science and Engineering

at Ahmedabad University?

- Specialisation in AI and Data Science: Focused on cutting-edge fields making graduates highly sought after in the industry.
- Industry-Oriented Curriculum: Designed in collaboration with industry experts, the curriculum offers hands-on learning through projects, case studies, and research opportunities, to align with real-world applications and the latest technological trends.
- Flexible Learning for Working Professionals: Designed for working professionals, the programme offers a flexible structure, such as weekend and evening classes, to facilitate upskilling while maintaining career continuity.
- Strong Industry and Research Collaborations: Ahmedabad University's strong industry ties, including collaborations with leading AI and Data Science companies and research labs, provide students with internships, projects, and career opportunities.
- Expert Faculty: Learn from renowned academicians and industry leaders with deep expertise in Big Data Analytics, Machine Learning, Cloud Computing, Data Science, and AI.
- State-of-the-Art Infrastructure: Access to advanced computing labs, high-performance servers, and AI research facilities.
- Career & Placement Support: Dedicated career support with placement assistance, mentorship programmes, and networking opportunities.

Master of Technology in
Computer Science and Engineering

The advent of emerging technologies in recent times has led to rapid advancements in computer science and engineering, transforming the field exponentially. These technologies are driving innovation across industries, creating new opportunities, and becoming increasingly interdisciplinary, marking a crucial moment in the impact of technology on our daily lives.

Given that continuous learning and adaptation are imperative to remain current with the rapid pace of technological change, the School of Engineering and Applied Science offers a Master of Technology programme in Computer Science and Engineering, specialising in Data Science and Analytics. Furthermore, the School has introduced a specialisation in Artificial Intelligence, commencing in the academic year 2024-2025.

The specialisation in Data Science and Analytics trains students in applied mathematics, statistics, and computer science, enabling them to apply their knowledge to real-world domains such as finance, energy, supply chain management, agriculture, and e-commerce. Data Science focuses on the collection, preparation, analysis, and visualisation of large datasets—including multimodal and unstructured data—to derive meaningful insights.

The specialisation in Artificial Intelligence (AI) trains students to develop AI-based approaches to solve real-world problems using state-of-the-art techniques in computer vision, natural language processing, medical image analytics, and deep learning.

Programme Highlights

- Two-year, full time
- Student-centric pedagogy
- Project-based approach
- Design-driven curriculum
- Industry-oriented courses
- Complex problem-solving approach
- Inspiring innovation and lifelong learning
- Deep, interdisciplinary education that builds skills and perspectives

Programme Overview

Programme Structure
Duration: 2 years
Semesters: 4 semesters

Category	Credits
University Requirements Courses on: Technical Communication	3
Domain Courses	33
Specialisation Electives (3)	9
Research Project Proposal (Summer)	3
Major Project I and II (One Year) (Off-campus Industry Project OR On-campus Thesis)	32
TOTAL	**80**

Curriculum Structure

Semester 1

- Technical Communication (common for MTech Programmes)
- Advanced Data Structures and Algorithms (CSE 605)
- Statistical Learning (CSE 500)
- Computational Thinking (CSE 601)
- Artificial Intelligence (CSE 518)
- Artificial Intelligence Lab (CSE 618)

Semester 2

- Machine Learning Theory and Practice (CSE 623)
- Deep Learning (CSE 602)
- Applied Data Science (CSE 548)
- Data Science Lab (CSE 620)
- Elective — 1
- Elective — 2

Summer

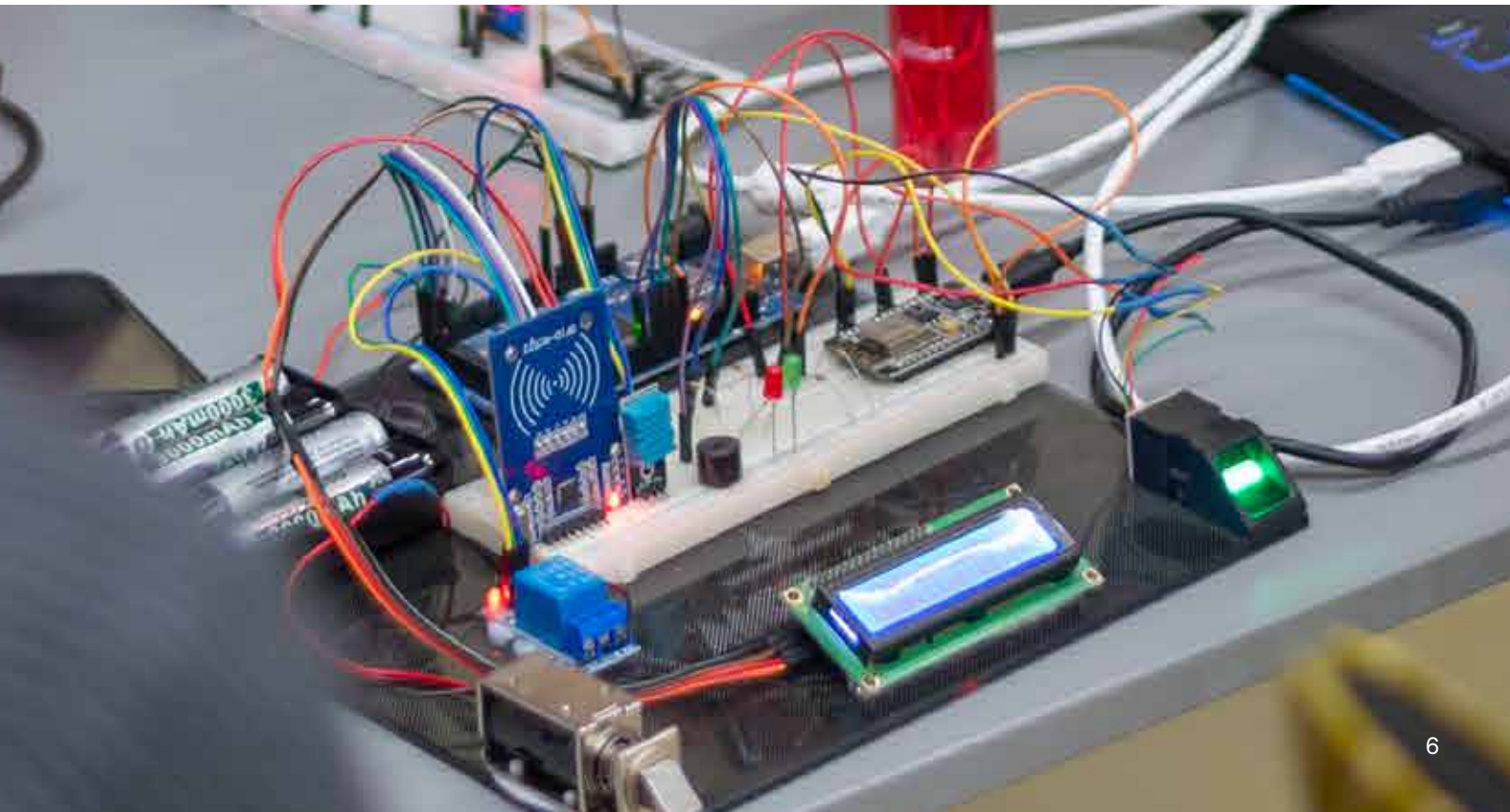
- Optimisation Theory and Algorithms (CSE 621)
- Research Project Proposal (CSE 660)

Semester 3

- Major Project (Part 1) [Off-campus Industry OR On-campus Thesis] CSE661
- Cloud and Large-Scale Computing (CSE 606)

Semester 4

- Major Project (Part 2) [Off-campus Industry OR On-campus Thesis] CSE662
- Independent Study (with Faculty) OR Elective - 3



Faculty

Amit Nanavati

Computer Science
and Engineering

PhD
(Louisiana State University)

Dhaval Patel

Computer Science
and Engineering

PhD
(Nirma University)

Jayendra Bhalodiya

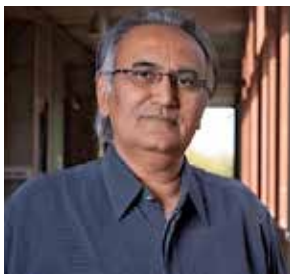
Computer Science
and Engineering

PhD
(The University of Warwick)

Mehul Raval

Computer Science
and Engineering

PhD
(Pune University)



Sanjay Chaudhary

Computer Science
and Engineering

PhD
(Gujarat Vidyapeeth)

Shefali Naik

Computer Science
and Engineering

PhD
(Sardar Patel University)

Srikrishnan Divakaran

Computer Science
and Engineering

PhD
(Rutgers University)

Souvik Roy

Computer Science
and Engineering

PhD
(Indian Institute of Engineering
Science and Technology, Shibpur)

Adjunct Faculty

Siddharth Asthana

Computer Science
and Engineering

PhD
(IIIT-Delhi, India [TCS Ph.D. Fellow])

S. Ramamohan

Computer Science
and Engineering

PhD
(SVNIT (then SVRCET), Surat

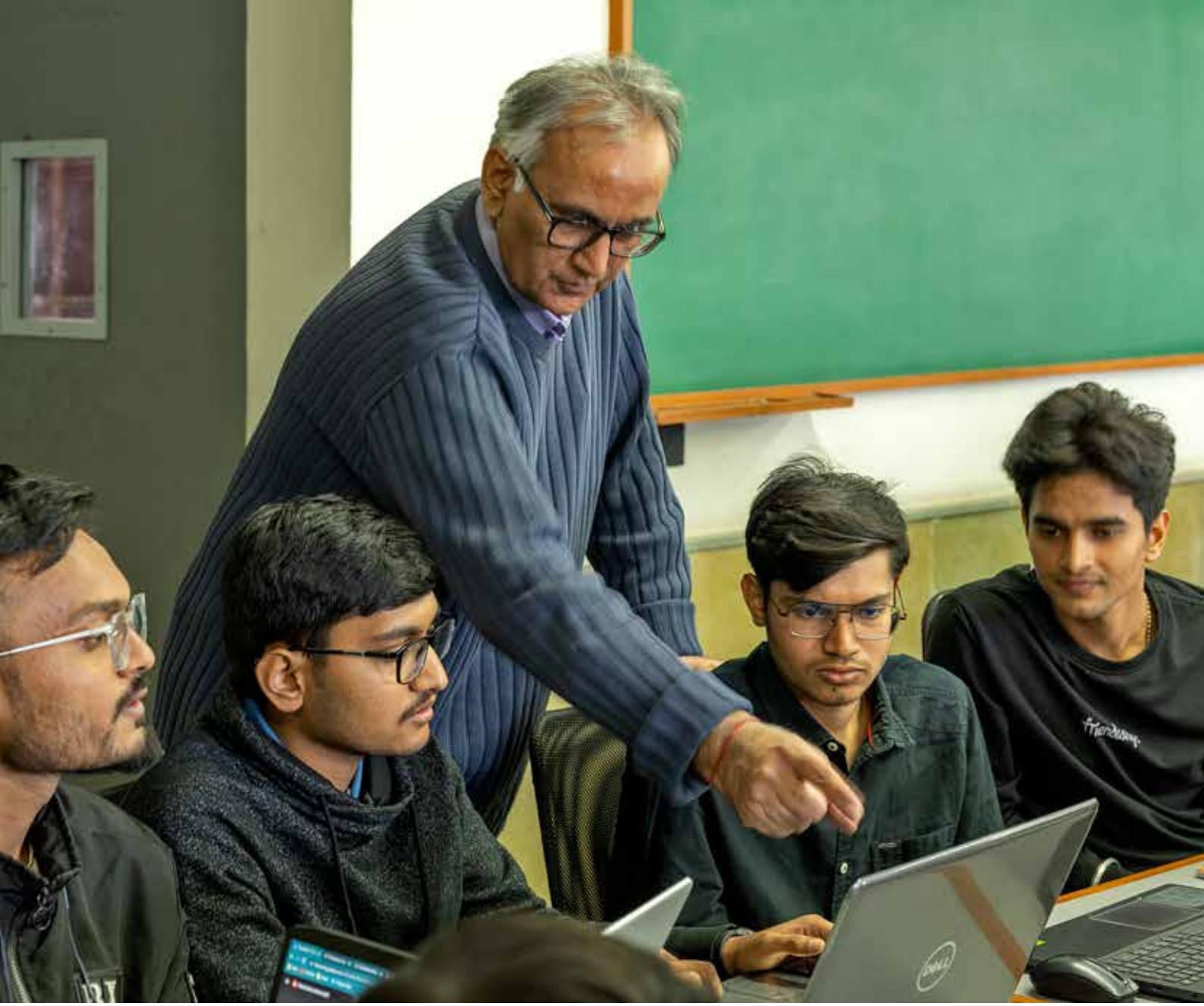
Career Prospects

The programme equips students with advanced technical expertise and industry-relevant skills through theoretical and practical learning, research, and industry collaborations. Industry partnerships facilitate internships, live projects, and job opportunities with top AI, data science, and software development companies.
Ahmedabad University actively engages with leading tech firms, research institutions, and startups to offer campus recruitment drives, industry talks, and hackathons. The programme also encourages students to explore entrepreneurial ventures and research opportunities.

Graduates from the programme have career prospects in AI research, data analytics, software engineering, and emerging fields like blockchain and cybersecurity. With a strong academic foundation and industry exposure, students are well-positioned for high-paying roles in India and globally, making Ahmedabad University an excellent choice for career-focused MTech aspirants.

Potential Job roles for employment

Software Engineer	ML Engineer
Data Scientist	Cloud Engineer
Business Intelligence Analyst	Blockchain Developer
Full Stack Developer	Risk Analyst
Data Analyst	Data Engineer
AI Engineers	Software Developer
DevOps Engineer	Product Manager
Big Data Engineer	Flutter Developer



Career Planning and Placement

The Career Development Centre (CDC) at Ahmedabad University prepares students for successful careers by offering access to significant resources. It enables them to explore, discover, develop, and pursue personal and professional goals, while facilitating their connection to the corporate world in alignment with those goals.

MTech students can tap such active connections to attain summer internships at the end of their first year. The CDC also facilitates final placement of students and prepares them for successful careers by augmenting their technical and technological skill sets.

The CDC is thus committed to working with students across various levels of career development, ranging from interest to assessments, networking opportunities to job searching strategies, and all other requirements.

Career Development Centre

Role of the CDC

The objective of the CDC is to:

- Help build a solid and active University-industry interface;
- Enhance students' career readiness through coaching, counselling, instruction, innovative programming, and aligning with prevalent industry trends;
- Organise various forums for students and faculty to engage with the industry, such as guest lectures, career masterclasses, workshops, seminars, conferences, and projects;
- Provide experiential learning opportunities to students through internships;
- Assist students in achieving their career goals by connecting them with recruiters; and
- Promote a sense of responsibility among students for lifelong career development efforts through exploration, education, and experience.

How Can the CDC Help You?

The CDC offers support to students in the following areas:

- Career counselling, guidance and planning
- Career assessment and testing
- Career development workshops and interactions with industry leaders
- Industry engagement (guest lectures, seminars, and research projects, among other things)
- Placement and internship assistance
- Campus-to-corporate training, including:
  - o Professional grooming sessions;
  - o Personality development workshops;
  - o Communication proficiency interventions;
  - o Resume writing workshops;
  - o Mock group discussions and personal interviews;
  - o Quantitative, analytical and logical practice tests; and
  - o Aptitude practice tests.

Campus Infrastructure

The Ahmedabad University campus offers a modern, sustainable, and fully networked environment designed to enrich the learning experience. The state-of-the-art infrastructure at the University includes modern and technically equipped classrooms, laboratories, a central library, and other learning resources. It provides comprehensive facilities for student well-being, including accommodation, sports facilities, cafes, spaces for recreation, and a wellness centre.

The award-winning University Centre is a vibrant hub for exchange of ideas, informal meetings, and social events. The eco-friendly campus, characterised by a rich biodiversity, has implemented sustainability strategies to enhance resilience against extreme heat, reduce water runoff, and augment green spaces for the entire community.

Student Housing

The Ahmedabad University student residencies offer high-quality, comfortable, and secure living accommodations. Committed to fostering a sense of community, the residencies celebrate diversity in ideas, lifestyles, and cultural practices, providing a true home-away-from-home experience.

Located within a one-kilometer radius of Ahmedabad University's Central Campus, the residencies offer air-conditioned accommodations on a sharing basis, subject to availability. Shared dining halls, gymnasiums, and recreational spaces are available for residents' convenience. The University also provides transportation to and from the campus. All residencies are under 24/7 security surveillance, with wardens, security guards, CCTV cameras, and on-call medical services ensuring residents' safety and wellbeing.

Life at Ahmedabad

At Ahmedabad University, learning extends beyond the classroom. Vibrant student clubs, cultural events, and a robust support system create a strong community. On campus, students receive the support and resources they need to succeed.

Located in the heart of Ahmedabad, India's first UNESCO World Heritage City, the University offers a unique blend of academic excellence and cultural experiences. The city's vibrant mix of tradition and modernity provides an inspiring backdrop for holistic education and exploration. The city brims with opportunities for students who can participate in inter-college competitions, music and performance festivals and explore ancient monuments, vibrant markets, and more.

Student Testimonials

"The programme proved to be a transformative experience. The curriculum is designed to bridge the gap between academia and industry, providing hands-on learning through real-world projects. The faculty, with their extensive research and industry expertise, guide us in understanding complex AI models and data-driven solutions. The programme has significantly enhanced my problem-solving skills and prepared me for leadership roles in AI-driven industries."

Krina Khakhariya

Class of 2026
Ahmedabad University

Abhishek Gandhi

Class of 2026
Ahmedabad University

"Choosing Ahmedabad University for my MTech in CSE was one of the best decisions of my career. The programme is well-structured, offering a perfect blend of theoretical concepts and practical applications. The University's focus on interdisciplinary learning and industry collaborations has exposed me to cutting-edge technologies. The small batch size ensures personalised mentoring, and the workshops and networking events have opened doors to exciting career opportunities."

Accreditations and Awards

- Recognised by University Grants Commission to award degrees under Section 22 of the UGC Act, 1956, in 2010.
- Recognised by the Government of Gujarat as a Centre of Excellence.
- Accredited with an 'A' grade by the National Assessment and Accreditation Council (NAAC).
- Awarded a 5-star rating, one of the highest awarded in the Gujarat State Institutional Rating Framework (GSIRF) for 2021-22 by the Knowledge Consortium of Gujarat (KCG), Department of Education, Government of Gujarat.
- Recognised by the UGC under Section 12(B) of the UGC Act, becoming one of the few private research universities to have been awarded this recognition for select research universities.
- Recognised as a Highly Commended University for Teaching and Learning Strategy of the Year in the Times Higher Education (THE) Awards Asia 2023.
- Awarded the Association to Advance Collegiate Schools of Business (AACSB) Innovations That Inspire Award 2023 for its Foundation Programme.
- Awarded Platinum Rating by the Indian Green Building Council for achieving the Green Building Standards at our University Centre.
- Awarded the Royal Institute of British Architects (RIBA) International Award for Excellence 2024 for our University Centre.

Admissions

Eligibility

A graduate with a BE/ BTech (ECE/ CSE/ IT/ ICT), MS (Maths), MS (Statistics), MCA, MS (IT), MS (ICT), degree can join this MTech programme.

Student with valid GATE Score in CSE/ECE will qualify for the interview round.

Students without a GATE score must undergo a written test followed by the interview round.

Selection Process

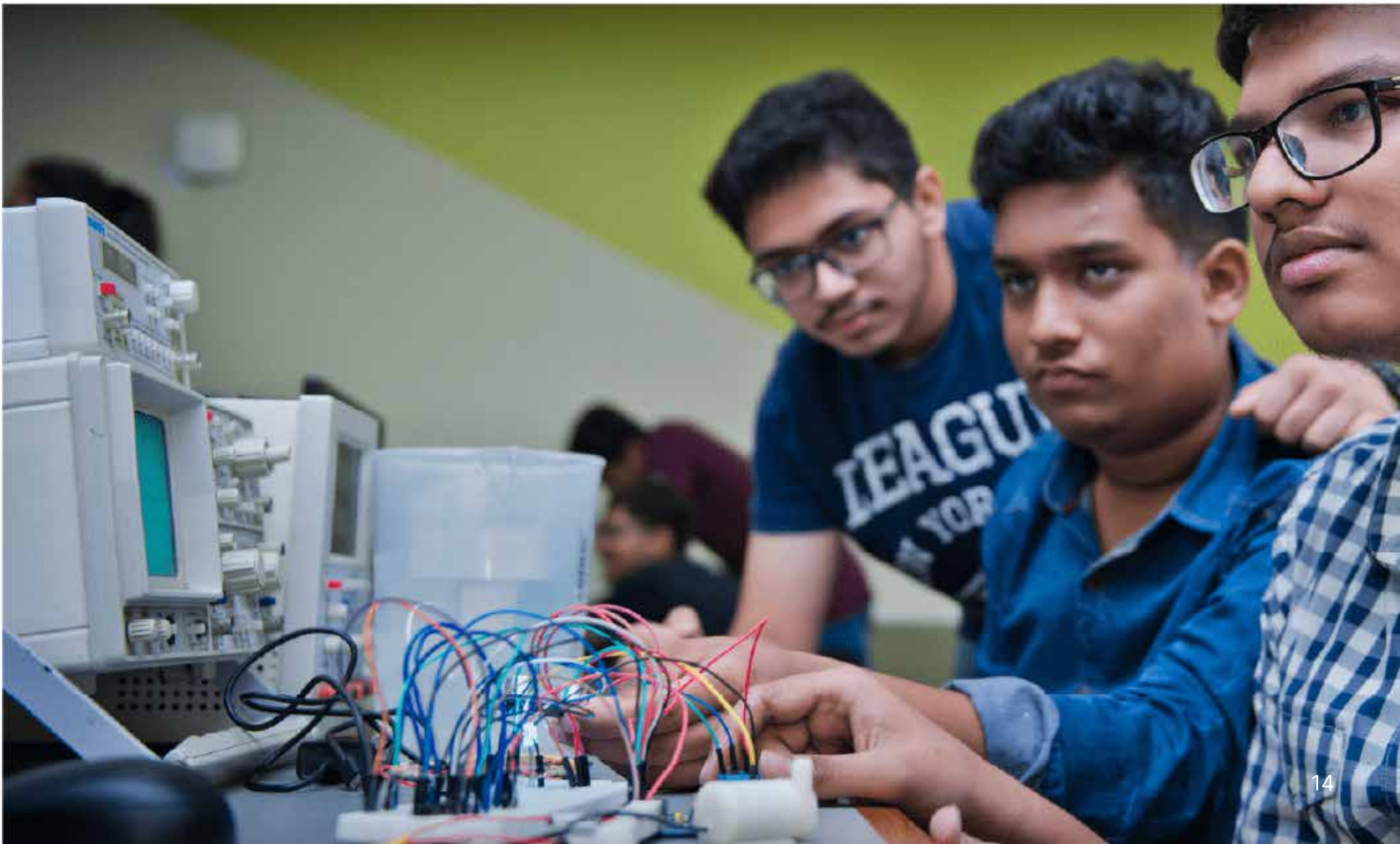
Eligible candidates can submit an online application form with a payment of INR 1200 as application fees (non-refundable).

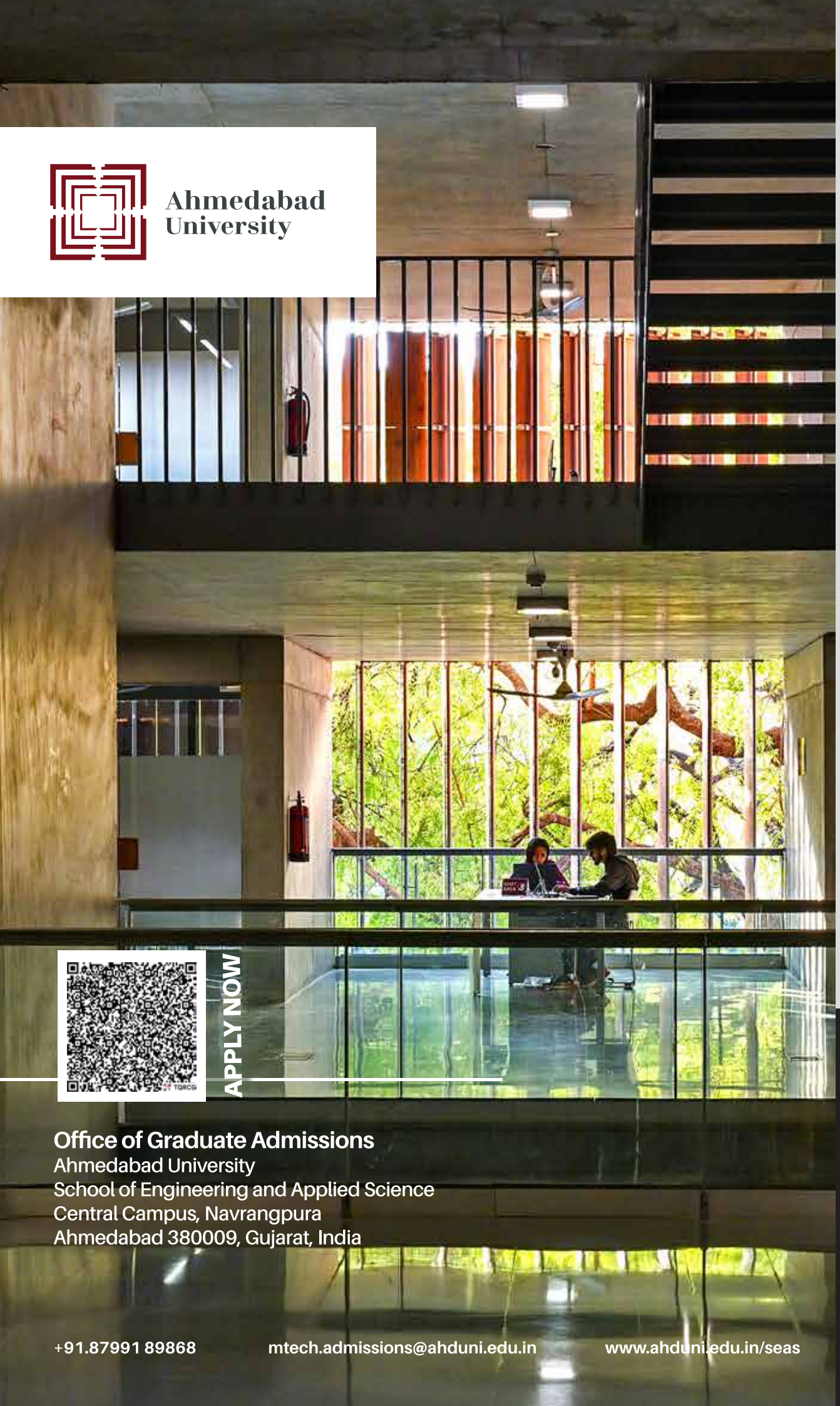
Shortlisted candidates will be called for faculty interaction on campus or online.

Based on holistic assessment, offers will be made to deserving candidates.

Fee Structure and Financial Aid

Please scan the QR code to view the fees and the financial aid.





Ahmedabad University

APPLY NOW

Office of Graduate Admissions

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