



SCHOOL OF ENGINEERING AND APPLIED SCIENCE

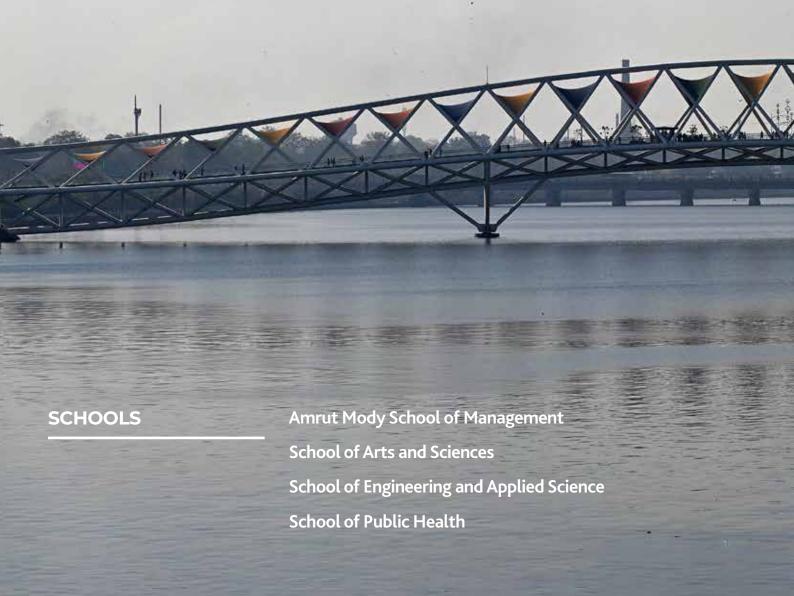
## **ABOUT**

# **AHMEDABAD UNIVERSITY**

Ahmedabad University was founded in 2009 by Ahmedabad Education Society (AES), a non-profit educational foundation located in Ahmedabad. Ahmedabad University is envisioned to become a global leader that provides liberal arts education within a research university. Interdisciplinary curriculum, experiential learning environment, and research define an Ahmedabad education. We are reimagining the classroom beyond the physical walls and focusing on the whole development of each student in an engaging and nurturing environment.

Being located in the centre of a vibrant and entrepreneurial city, our education is contextually rich and globally connected. Our world-class education attracts over 3600 students from twenty two states of India and seven countries.

Ahmedabad University is dedicated to foster continuous progress of self and society. We are transforming higher education in India. Our graduates bear the capabilities, attitude, and values to excel in whatever field they choose to pursue around the world.



We recognise that social challenges and job opportunities are occurring at the intersection of various axes of influence, defined by disciplines (data, materials, biology, and behaviour), nature (air, water, forests, and land), sectors of impact (health, transport, energy, and education) and society (individual and community). Accordingly, Ahmedabad University strives to guide students on how to learn through interdisciplinary academics and real-life experiences that traverse these intersections. Research programmes at the University also embody this integrative philosophy.

We prepare leaders of outstanding character who will contribute significantly to their fields of study and practice. The University promotes independent-mindedness and diversity across all dimensions of its activities and helps students to mature into critical thinkers who are analytically equipped, practically oriented, and contextually-aware global citizens.

Ahmedabad's dynamic learning environment is based on cross-disciplinary linkages between the arts, sciences, and professional disciplines. This forms the bedrock of the intellectual enterprise at the University and our research that builds knowledge which solves society's challenging problems. Our concern remains social, economic, and ecological development of local, national, and international communities.





### **MESSAGE FROM THE DEAN**

## SCHOOL OF ENGINEERING AND APPLIED SCIENCES



Ahmedabad University is committed to providing an education that prepares students to think critically and creatively 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 they may thrive and help others thrive.

The School's infrastructure is congenial to learning and comprises contemporary facilities, well-equipped laboratories, and an immense library. Our students are also supported and mentored by a robust team of faculty who are active researchers and engage students in their academic pursuits whenever possible. Additionally, the school facilitates professional and personal development through workshops, conferences, and other extracurricular events organised on campus. We are confident that studying at the School of Engineering and Applied Science will ensure a sound engineering education and a nuanced approach to real world challenges.

#### Sunil Kale

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

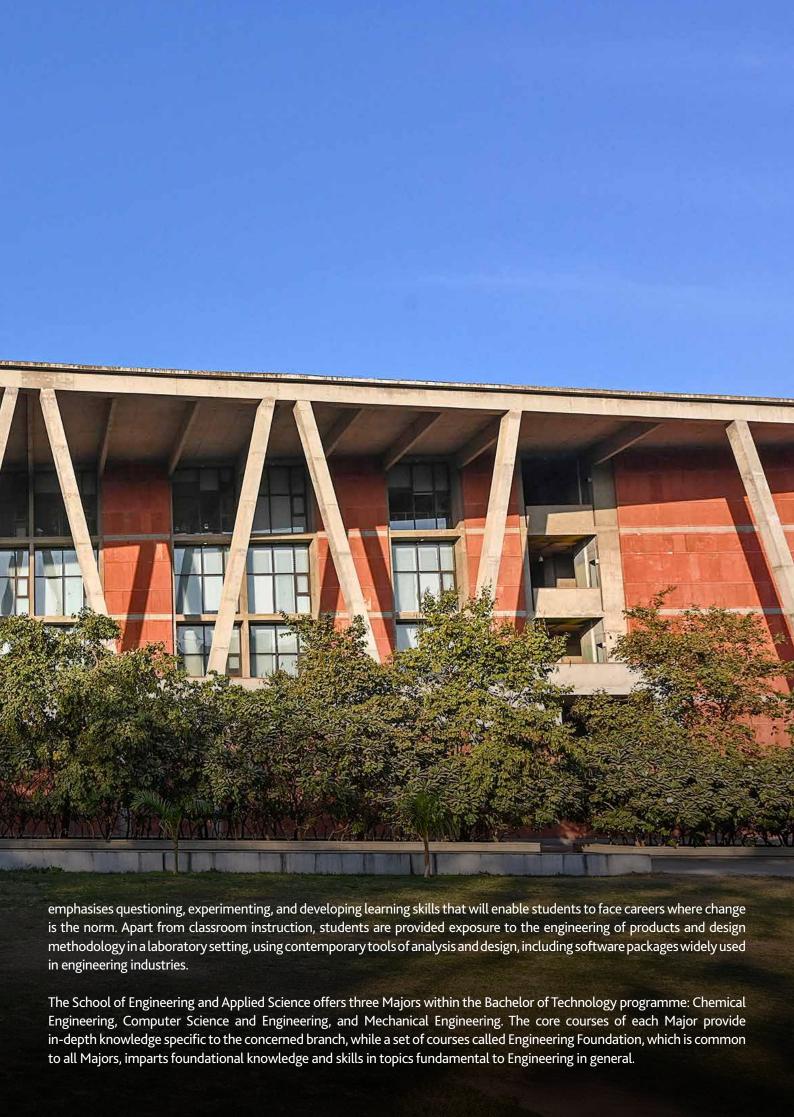
# ABOUT SCHOOL OF ENGINEERING AND APPLIED SCIENCE

The School delivers undergraduate and graduate engineering programmes with extensive students-centric pedagogies to produce excellent learning outcomes. Our project-based educational approach creates dynamic and proactive graduates with capabilities for lifelong learning, complex problem solving, design and innovation, and relating technology to society. We not only teach technology; we actively infuse the use of technology in ways that are impossible with conventional approaches.



The Bachelor of Technology programme at Ahmedabad University offers an entry point for careers and further studies in engineering and technology, while also preparing students for future roles as entrepreneurs and innovators. The unique curriculum offers a wholesome education, providing in-depth focus through Majors in different branches of engineering, alongside a robust multidisciplinary foundation in engineering, the humanities, and the social sciences. Strong emphasis is laid on teamwork, design, learning-by-doing, project-based learning, and developing communication skills. The education is contextualised within broad societal issues with sustainability being a common theme.

The underlying focus is on strong and rigorous fundamentals and concepts, application to engineered equipment and systems, and hands-on learning about products and equipment in a multi-subject setting within each Major. The pedagogy



#### BTECH WITH A MAJOR IN COMPUTER SCIENCE AND ENGINEERING

The curriculum design of the Major in Computer Science and Engineering is in keeping with the multidisciplinary emphasis of the BTech programme as a whole. It combines a rigorous grounding in the field of computer science with added emphasis on the physical and architectural design of modern computer systems. Based on the breadth of the training provided in Computer Science and Engineering, graduates will be able to design, develop, and deploy computing systems across the hardware–software spectrum. The core courses introduce students to themes such as basic electronic circuits, data structures, digital design, operating systems, database management system, computer organisation, computer architecture, algorithm design, computer networks, embedded system design, and models of computation. These courses will enable students to develop expertise as well as widen their competence through exposure to global perspectives in the areas of data science, cyber physical systems, intelligent systems, and theoretical computer science. The Computer Science and Engineering major with its innovation and multidisciplinary approach equips students to explore research, higher education, and employment alike in software engineering, hardware design, IoT, data analytics, and many others.



#### BTECH WITH A MAJOR IN CHEMICAL ENGINEERING

The Major in Chemical Engineering equips students for successful careers in diverse areas that make up the chemical engineering profession. It also prepares students for advanced study in chemical engineering, as well as for the pursuit of other fields, such as science, law, medicine, business, and public policy.

Chemical Engineering deals with the design and development of processes to transform raw materials, micro-organisms, and energy into economically useful products. Traditionally, chemical engineers have been employed in industries such as petroleum refining, petrochemicals, fertilisers, bulk inorganic chemicals, polymers, and textiles. In recent times, with increased emphasis on life sciences, the fields of biotechnology and pharmaceuticals also offer good opportunities for young chemical engineers. Many of the life-improving breakthroughs of the last century, in areas such as health, agriculture, energy, and environment, have been heavily dependent on advances in Chemical Engineering.

At Ahmedabad University, the unique curriculum of the BTech programme with a Major in Chemical Engineering exposes students to a range of General Education Requirement courses along with the Engineering Foundation courses. Apart from these, the students undergo four Foundation courses which provide a broad perspective and equip students with basic skills such as effective communication, programming, data analysis as well as the ability to think critically. Learning by doing is encouraged alongside a strong emphasis on student projects and research. Students have the opportunity to engage early on in research with faculty or with individuals in industry to gain in-depth understanding and acquire skills in specific areas. Not only are our programmes in sync with current technologies, several of our elective courses focus on skill sets and know-how that are currently in high demand.



#### BTECH WITH A MAJOR IN MECHANICAL ENGINEERING

The Major in Mechanical Engineering is structured around in-depth courses in the mechanics of machines, mechanical design, thermo-fluids, materials, manufacturing, and manufacturing systems. The use of simulation and design and extensive hands-on courses on experimentation and design-to-manufacturing are also incorporated in the coursework. The overall approach is to integrate the different subfields and bring out the cross-disciplinary nature of Engineering in general, and Mechanical Engineering in particular.

The curriculum is designed to address two aspects – the breadth in engineering via the Engineering Foundation coursework and the depth via the Major core courses. The focus is on strong and rigorous fundamentals, applications to engineered equipment and systems, and hands-on learning of products and equipment in a multi-subject setting. The pedagogy emphasises questioning, experimenting, and developing learning skills to face a career where change is the norm. Students are exposed to the engineering of products and design in a laboratory setting using contemporary tools of analysis and design, including software packages widely used in engineering industries. Teamwork is emphasised alongside strong engineering skills.

Graduates in mechanical engineering are equipped for a variety of tasks spanning a range of industries, services, and other fields. Career paths include working in engineering concerns, entrepreneurship, and undertaking further studies in India or abroad. The cross-disciplinary focus of the curriculum equips graduates with the ability to learn and grow in new fields, which is essential to pursuing a successful career.



# MTECH IN COMPUTER SCIENCE AND ENGINEERING WITH A SPECIALISATION IN DATA SCIENCE AND ANALYTICS

The School of Engineering and Applied Science offers a two-year MTech programme in Computer Science and Engineering with a specialisation in Data Science and Analytics.

In an increasingly competitive marketplace, organisations need skilled professionals to interpret a growing stream and variety of data. Increasingly, industry focuses on how "big data" can be used to help decision makers improve organisational competitiveness.

The MTech programme's Data Science and Analytics specialisation is designed to meet this growing need. Our students gain hands-on experience with a variety of analytical tools available for the purpose of structuring large data sets to unearth hidden information and patterns key to enterprise. Students also gain experience from using different software tools and functions, including data mining, predictive modelling, and visual analytics using large data sets. Commercial and open-source tools are used to conduct analyses and build prototypes using real-world case studies and data sets. Case studies cover building predictive models in a variety of industries.

# **ENGINEERING** KEY STATISTICS - PLACEMENT 2023 **GRADUATE PROGRAMME**



### INDICATIVE LIST OF PARTICIPATING ORGANISATIONS

### FOR PLACEMENTS & INTERNSHIPS

AavenirGenuin IncNirmaABBGoldman SachNiveaAccentureGSFC LimitedNiyantrasAdani GroupHarsha EngineersNull InnovationsAGS HealthHashedIn by DeloittePlaypower Labs

Amara RajaHCL TechnologyProclinkAmuse LabHexaware TechnologiesQuicko

Asite Solutions IBM Reliance Group
Atul Limited IDFC First Bank rtCamp

Atul LimitedIDFC First BankrtCampAwaaz DeinFocusPSajjan IndustriesBiznovareInforSapio AnalyticsBlueStarInjalaShipmntsBombay SoftwareInteralitySiemens Energy

Bosch RexrothIRM EnergySmyttenCargillIshitva RoboticsSource One

Celebal Technologies Jio Platforms Tata Consultancy Services

Chqbook Korn Ferry Tatvic Analytics

Cogitate TechnologyKurlonToddleCognizantMaqure VenturesTorrecid IndiaContinentalMaxxis RubberTrilogy InnovationDaimler IndiaMerkle SokratiUST BlueConch

DxFactorMotadataVeloxCoreForbes MarshallMotherson SumiWiproGemba ConceptsNetmedsZydus Life

Microfinance

## **FACULTY**

Data Insights

## AT AHMEDABAD UNIVERSITY

Faculty at Ahmedabad University come from leading institutions around the world. Here are a select few.

Clarkson University

**Cornell University** 

**Rutgers University** 

Stanford University

University of Cambridge

University of Oslo and UiT

University of Pittsburgh

Inter-University Centre for Astronomy and Astrophysics (IUCAA)

Queen's University at Kingston

University of Texas at Arlington

Indian Institute of Science

Indian Institute of Technology

Institute of Chemical Technology

**Delft University of Technology** 



Vayana Networks

# CAREER DEVELOPMENT CENTRE

We, at Career Development Centre, Ahmedabad University, look forward to connecting you with our immensely talented faculty and students and engage in an inclusive industry-academia association through Talent Acquisition, Joint Research, Faculty Projects, Management Development Programmes (MDPs), and more.

We would be glad to assist you with your queries and provide solutions to your talent acquisition needs. Please feel free to reach out to us.

