

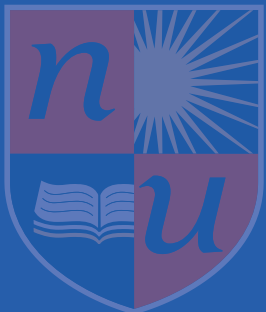
PROSPECTUS

POSTGRADUATE
PROGRAMMES 2019



INSTITUTE OF TECHNOLOGY
THE FUTURE IS HERE

तमसो मा ज्योतिर्गमय



Email ID : pgadmissions.it@nirmauni.ac.in



Vision

Shaping a better future for mankind by developing effective and socially responsible individuals and organizations.

Mission

Institute of Technology emphasizes the all-round development of its students. It aims at producing not only good professionals but also good and worthy citizens of a great country, aiding in its overall progress and development.

It endeavours to treat every student as an individual, to recognize their potential and to ensure that they receive the best preparation and training for achieving their career ambitions and life goals.

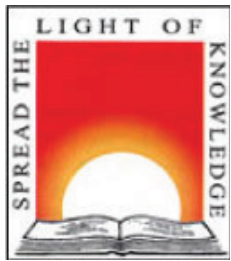
Quality Statement

To develop high quality professionals who reflect and demonstrate values that the University stands for, through innovation and continuous improvement in facilitation of learning, research and extension activities.



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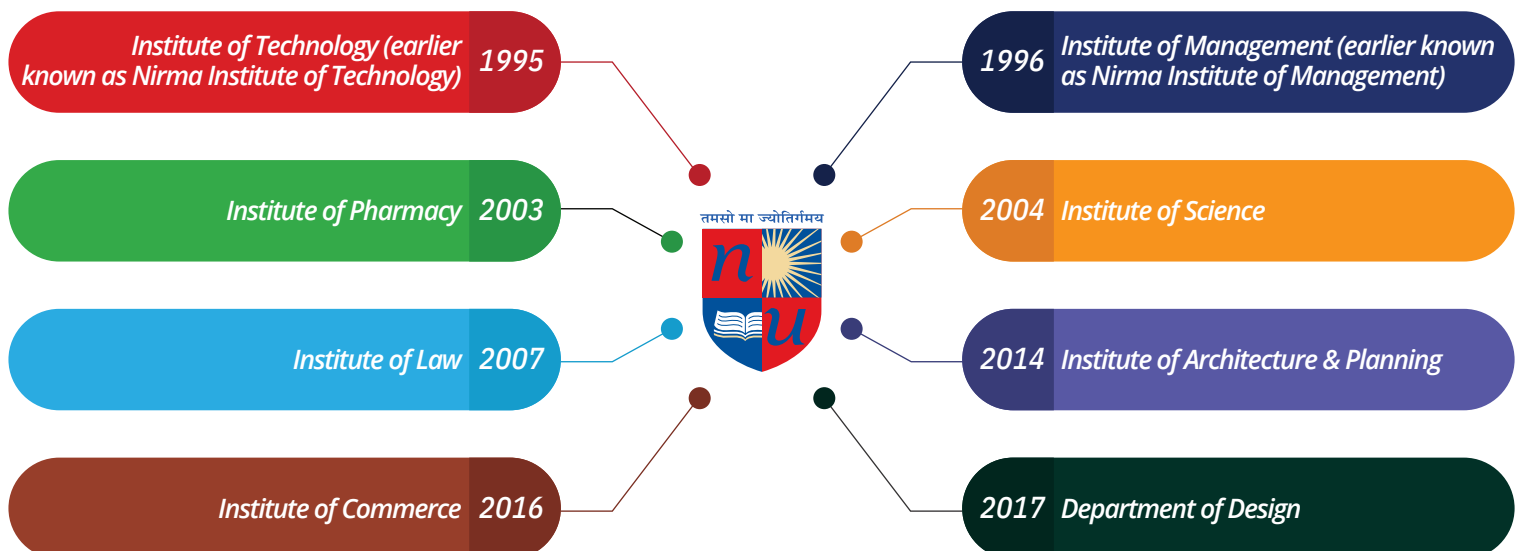
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Nirma University was established by the initiative of Nirma Education and Research Foundation (NERF). The renowned industrialist and philanthropist Dr. Karsanbhai K. Patel, the founder of Nirma Group of Industries, established the NERF in 1994 with a view to promote and support higher education in India.

The NERF chaired by Dr. Karsanbhai K. Patel is a trust that crystallized his long cherished dream of providing world-class education and inculcating the spirit of social relevance among the young students of the country.

THE FOLLOWING INSTITUTIONS HAVE BEEN ESTABLISHED UNDER THE AEGIS OF THE NERF:



All of the above institutes are the constituents of Nirma University that was established by the NERF in 2003.

Board of Governors

Dr. Karsanbhai K. Patel

Chairman, Nirma Limited,
Chairman, Nirma Education and Research Foundation,
President, Nirma University

Shri K.K. Patel

Vice President, Nirma University

Dr. Anup K. Singh

Director General, Nirma University

Shri Rakeshbhai Patel

Vice Chairman, Nirma Limited

Ms. Anju Sharma, IAS

Principal Secretary, Higher and Technical
Education, Education Department,
Government of Gujarat, Gandhinagar

Shri Hirenbhai K. Patel

Managing Director, Nirma Limited

Shri R. D. Shah

Chartered Accountant, Trustee Nirma
Education and Research Foundation

Shri J. P. Joshipara

Academician

Prof. N. R. Madhava Menon

Hon. Director, Bar Council of Kerala,
M.K. Nambyar Academy for Continuing
Legal Education, Kochi

Dr. P. N. Bhagwati

Industrialist and Educationist, Chairman,
Bhagwati Sphero Cast Limited

Shri Kamalbhai Trivedi

Advocate General
Gujarat High Court, Ahmedabad

Dr. Pankajbhai Patel

Chairman and Managing Director
Zydus Cadila Health Care, Ahmedabad

Shri Vipinbhai S. Parikh

Advocate

Dr. Alka Mahajan

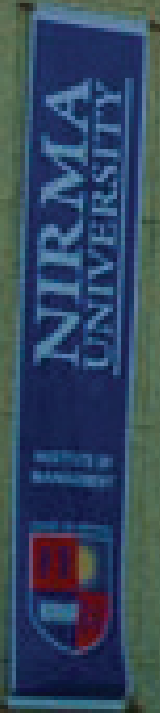
Dean, Faculty of Technology and
Engineering, Nirma University

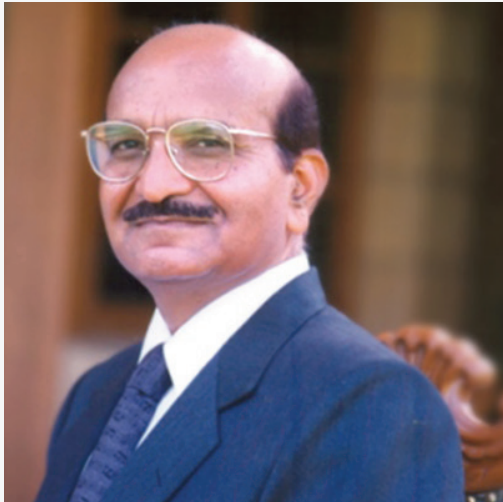
Dr. Manjunath Ghate

Dean, Faculty of Pharmacy,
Nirma University

Shri G. Ramachandran Nair

Executive Registrar (Secretary)





Dr. Karsanbhai K. Patel

President

Nirma University

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The Visionary Behind

Dr. Karsanbhai K. Patel, Chairman, Nirma Limited and founder President of Nirma Education and Research Foundation (NERF) and Nirma University is globally recognized, both, as an industrialist and as a visionary in the field of education.

Dr. Patel has been conferred with the Padma Shri Award in the year 2010, Udyog Ratna Award in 1990, Gujarat Businessman Award in 1998, Ernst & Young Lifetime Achievement Award in 2006, Sardar Vallabhbhai Patel Vishwa Pratibha Award in 2009, Baroda Sun Lifetime Achievement Award in 2009 and Chemtech Award of Hall of Fame, to name a few.

He was awarded an Honorary Doctorate of Humane Letters by Florida Atlantic University, USA for Business and Marketing acumen and philanthropy in the year 2001. He was also conferred upon Honorary DLit by Devi Ahilya Vishwavidyalaya, Indore in 2007.



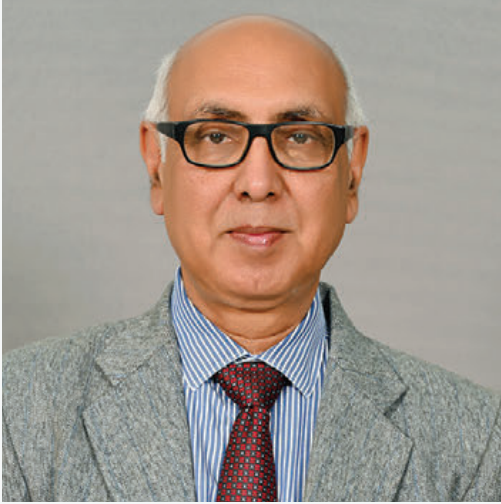
Shri K.K. Patel

Vice President
Nirma University



Man with a Mission

Mr. K. K. Patel is in a significant leadership role at Nirma University since its inception. Mr. Patel did his BS in Chemical Engineering from Tennessee Technological University, USA. He has a versatile personality and began his corporate career as the Managing Director of MASCOT (India) Instruments Pvt Ltd, a company manufacturing Control Valves under US Technical Collaboration at Naroda, Ahmedabad and served the organization for sixteen years. He has broad based experience across various areas in addition to the existing profile at Nirma University. He is also the Joint Managing Trustee, Nirma Education and Research Foundation; Director, Kalupur Commercial Co-operative Bank Limited (KCCBL), a scheduled bank having several branches; President of the Gozaria Kelvani Mandal, an Educational Public Charitable Trust in Mehsana District; and also the Trustee of The Gozaria Sarvajanik Hospital.



तमसो मा ज्योतिर्गमय



Dr. Anup Singh

Director General
Nirma University

Welcome to Nirma University, a not-for profit professional education university, known for its commitment to academic excellence and creation of intellectual capital.

India is fast emerging as a knowledge society and becoming integrated with other knowledge societies of the world. A university is the engine of a knowledge society. Higher education is a significant contributor of national development and growth. The Indian youth are increasingly participating in higher education. The Indian talent is today internationally sought for providing leadership to business organisations.

Nirma University develops leaders in different fields who would provide leadership to different organisations. We inculcate global competencies among them and help them realise their potential. Our rankings and achievements are testimony to our commitment to academic excellence and student centricity. We endeavour to develop employable and entrepreneurial graduates, who would not only be outstanding achievers, but would also be known for their contribution to the society. Our curricular, co-curricular and extra-curricular activities are designed to help students meet their personal and career ambitions.

I am confident that all our stakeholders would find their relationship with us as value adding and satisfying. Prospective students will get high quality education and employability and recruiters would get industry ready graduates. Society at large would receive socially responsible citizens, and peer organisations would get rich intellectual capital at the University.

I urge you to join the community of Nirma University and contribute to creating a better society.

Dr. Anup K. Singh



Dr. Alka Mahajan

Director

Institute of Technology

तमसो मा ज्योतिर्गमय



Greetings from the Institute of Technology, Nirma University.

Higher education is no longer the privilege of the few; it is now the gateway for many, to pursue and achieve their life and career goals. Choosing a course of study is a big decision, but in the midst of all of the many study options available, Engineering at the Institute of Technology, Nirma University stands out in all respects. The IT-NU offers a unique combination of academic and professional studies with an ethical perspective. Being in a university system gives students an opportunity to pursue their interest in management, law, biological sciences, pharmacy and many other streams by opting from a variety of university/institute level electives. The interdisciplinary minor specialization program allows you to pursue your interest in another branch of engineering while pursuing degree program in one.

We constantly review our programs to update and improve while making sure that students gain thinking skills, analytical frameworks, interpersonal and communication skills which will stand them in good stead in the future. Monitoring and assessment of every subject taught is done to ensure no weaknesses remains in the system and that timely-measures are taken to address students' concerns/ problems, if any. Every student matters to us and we are totally focused on helping every one of our students to succeed and enjoy their learning experience.

This prospectus is to guide you through the most critical choice of your career and provides a small flavor of the very special atmosphere which makes the IT-NU, a unique institute in which to study.

Welcoming you to the Nirma family, with best wishes for a bright future,

Dr. Alka Mahajan



Nirma University is one of India's leading universities based in Ahmedabad (Gujarat). The University was established in the year 2003 as a Statutory University under a special act passed by the Gujarat State Legislative Assembly. It is recognized by the University Grants Commission (UGC) under Section 2 (f) of the UGC Act. The University is duly accredited by National Assessment and Accreditation Council (NAAC). The University is a member of Association of Indian Universities (AIU) and the Association of Commonwealth Universities (ACU). Dr. Karsanbhai K. Patel, Chairman, Nirma Group of Companies and Chairman, NERF is the President of the University.

Functioning under the aegis of NERF (Nirma Education and Research Foundation), the University consists of Faculty of Engineering and Technology, Faculty of Management, Faculty of Pharmacy, Faculty of Law, Faculty of Science, Faculty of Architecture & Planning, Faculty of Commerce and Faculty of Doctoral Studies and Research.

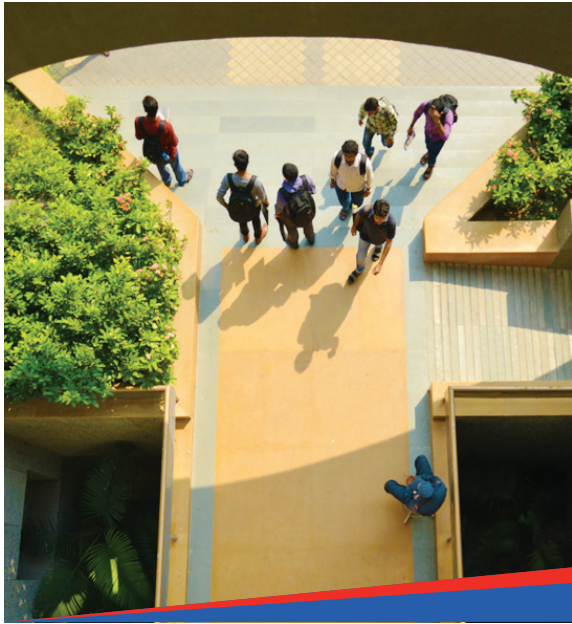
The eight constituent institutes, spread across a lush green 125 acre campus of the University, have set the bar high in delivering quality education. The graduate, postgraduate and doctoral level programmes offered by these institutes are rated highly by accreditation agencies, industry, business magazines and students.

The University is acclaimed for its holistic education that strives to develop not only academic competence but also human character. Today, it is identified with cutting edge research, robust academic programmes, quality teaching-learning process and over-all personality development interventions of its students. The state-of-the-art campus provides refreshing environment, stimulates intellectual growth and creativity.



About The Institute

Institute of Technology



Institute of Technology, Nirma University, earlier known as Nirma Institute of Technology, started in 1995 by Nirma Education and Research Foundation (NERF), was the first self-financed engineering college in Gujarat. Within 24 years of inception, Institute of Technology is a leading hub of education, offering multidisciplinary undergraduate, postgraduate and Ph.D. programmes in engineering. The institute is ranked 136 by the NIRF 2019 and four of its programmes are Tier-I NBA (National Board of Accreditation) accredited.

The institute is ranked in top 15 self-financed engineering colleges of India and amongst the top 3 in the state, by various ranking agencies.

The Institute gives ample opportunities to its students and strives to equip our students in terms of providing the skills, ability and knowledge required for life-long learning and accolades.

Some of the major strengths of the Institute include:

- Excellent local and regional reputation with well-established national recognition
- Young, dynamic and dedicated faculty and staff members aligned with institutional goals
- Learner centric approach along with personalized attention to the students
- Focus on synergy between teaching and all-round development of the students
- Meritorious students with geographical diversity in undergraduate programmes
- Well placed closed-loop feedback system for curriculum development encompassing all the stake holders
- Globally compatible academic credit system with emphasis on continuous evaluation
- Transparent management policies with well-defined procedures
- Well-disciplined conducive academic environment and ambience
- ICT usage for enhancing various academic accomplishments
- Active linkages with nearby industries and research organizations
- Continuous emphasis on faculty and staff development
- Strong commitment and dedicated efforts towards continuing education and pedagogy

Accreditation

The Institute of Technology is a constituent Institution of Nirma University. Nirma University and Its constituent Institutions are accredited by National Assessment and Accreditation Council (NAAC), an autonomous institution of the University Grants Commission, Government of India with 'A' grade.

The letter grade 'A' is the highest grade awarded to an institution of higher education by NAAC. This accreditation status indicates that Nirma University and all its constituent Institutions meet the standards of quality as set by NAAC, in terms of its performance related to educational processes and outcomes; covering the curriculum, teaching-learning, evaluation, faculty, research, infrastructure, learning resources, organisation, governance, financial well-being and student service.

Academic Programs



B. Tech. (Four years, Eight semesters)

- Chemical Engineering
- Civil Engineering
- Computer Science and Engineering
- Electrical Engineering
- Electronics & Communication Engineering
- Instrumentation & Control Engineering
- Mechanical Engineering



M. Tech. (Two years, Four semesters)

- Civil Engineering (Computer Aided Structural Analysis & Design)
- Computer Science and Engineering (Computer Science & Engineering)
- Computer Science and Engineering (Information & Network Security)
- Computer Science and Engineering (Data Science)
- Electrical Engineering (Electrical Power Systems)
- Electronics & Communication Engineering (VLSI Design)
- Electronics & Communication Engineering (Embedded Systems)
- Mechanical Engineering (CAD/CAM)
- Mechanical Engineering (Thermal Engineering)



M. Tech.- By Research (Three years)

M Tech (By Research) is a 3 year programme meant for working professionals which emphasizes on multidisciplinary rigorous learning and research work.



MCA (Three years, Six semesters)

Masters in Computer Applications is a three year programme imparting comprehensive knowledge of computer applications through emphasis on theory and practice and is designed to meet the growing demand for qualified professionals in the field of Information technology.



Ph. D. Programmes

Ph.D Programmes in Engineering are offered by all the departments on full-time and part-time basis.

Memorandum of Understanding

MoU with Industries

- J K Lakshmi Cement Limited
- Building Energy Efficiency Project (BEEP)
- INFOSYS Technologies, Bangalore
- enti INNOVATIONS Pvt Ltd.
- Mitsubishi Electric India Pvt. Ltd.
- NORD Drive Systems Pvt. Ltd.
- Tata Consultancy Services iON
- Gujarat Industrial Development Corporation
- IEEE (Institute of Electrical and Electronics Engineers)
- IBM Technologies
- Dr. Fixit Institute of Structural Protection & Rehabilitation
- InspirOn Engineering Pvt Limited



MoUs with Foreign Universities

- ITER, France
- Iowa State University, USA
- Binghamton University, New York
- Florida Atlantic University, USA
- Carleton University, Canada
- University of Georgia, Athens, Atlanta
- University of Wyoming, USA
- Wadhvani Operating Foundation, USA
- Coventry University, UK
- University of Newcastle, Australia
- Memorial University of Newfoundland, Canada
- Changwon National University, South Korea
- Wolkite University, Ethiopia



MoUs with Research Organizations / Educational Institutions

- Central Building Research Institute, Roorkee
- Ahmedabad Textile Industry's Research Association
- Institute of Plasma Research, Gandhinagar
- Indian Institute of Technology, Gandhinagar
- Piramal Pharmaceutical Development Services Pvt. Ltd
- Intas Biopharmaceuticals Ltd., Ahmedabad
- Cadila Pharmaceuticals Ltd., Ahmedabad
- B.V. Patel Pharmaceutical Education & Research Development (PERD), Ahmedabad
- Indian Space Research Organization
- Physical Research Laboratory, Ahmedabad
- Central Salt and Marine Chemicals Research Institute, Bhavnagar

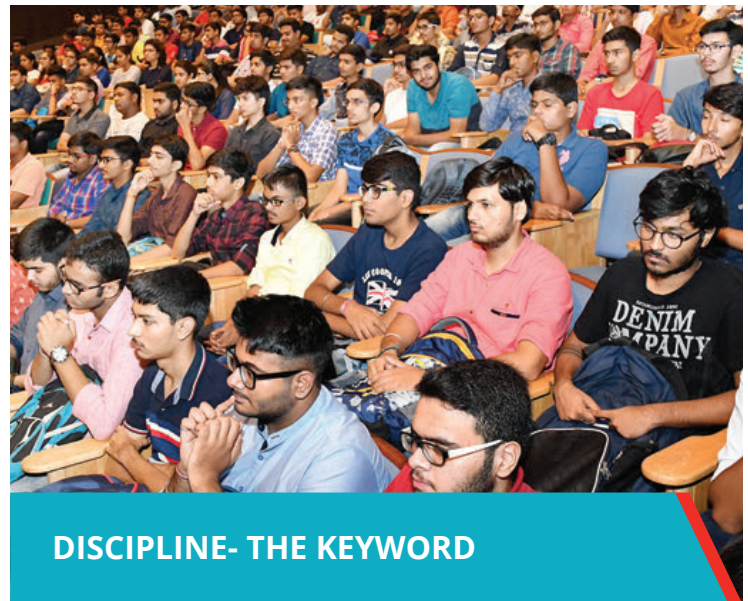


Pedagogy

The institute makes use of an appropriate mix of pedagogical tools to train students. This includes lectures from in-house and visiting faculty and experts, seminars, discussions and industrial visits. Continuous evaluation and counselling are important features of each academic program.



The institute synthesizes traditional methods of learning with interactive teaching-learning aids like field-based projects, interaction with practitioners, use of computers and multimedia, creative co-curricular activities for a holistic development of students. The institute lays emphasis on continuous evaluation and credit-based system with weightage for different components of study.



The academic calendar for the whole year of study is notified in the beginning of each year and is strictly adhered to. Student's attendance is compulsory and students are expected to conduct themselves with discipline both inside and outside the classroom.



The institute has a credit-based evaluation system which motivates students for systematic and continuous study and appraises students on the basis of project work, problem solving, classroom assessment methods, examinations and other tools to evaluate both cognitive as well as applied learning. Self-development, communication skills, societal and environmental awareness, project-based learning are salient features of the teaching learning process. Through projects and internships, students are given sufficient opportunities and support to apply their learning in real life situations.



Each faculty is assigned about 15 students with whom the faculty meets periodically and reviews their attendance, submissions and academic performance and provides necessary guidance. The services of a professional psychological counselor are also available for the students.

Recognition

#1 Nirma University Ranked 1st among the Universities in the State of Gujarat
Source: *State Institutional Ranking Framework (SIRF), Govt. of Gujarat, 2019*



NBA Accredited UG Programmes

- ▶ Chemical Engineering
- ▶ Computer Science & Engineering
- ▶ Electronic & Communication Engineering
- ▶ Mechanical Engineering

#136



INSTITUTE OF TECHNOLOGY RANKED 136th
Source: *National Institutional Ranking Framework (NIRF) MHRD, Govt. of India, 2019*

#2

Ranked 2nd among all Central/Deemed/State Private Universities in Gujarat State and is listed AAAA Category

Source: *Careers 360, 2019*

#10

Ranked 10th in Top T-Schools (Private) in India

Source: *DataQuest Survey 2019*

#23

Ranked 23rd in Top T-Schools (Overall) in India

Source: *DataQuest Survey 2019*

#101

Ranked 101th in Best Engineering College in India

Source: *Indian Institutional Ranking Framework, 2019*

#23

Ranked 23rd amongst National Ranking by Digital Learning and is listed AAAA category

Source: *Digital Learning Engineering Survey, 2019*

#1

Ranked 1st among all Engineering Colleges in Gujarat

Source: *CSR-GHRD, 2018*

#5

Ranked 5th in Top Private Engineering College (All India)

Source: *The Week-Hansa Research, 2018*

#1

Ranked 1st among all Engineering Colleges in Gujarat

Source: *CSR-GHRD, 2017*

Recognition

#7

Ranked 7th in Top 25 Engineering College for Placements, USP, Social Responsibility, Networking & Industry Interface

Source: *CSR-GHRD, 2018*

#7

Ranked 7th for Placement Scores across the country

Source: *DataQuest CMR T-School, 2018*

#8

Ranked 8th among Top Engineering Colleges of Super Excellence in India

Source: *CSR-GHRD, 2018*

#9

Ranked 9th in Top 25 Engineering College for Faculty, Research, Consultancy, EDP and others

Source: *CSR-GHRD, 2018*

#11

Ranked 11th among Top 20 Private Colleges in India

Source: *Outlook, 2018*

#11

Ranked 11rd in Top 100 Private T-Schools (Govt. and Private Combined) across the country

Source: *DataQuest CMR T-School, 2018*

#13

Ranked 13th in National Ranking for Top Engineering Institutes in India

Source: *Digital Learning, 2018*

#3

Ranked 3rd in Top 10 T-Schools in the West Zone

Source: *DataQuest CMR T-School, 2017*

#5

Ranked 5st among all Engineering colleges in West Region- India

Source: *The Week, 2017*

#7

Ranked 7th in Top 10 Engineering colleges in India for Placement

Source: *Higher Education Review, 2017*

#9

Ranked 9th among Top Engineering Colleges of Super Excellence in India

Source: *CSR-GHRD, 2017*

#11

Ranked 11th in Top 100 Private T-Schools across the country

Source: *DataQuest CMR T-School, 2017*

#12

Ranked 12th in Top 25 Engineering College for Faculty, Research, Consultancy, EDP and others

Source: *Higher Education Review, 2017*

#16

Ranked 16th in Top 100 Private engineering colleges in India for Placement

Source: *Higher Education Review, 2017*

#26

Ranked 26th among Top 100 Private Engineering Colleges in India

Source: *Outlook, 2017*

Recognition

#28

Ranked 28th among Top Private Engineering College in India

Source: *The Week*, 2018

#15

Ranked 15th amongst National Ranking by Digital Learning and is listed AAAA category

Source: *Digital Learning Engineering Survey*, 2017

#29

Ranked 29th among Top Private Engineering College in India

Source: *The Week*, 2017

Awards

Awards

Winning Year

Indian Society for Technical Education (ISTE) Awards

ISTE Charutar Vidya Mandal, Vallabh Vidyanagar, Gujarat Award for the Best Engineering College Teacher in Gujarat

2018, 2017, 2016, 2014

National Awards for Best Faculty Chapter

2016*, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008, 2007

Rajarambapu Patil National Award for the Promising Engineering Teacher (Below 50 Years of Age) for Creative Work done in Technical Education

2016

National Award for Best Clean & Green Campus

2015

National Awards for the Best Teacher in Gujarat state

2014, 2013, 2012, 2011, 2010, 2009, 2008, 2007, 2005, 2004, 2003, 2002

SGSITS National Award for Best Research by Young Teachers of Engineering Colleges

2009

National Award for Engineering College having Best Overall Performance

2002

National Award for Best Principal

2002 * Runner Up Award

ISTE Student Awards

ISTE IPCL Best M.Tech Thesis award in Chemical Engineering

2018, 2017, 2016, 2015, 2014, 2013, 2012

ISTE National Award for Best M.Tech Thesis award in Civil Engineering

2018

ISTE-GSFC National Award for Best M.Tech Thesis in Mechanical Engineering

2018, 2011

ISTE-IPCL National Award for Best M.Tech. Thesis in Chemical Engineering (Energy System)

2016, 2015

National Award for Best B.Tech Student Project in Civil Engineering

2015

Best Student Award

2015, 2012

National Awards for Best Student Chapter

2014, 2012, 2010, 2007, 2006, 2005, 2003

National Award for Best B.Tech Student Project in Civil Engineering and Instrumentation & Control Engineering

2011

1st Prize & 2nd Prize for Best M.Tech Thesis in Civil Engineering and Chemical Engineering

2010

ROBOCON Awards

National Championship ROBOCON event organized by Doordarshan	2018, 2015, 2014, 2011, 2008, 2006, 2003, 2002
Prof. Balakrishna Memorial Award, Fastest Job Completion Award, Cash prize of Rs 100000/- and a Gold Medal.	2018
Represented India in International ROBOCON events hosted by Japan, Thailand (2 times), India (2 times), Malaysia Indonesia and Vietnam	2018, 2016, 2015, 2012*, 2009, 2007, 2004, 2003 * Runner Up Award
ROHM Award for Innovative Design	2018
Best Innovative Design award for the unique design of Robot	2017
Toyota Award in Robocon event	2015

All-Terrain Vehicle (ATV) Awards

First position for E-BAJA Overall and won Rs. 1,00,000 cash prize	2019
First position for E-Baja for Sales, CAE, Acceleration and Durability and won a cash prize of Rs. 2 lakh	2019
First position for m-BAJA (in Skill) and won Rs. 50,000 prize	2019
GTU Techfest-ATV Championship Trophy and cash awards	2019#, 2017*, 2015 * 1 st Runner up Award # 2 nd Runner up Award
First position for m-BAJA and won Rs. 1 lakh cash prize	2018
Overall third position for m-BAJA and won Rs. 75,000 cash prize	2018
BAJA Dronacharya Award for the valuable guidance and support to the team.	2018
GO GREEN Award and a cash prize of Rs. 2 lakh	2017*, 2014 * 1 st Runner up Award
Overall best performance in International event of Go-Cart, Lovely Professional University, Jalandhar and a cash prize of Rs. 1 lakh	2015
Raftar Award for acceleration and Hill Climb of Rs.1 lakh	2014
Best Mentor Award	2014
Go Green Mission' and a cash prize of Rs. 2 lakh	2013
Best Technology Innovation and a cash prize of Rs. 2 lakh	2012

Other Awards

Mitsubishi Cup-MECUP a National level Automation Competition for Students organised by Mitsubishi Electric India Pvt Ltd. The team "CON-SL-E" of IC Department from Institute of Technology, Nirma University become winner of Silver Cup	2019* 2018*, 2017* *1 st Runner up and cash prize of Rs 75000
"UltraTech Sparkling Star" organized by Ultratech Cement Ltd. for UG and PG student of Civil Engineering branch	2019* 2018# *1 st prize and cash price of 15,000/- 1 st Runner up and cash prize of Rs 12000
QUIZO-2018 - A technical quiz competition organized by ASHRAE Western India Chapter	2019* 2018* *2 nd Runner up
Vibrant Gujarat Grand Challenge 2018 in Agri-Tech Theme	2018
ASHRAE Student Branch Advisor award (ASHARE), Western India Chapter	2018
9 th ABP NEWS National Education Awards as Outstanding educational Institutes (West) by National education Awards 2018	2018
ISA (International Society of Automation) Members' Choice Award-" Section Leader of the Year 2018"	2018
India Innovation Challenge Design Contest (IIDC)	2018
National Concrete Canoe Competition (NCCC) 2015 organized by IIT Madras in association with the Indian Concrete Institute (ICI).	*2015 *1 st Runner up
A team consisting of students from EC, IC and Computer Engineering participated in the Freescale Cup competition 2013 organized by Freescale Semi-conductors and IISc, Bangalore.	2013* *1 st Runner up and Rs.1 lacs as prize money

Mr. Fenil Shah from Civil Engineering awarded the title of International Master after achieving the Elo rating of 2411 points in World Chess Tournament.

Academic Infrastructure



THE CAMPUS

The institute is situated in the Nirma University campus which is on the Sarkhej-Gandhinagar highway, Ahmedabad. The 125-acre campus is Wi-Fi enabled and is nestled amidst green, refreshing environment and an ambience that motivated students to grow. The campus has six buildings (A, B, D, N, W and PG Block), modern sports facilities and an atmosphere that is distinguished by serenity.



CLASS ROOMS

The classrooms are well ventilated, spacious and equipped with modern audio-visual equipment and internet connectivity to facilitate effective learning and promote maximum interaction between faculty and students.



COMPUTING FACILITIES

The computing facilities at the campus includes:

- 1400 + computers with latest configurations, modern software and high speed servers
- Lease line: 512 Mbps for the campus.
- 37 High-End NVIDIA GPU workstation with K-20, K40, K-80, and P-100 GPU cards.
- Wireless Sensor Motes and various CISCO networking components to simulate real-time networking scenarios
- New HP/Aruba Local Area Fiber Network (in Ring Connectivity) having a capacity of 10 Gbps and New Aruba Access Points having the capacity of 1Gbps on Wi-Fi added to strengthen then Network.
- Windows and Novell Netware, Linux Enterprise server and SCO Unix. 200+ Systems are working on Linux Platform

Departments of School of Engineering & School of Technology

Role of Departments

- Departments play a pivotal role in developing and implementing academic programmes. School of Engineering constitutes of Chemical Engineering (CH), Civil Engineering (CL), Electrical Engineering (EE), Mechanical Engineering (ME) Departments.
- School of Technology constitutes of Computer Science and Engineering (CSE) including the programme of Masters of Computer Application, Electronics and Communication Engineering (EC) and Instrumentation and Control Engineering (IC), Mathematics and Humanities (M&H) Departments.
- Each department has different sections according to the programmes/specialties handled by it.
- The institute has evolved a participatory model of administration through which all proposals of budgetary allocation, academic development, curricular reforms, laboratory updates etc. first originate at the section level and then finalized at the department and higher level. In this context the role of the faculty in the total process of teaching-learning assumes great importance.

Faculty

- Through a judicious recruitment policy and enlightened approach, University has ensured that the institute is staffed by a well-qualified and competent faculty to shoulder the responsibilities of maintaining high standards of education in the institute.
- In keeping with the aims outlined in the mission statement, the faculty members remain fully conscious of their dual role both as teachers to impart efficiently technical knowledge to students as well as counselors to guide them for their overall development.

Faculty Development Programmes

- The teachers are encouraged to update their knowledge and skills through various training and learning modes. Constant efforts are being made by the Management to achieve this aim. Some of the initiatives taken in this direction are listed below.
 - Deputation for higher studies for M. Tech and Ph.D. in India and abroad.
 - In-service registration to pursue Ph.D. programmes.
 - Participation in reputed conferences and seminars on technical subjects.
 - Participation in collaborative research projects.
 - Promotion of consultancy.
 - Training in industries and specialized testing work etc.
 - To organize and conduct national / state level training programmes for professionals.



M.Tech. (Regular) - Programmes Offered

Sr. No	Department	Specialization	Qualifying Examination	Valid GATE Exam	Intake
1	Civil Engineering	Computer Aided Structural Analysis & Design	Degree in Civil Engineering or equivalent	Civil Engineering	18
2	Computer Engineering	Computer Science & Engineering	B.E./B.Tech./B.S. in Engineering in Computer Engg./ Computer Science / Information Technology / Electronics / Electronics & Communication / Electrical / Instrumentation Engineering & Control or M. Sc. In Computer Science / M.Sc. in Information Technology or MCA or equivalent	Computer Science or Electronics and Communication Engineering	18
		Information & Network Security			18
		Data Science			18
3	Electrical Engineering	Electrical Power Systems	B.E./B.Tech. in Electrical Engineering or equivalent from recognized institutes, as per University rule	Electrical Engineering	18
4	Electronics & Communication Engineering	VLSI Design	Degree in Electronics and Communication Engg. / Instrumentation and Control Engg. / Computer Engineering / Information Technology / Electrical Engg. or equivalent	Electronics & Communication Engineering	18
		Embedded Systems			18
5	Mechanical Engineering	CAD/CAM	Degree in Mechanical Engineering / Production Engineering / Industrial Engineering / Mechatronics or equivalent.	Mechanical Engineering	18
		Thermal Engineering	Degree in Mechanical Engineering / Automobile Engineering or equivalent		18

All the Postgraduate programmes of Institute of Technology are approved by Nirma University. Nirma University is a statutory University under a special Act passed by the Gujarat State Legislative Assembly and also recognized by University Grant commission (UGC) under section 2(f) of UGC act. Institute of Technology is a constituent institute of the Nirma University. For constituent institute of a university, AICTE approval is not required.



A student seeking admission to any Programme must fulfil the following criteria:

He/She should have passed the qualifying examination of Bachelor of Engineering / Bachelor of Technology from a recognized university with minimum percentage of marks as prescribed by AICTE from time to time or equivalent cumulative grade point index.

OR

He/She should have passed any other qualifying degree examination considered as equivalent by Nirma University with minimum percentage of marks as prescribed by the AICTE from time to time or equivalent CPI.

For calculation of aggregate marks, results of semesters, based on which class of the degree is awarded, will be considered.

Candidates who have appeared for the final semester qualifying examination may also apply. The results of such applicants have to be submitted to Member Secretary, PG-ENGG, immediately on declaration of result, which should be within 30 days of commencement of semester. Failing to do so the admission is liable to be cancelled. However such candidate has to produce a certificate from the Head of the Institute certifying that he / she has already appeared for the examination.

Any candidate who has not appeared in final semester examination at the time of counseling for admission will not be considered for admission.

Applicants having results in terms of CPI, have to produce certificate from the concerned University regarding equivalent percentage of marks, on which; class is awarded for the degree.

For all categories, if applicant has passed the qualifying examination from University other than Nirma University, he/she will be required to obtain Eligibility Certificate from Nirma University. The arrangement for obtaining the same will be made on the spot during counseling on payment of ₹ 1000/-.

SELECTION PROCEDURE

1. For all programmes, applicants with qualifying GATE score as mentioned in score card (greater than or equal to qualifying marks of GENERAL category out of 100 or score in respective discipline) will be given admission based on GATE merit. After the admission of GATE applicants if any vacancy remains then the same will be filled by Non-GATE applicants based on the merit of the All India Basis written test to be conducted by Nirma University.
2. Applicants who have applied under GATE category but have marks less than qualifying marks / score (of General category) will be considered as Non-GATE applicants and will have to appear for the written test. Such applicants will be given admission based on merit of written test.
3. Syllabus for written test for Non-GATE applicants will be same as that of the GATE-2019 Examination of concerned M.Tech. programme. There will be 60 objective type questions of 60 marks and the duration will be 1 hour.
4. Appearing in written test does not guarantee admission. If all the seats are filled up by GATE qualified candidates, no admission will be offered to Non-GATE category. However the merit list of Non-GATE candidates will be operated after exhausting merit list of GATE category.
5. In case, GATE Candidates are having equal GATE Score / marks, Non-GATE candidates having equal marks in written test, following criteria will be used for deciding merit order:
 - i. Percentage of qualifying examination based on which class is awarded for degree
 - ii. Percentage of eighth semester in qualifying examination
 - iii. If result is awaited, percentage of seventh semester in qualifying examination
 - iv. Date of Birth (candidate who is older in age shall be given priority)

STIPEND

The first 9 (nine) students admitted on the merit of GATE score will be paid a stipend of Rs. 12,400/- per month. All the remaining GATE and/or non-GATE students will be paid the stipend of Rs. 5,000/- per month.



INTERNATIONAL STUDENTS

The foreign students can apply online at the website http://www.nirmauni.ac.in/nu/gulf_pio under one of the following two categories: (1) Foreign students having non-Indian passports (FN) OR foreign students having having OCI or PIO card can apply under PIO/FN Supernumerary category that has 10% seats reserved.

(2) Students whose parents are currently working in Gulf countries or SouthEast Asia can apply under CIWGC-SEA Supernumerary category that has 5% seats reserved.

Entrance test is not required and admissions are given as per merit marks of the undergraduate degree as per the eligibility requirement.

THE FEE STRUCTURE

Program	CIWGC-SEA	PIO/FN	PIO/FN from SAARC
M Tech	USD 5500 per year	USD 5000 per year	Rs.2,42,000/- per year

One time non-refundable processing fees of Rs.30,000/- will be collected at admission

For further details, please contact Office of International Relations, at

http://www.nirmauni.ac.in/nu/gulf_pio +917930642499 or +917930642421.

* The above Tuition Fees are existing at present, and subject to revision from time to time.

IMPORTANT NOTES

1. Applicant should submit one application form for all programmes of concerned department. However if one desires to appear for different department programmes, separate applications are required to be submitted.
2. Applicants must provide email address and contact number. All information pertaining to admission process will be sent by email or SMS.
3. Important announcements will be displayed on website also. Outstation candidates should check the website before proceeding for written test / counseling.
4. For all programmes the list of applicants called for test/counselling will be displayed on website (date as decided by the PG admission Committee). No separate intimation will be conveyed for test/counselling.
5. All Non-GATE applicants of all departments are required to report to the venue at least 30 minutes before specified time as declared on website for written test. They should bring the downloaded application form and identity card for appearing in the written test.
6. Written test wherever applicable; will start as per schedule displayed on the website.
7. GATE candidates of different programmes are required to report at the venue at least 30 minutes before specified time as declared on website for counselling.
8. Appearing for counselling/ test does not guarantee admission.
9. Generally the number of candidates called for counselling is more than intake in respective programmes assuming that all the candidates called for counselling may not report. Therefore, attending the counseling does not give guarantee of admission and it is subject to availability of the seats.
10. The selected applicants will be given admission on the same day of counseling after verification of testimonials and other relevant documents.
11. In case of any dispute/doubt in the interpretation of any clause, the decision of admission committee shall be final and binding.

For detailed information about the programmes please contact concerned P.G. Coordinators at the Email addresses mentioned below:

Sr. No.	M. Tech. Specialization	Name of PG Coordinator	Email Address
1	Computer Aided Structural Analysis & Design	Dr. Sharad Purohit	pg.casad.it@nirmauni.ac.in
2	Computer Science and Engineering	Dr. Priyanka Sharma	pg.cse.it@nirmauni.ac.in
3	Data Science	Dr. Gaurang Raval	
4	Information & Network Security	Dr. Sharada Valiveti	
5	VLSI Design	Dr. N. M. Devashrayee	
6	Embedded System	Dr. N. P. Gajjar	pg.es.it@nirmauni.ac.in
7	Electrical Power Systems	Dr. S. C. Vora	pg.ps.it@nirmauni.ac.in
8	CAD/CAM	Dr.B.A.Modi	pg.cadcam.it@nirmauni.ac.in
9	Thermal Engineering	Dr. V.J.Lakhera	pg.thermal.it@nirmauni.ac.in

M. Tech. in Civil Engineering

(Computer Aided Structural Analysis and Design)



ABOUT THE PROGRAMME

To meet with surging requirements of tall, complex and diversified structures, Structural Engineers equipped with fundamental knowledge, skills and adaptability are essential. The programme is designed with an objective to impart strong theoretical concepts along with appropriate exposure to professional practices adopted in the field. The scope of the programme is not just limited to theory classes but focus is on exposure to hands-on sophisticated laboratory equipments & latest computational tools, knowledge upgradation through expert lectures, practical training and major project work.

COURSE STRUCTURE

Following academic curriculum of M. Tech. (CASAD) is in force.

Semester - I

- Advanced Structural Analysis
- Structural Dynamics
- Design of Concrete Structures
- Design of Steel Structures
- Advanced Concrete Technology
- Advanced Materials
- Supplementary Course

Semester - I

- Finite Element Method for Structural Engineering
- Department Elective – I
- Department Elective – II
- Department Elective - III
- Research Methodology and IPR
- Experimental Techniques in Structural Engineering
- Minor Project

Semester III

- Major Project Part – I (Full Time)

Semester IV

- Major Project Part – II (Full Time)

PROJECT AREAS

Post-graduate student broadly work in the following thrust areas of structural engineering.

- Computational Mechanics of Structures
- Seismic Analysis and Design of Reinforced Concrete, Steel, Masonry and Composite Structures
- Advances in Concrete Technology – Geopolymer, Pervious, Fibre Reinforced etc.
- Analysis and Design of Special Structures – Bridge, Tall Building, Chimney, Silo, Marine Structure, Transmission Line Tower, Fluid Storage Tank, Precast Structures, Industrial Structures etc.
- Repair and Rehabilitation of the Structures
- Experimental Investigations on Structural Components and Structural Systems
- Geotechnical Investigations and Foundation Design

LABORATORY FACILITY

Department of Civil Engineering has well-equipped Heavy Structures Laboratory (HSL) catering to the need of experimental investigation on various structural components/structural systems. Computer laboratory with high-end machines installed with professional software like STAAD Pro., SAP2000, ETABS, MIDAS-GEN, ABAQUS, Pro-SHAKE, AutoCAD, ORIGINLAB, ANSYS and MATLAB offers required computational facilities.

SALIENT FEATURES OF THE DEPARTMENT

- Qualified and experienced faculty members of the department strive to impart quality education keeping in tune with latest advancements.
- Regular site visits – local & out-station for students to understand professional requirements on the field.
- Hosting distinguished Professors of International and National Institutions of repute like UIUC-USA, UBC & UVIC-Canada, University of Dundee-UK, IIT-Bombay, IIT-Kharagpur, IIT-Delhi, IIT-Roorkee, IIT-Guwahati, IIT-Gandhinagar, IIIT-Hyderabad, MNIT-Jaipur etc. to deliver Expert Lectures and workshops to the students.
- Organizing, Workshops, Field visits, Expert Lectures from reputed Industries and Structural Consultancy Firms for students to understand the requirements of the industry.
- Collaboration of the department with nationally reputed research organisations like CSIR-SERC, CSIR-CBRI, SAC-ISRO, BARC, ISR, IPR, CSIR-CIPET, ATIRA help students for academic visit, major project work, seminar/workshop participation and to network with research scientists.
- Students work shoulder-to-shoulder with faculty members as part of Consultancy Projects, Externally Funded Research Projects, Organization of International Conferences to sharpen his/her academic management and professional skills.
- Students get placed through Campus Placement with the support of well-established III Cell at the Institute. Alumni network of M. Tech. (CASAD) plays key role for off-campus placement of the current students.
- Dedicated, ever-evolving and well-equipped HSL with latest equipment's and indigenously designed structural testing facilities are backbone of the various academic & research activities conducted by the students.
- Sophisticated Computer Laboratory with 30 computer system allows students to have hands-on experience. Also, students are encouraged to use open source software like SciLAB, OCTAVE, LATEX etc.
- Full-fledged library with good titles and e-resources like ASCE, Science Direct, SCOPUS allows students to gain required knowledge. Remote log-in access to each student offers freedom for 24x7 learning.
- Department offers Doctoral Programme (Ph. D.) in the area of Structural Engineering and Geomatics.
- Student have brought recognition to the institute by winning prizes by participating in various Design Competitions, Symposiums, Best M. Tech. thesis Award and Conferences at National and International Levels.



Research and consultancy activities are one of the major activities undertaken by the department.

- Department has successfully completed many externally funded research projects from funding agencies like DST, ISRO-RESPOND Programme, SAC-ISRO, IEI (India), GUJCOST, IC-Impact (Canada), European Space Agency etc.
- Department offers consultancy in various domains of Civil Engineering like Structures, Geotechnique, Environment and Transportation. Consultancy services, in past, have been offered for Proof Checking of Structural Design, Damage Assessment of Fire affected buildings, Non - destructive Evaluation of Structures, Seismic Analysis and Design of Structures, Repair and Retrofitting of Structures, Finite Element Analysis of Structures, Environmental Engineering and Pollution Control, Environmental Analysis and Monitoring, Environmental Audit of Industries, Soil Investigation, Foundation Design and Ground Improvement Techniques, Quantity Surveying and Surveying and Geodesy Work. Notable Government/Private/Public Sectors organisation sought consultancy services includes ONGC, IPR, Sintex, GWSSB, GIDC, L & T etc.
- Faculty members of the department regularly publish technical papers with reputed Journals (indexed in Scopus, Web of Science, ICI) from International publishers like Elsevier, Wiley, Springer, Inderscience, Taylor & Francis, Techno-press etc.
- Department offers Doctoral Programmes (Ph. D.) in the area of Structural Engineering and Geomatics. Currently, department has 14 Ph. D. students enrolled.
- Research activities are given utmost importance in the department to keep abreast with current developments in the structural engineering domain. Major areas wherein research work is carried out includes, Experimental Investigations of Structural Systems/Component under different types of loading, Advances in Concrete Technology, Seismic Control of Structures and Application of Geomatics in Civil Engineering.



M. Tech. in Computer Science & Engineering

(Computer Science & Engineering)



ABOUT THE PROGRAMME

The M. Tech. programme in Computer Science and Engineering aims at preparing computer professionals for research, academics, design and development in hardware/software. The programme emphasizes on building strong foundation in computer science, developing strong learning skills and imparting knowledge in key subject areas relevant to the current scenario in the field of computer science. The programme lays emphasis on learning by doing thorough practical work and by solving open issues in the field through research projects.

COURSE STRUCTURE

Following academic curriculum of M. Tech. (CASAD) is in force.

Semester - I

- Complexity Theory and Algorithms
- High Performance Computing Architecture
- Applied Machine Learning
- Advanced Database Systems
- Applied Mathematics for Computer Science
- Ethics for Data Science

Semester - I

- Advanced Computer Networks
- Elective – 1
- Elective – 2
- Elective – 3
- Research Methodology and IPR
- Minor Project

Semester III

- Project Part – I

Semester IV

- Project Part – II

PROJECT AREAS

- Students get opportunity to work on innovative topics for their project work and dissertation in the domain of Data Analytics and System Analytics, Video and Image processing, Machine Learning, Deep Learning, Networking domains like Wireless Networks, Wireless Sensor Networks, Software Defined Networks, Internet of Things, High Performance Computing, Cloud Computing.

M. Tech. Computer Science and Engineering

(Information and Network Security)



ABOUT THE PROGRAMME

The era of disruptive internet usage for transparency in governance and digital transactions has taken a drastic sweep over the conventional means. The communication system these days is also very vulnerable to attacks due to the lack of needed infrastructure and skilled manpower to manage the networks and information systems. A person having knowledge of identifying vulnerabilities through use of state-of-the-art tools and technologies would be able to mitigate threats and provide necessary security services. The program aims to develop skilled manpower capable of strengthening the information and network security backbone.

COURSE STRUCTURE

Semester - I

- Complexity Theory and Algorithms
- System and Network Security
- Applied Machine Learning
- Cryptography
- Applied Mathematics for Computer Science
- Cyber Laws

Semester - I

- Digital Forensics, Audit and Investigation
- Elective – 1
- Elective – 2
- Elective – 3
- Research Methodology and IPR
- Minor Project

Semester III

- Project Part- I

Semester IV

- Project Part- II

PROJECT AREAS

- Students get opportunity to work on innovative topics for their project work and dissertation in the domain of Intrusion Detection Systems for availability attacks in Ad Hoc Networks, User profiling for Fraud Detection Systems, Psychology Profiling for an individual through Cyber Access, Image, Audio and Video Forensics, Vulnerability assessment and Penetration Testing for Web applications, Privacy Preservation in Data Mining Techniques etc.

M. Tech. Computer Science and Engineering

(Data Science)



ABOUT THE PROGRAMME

The ever expanding digital world in the era of digital transformation of almost every business has remitted in an explosive growth of data. The use of data analytics and emerging technologies can help in uncovering patterns from voluminous data leading to the predictions for new products or services. Given the increasing complexity and volume of data, business houses from start-ups to large scale industries have become highly dependent on Data Scientists to expand their business with the specialized skills of such experts to efficiently handle massive amount of data. The programme has been designed to cater to the ever growing business and research needs in this area with emphasis on building strong foundation in data science. The programme aims at developing skills and imparting knowledge in key data science streams with focus on applied problem solving approach. This specialization opens a myriad of options for candidates on the career front in a variety of business sectors.

COURSE STRUCTURE

Semester - I

- Complexity Theory and Algorithms
- Advanced Database Systems
- Applied Machine Learning
- Introduction to Scalable Systems
- Applied Mathematics for Computer Science
- Ethics for Data Science

Semester - I

- Exploratory Data Analysis
- Elective – 1
- Elective – 2
- Elective – 3
- Research Methodology and IPR
- Minor Project

Semester III

- Project Part- I

Semester IV

- Project Part- II

PROJECT AREAS

- Students get opportunity to work on innovative topics for their project work and dissertation in the domain of Data Analytics and Visualization, Machine Learning and Deep Learning, Social Media Analytics, Image and Video Analytics, Computational Intelligence and Predictive Analytics, Scalable and Multi-core Computing, Statistical Modelling and Analysis, Information Retrieval and Data Mining etc.

SALIENT FEATURES

- Final year internship with attractive stipend in companies like Intel, Oracle, Philips, Morgan Stanley, ARM, Arris to name a few
- Skill development based curriculum design incorporating contemporary ICT technologies and tools pertaining to application development and data analytics
- Research and Academic collaboration with MNCs and Research Organizations like Infosys, ISRO, TCS, IPR etc.
- Collaborations with the top USA and Canadian Universities leading to preapproved MS programmes, summer internships and joint research projects
- Specialized laboratories for High Performance Computing, Networking, Security
- Research laboratory equipped with high-end NVIDIA graphics cards
- Industry collaboration through Infosys Campus Connect for faculty development programmes, Foundation Programmes for students etc.
- Large pool of highly qualified faculty members with diversified and specialized skill sets
Special technical/research talks by renowned experts from premier industries/R&D organizations/ Universities to impart the knowledge beyond curriculum
- Dedicated project based learning laboratory with modern hardware and software
- IEEE and CSI student chapters and other student clubs actively organizing various events round the year

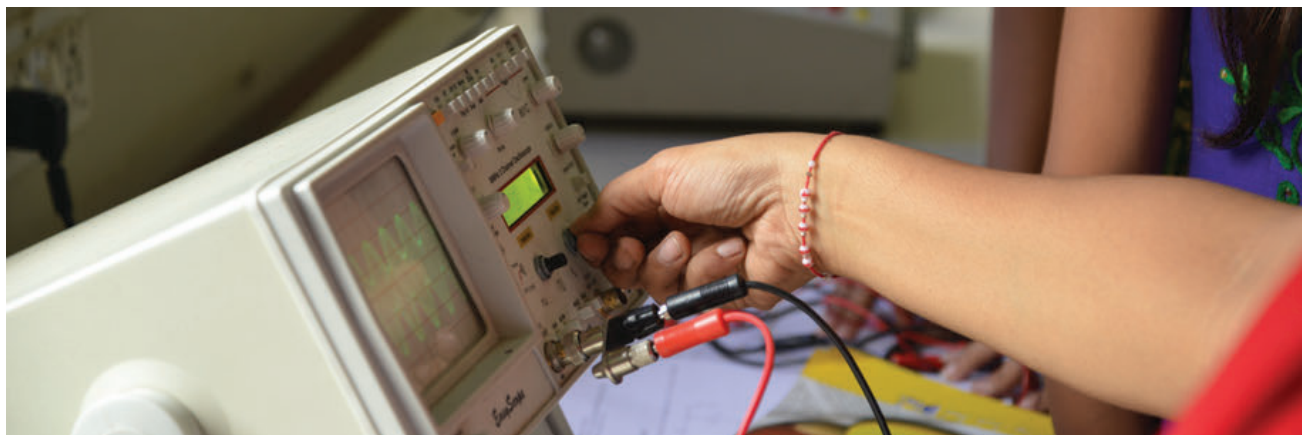




- Active research collaborations with research organizations like SAC-ISRO, IPR and research funding through ISRO-RESPOND, DAE-BRNS, DST, GUJCOST.
- Completed externally funded Research Projects
 - Security Enhancement of GSM Stream Ciphers
 - Parallelization of Thermo-dynamics Nuclear Reactor code using GPU based Computation
 - Design and Development of Spatio-temporal Data Mining
 - Development of Image Processing Algorithms on FPGA
 - Object detection in Video Surveillance System
 - Design and Development of Scalable Data Mining Algorithms for Big Earth Data
 - DNA Sequencing and Assembly using GPU
- Ongoing externally funded Research Projects
 - Oceanic Pollution and Other Ocean Phenomenon Monitoring Using Feature Extraction From Multi-Polarized SAR Data.
 - Using Deep Learning to Understand and Predict The Dynamics of Tokamak Discharges
 - Spectral Discrimination and Separability Analysis of Crops and Weeds Using Deep Learning Techniques
 - Study and Development Of Domain Adaptive Classification Algorithm for Advanced Earth Observation and Annotation System
 - Development of Comprehensive Technique for Soil Moisture Estimation Using L & S Band Airborne Polarimetric SAR Data
 - Development of Blind Hyper Spectral Unmixing (BSU) Algorithm for Water Pollutant Identification Due to Sewage and Industry Disposals for South Karnataka Coast, Mangalore Region
 - Land-Cover Classification of Polarimetric SAR Image/Data for Agricultural and Urban Region
 - Trajectory Planning for Robotic Arm for Automatic Damage Detection and Recognition of First Wall Tile Images in Tokamak Using Image Processing and Machine Learning
 - Optimizing Parallelization of Legacy Code on Appropriate HPC
 - Mining Crop Cover, Crop Type Stages from L & S Band SAR.
 - Proactive Solution for Achieving Trust in Cloud Computing Using Machine Learning Approach
 - SAR Polarimetry for Detecting Ocean Surface Targets

M.Tech. in Electronics and Communication Engineering

(VLSI Design)



ABOUT THE PROGRAMME

In the era of rapid change in technologies, the Indian electronics and communication landscape is expanding every year and more and more new projects are emerging in the field of VLSI Design. It requires a large pool of highly skilled and technically sound engineers who can execute these projects. This is an area of concern at PG Level. VLSI Design is an advanced level course in the field of Electronics and Communication engineering with specialization in terms of technology and application to fulfill the requirements of the VLSI industry.

COURSE STRUCTURE

Semester - I

- Digital VLSI Design
- Analog and Mixed Signal Design
- Semiconductor Device Physics and Modeling
- Advanced Digital System Design using Programmable Logic
- VLSI Physical Design

Semester - I

- VLSI Design Verification and Testing
- Department Elective – I
- Department Elective – II
- Department Elective – III
- Research Methodology and IPR
- Minor Project

Semester III

- Major Project Part – I (Full Time)

Semester IV

- Major Project Part – II (Full Time)

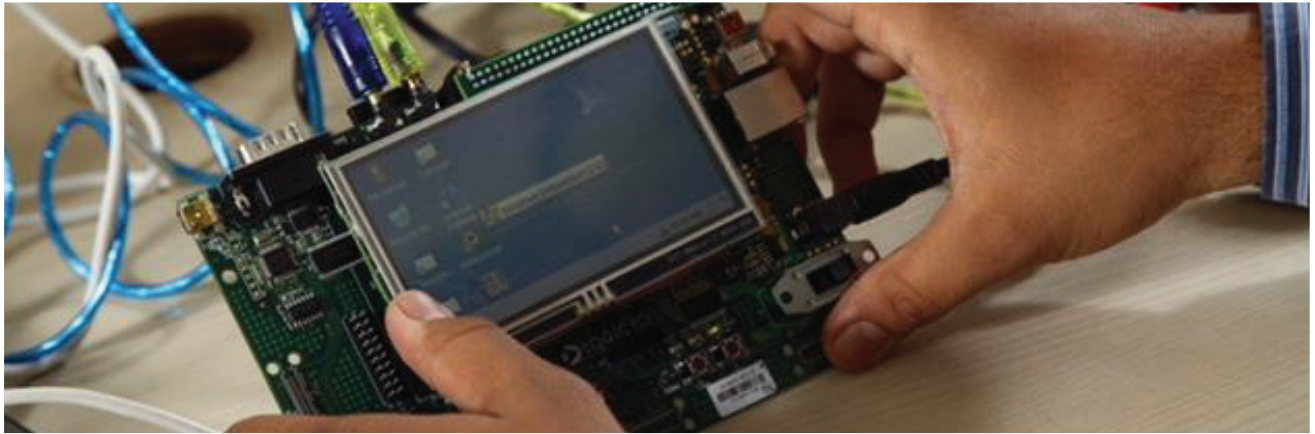
PROJECT AREAS

- Digital VLSI Design
- Analog VLSI Design
- Mixed Signal Design
- Testing and Verification of VLSI Design
- Front end Design
- Back end Design
- VLSI Signal Processing
- IC fabrication Technology



M.Tech. in Electronics and Communication Engineering

(Embedded System)



ABOUT THE PROGRAMME

Electronic advancements have made our lives more dependent on Embedded Systems. This includes not only safety critical applications such as automotive devices and controls, railways, aircraft, aerospace and medical devices, but also communications, 'mobile worlds' and 'e-worlds', the 'smart' home, clothes, factories etc. Unlike the general purpose computing systems, embedded computing systems are individually optimized to fulfill specialized tasks. Acknowledging such scope of embedded system, the Master's degree prepares students to work in the field as architects of hardware and software systems by developing the next generation of technologies and tools of modeling, design, implementation and operation of hardware/software systems embedded in intelligent devices.

COURSE STRUCTURE

Semester - I

- Advanced Digital System Design
- Processor Architecture and Design
- Digital Signal Processing and Applications
- Embedded Systems Programming
- Electronic System Design
- Embedded Networking Laboratory

Semester - I

- Embedded Operating System
- Department Elective - I
- Department Elective - II
- Department Elective - III
- Research Methodology and IPR
- Minor Project

Semester III

- Major Project Part-I (full time)

Semester IV

- Major Project Part-II (full time)

PROJECT AREAS

- Real time control Systems
- Robotic Systems
- Bio-Medical Engineering Systems
- Image Processing
- Internet of Things
- Digital Signal Processing & Applications
- Wireless Communication & Networks
- Video Processing, Embedded Systems
- FPGA based System Design, VLSI System on Chip Design
- Multimedia Systems & Applications

SALIENT FEATURES

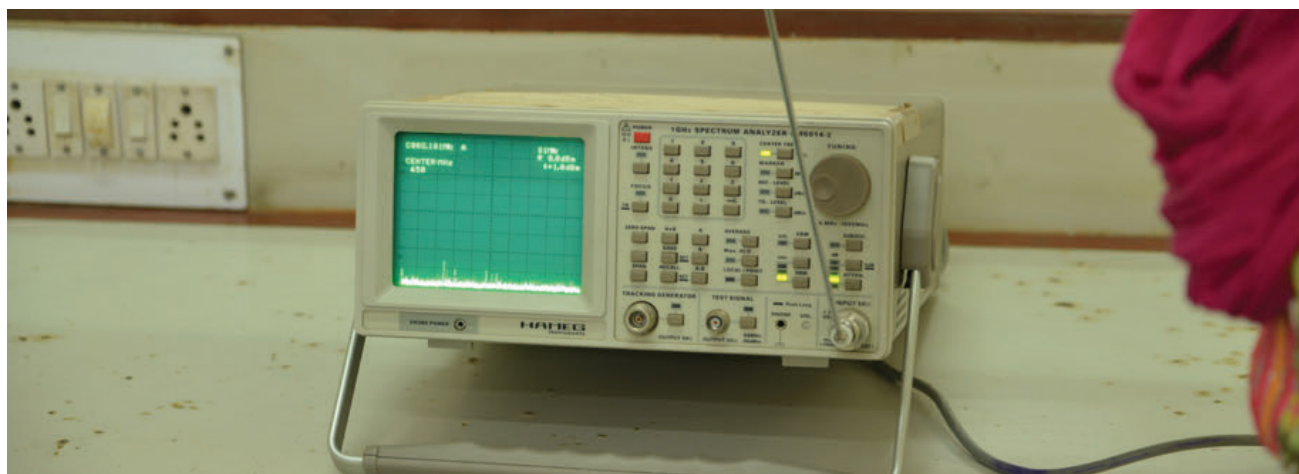
State-of-the art laboratories/research facilities:

- **VLSI Design Lab:** Equipped with development boards, software, measuring instruments such as FPA, FPGA, Mentor Graphics, Tanner tools, FPGA Advantage, Microwind, Visual TCAD, Cadence, Pattern Generator, Logic Analyzer, Digital Storage Oscilloscope, Function Generators, ADC/DAC cards
- **DSP and Communications Lab:** Equipped with development boards, software, measuring instruments such as Communication System level design with VHDL source codes/IP, Microwave benches, Antenna Trainer, Mobile communication Trainer, Wireless Sensor Network Nodes, RF Signal Generator, Network analyzer, Spectrum analyzer, Logic analyzer, Digital pattern generator, Digital Storage Oscilloscope, DSP development boards with supporting software and emulators, simulation software, kit for Software Defined Radio
- **Embedded Systems Lab:** Equipped with development boards, software, measuring instruments such as Advanced Microcontrollers development boards of ARM, STM32 Cortex Boards, TI - MSP430, ATMEL AVR, PIC, Raspberry PI board, Intel Edison boards for IoT, NI Hardware: ADC/DAC cards, Digital IO cards and CompactRIO Platform, 5.1 Channel audio system, Embedded System Development boards from QUALCOMM & FREE SCALE, Altera DE-2 boards, Image Processing development board, Eclipse IDE, Keil IDE, Embedded OS, Real time Operating Systems (uCOS, TinyOS, Embedded Linux).
- **Computing Facility:** Server and latest Computer systems with LINUX/Windows Operating Systems, GPU computing using NVIDIA GPU cards, Blue Ray reader writer.

Industrial internships/Placement: Students work for internship/project and finally placed in the companies such as INTEL, ST Microelectronics, e-Infochips, ARRIS, Broadcom, Qalcomm, SAC ISRO, DRDO, PRL, IPR, ARM, Broadcom, Cypress Semiconductor, NXP, Synopsys, Xilinx Proviono Tech etc.

Faculty qualifications: All the Professors and Associate Professors, teaching in PG programs, are having Ph.D. degrees from reputed institutions.





- **Funded projects:** Faculty members are investigating research projects on state of the art technologies funded by various agencies such as DST, GUJCOST, ISRO, BRNS, DRDO in various domains such as product development, system integration, system design and performance analysis in the areas of VLSI design, embedded system and communication engineering. The total amount is about Rs. 180 lakhs.
- Faculty members and students publish research papers in standard international/national Journals and present papers in reputed national/international conferences. There are total 190 and 250 papers in journals and conferences. The faculty members are also involved in writing books from known publication houses.
- **PhD scholars:** In the department, 20 students are pursuing Ph D in various domain such as wireless communication, optical communication, VLSI design, Embedded system design, Antenna design, image processing etc. under the supervision of 13 guides.



M. Tech. in Electrical Engineering

(Electrical Power Systems)



ABOUT THE PROGRAMME

Worldwide power sector is in the process of reform through deregulation and inclusion of large scale renewable resources. As a result, the environment faced by electric utilities is quite challenging and this has led to change in the operating procedures drastically. Adding to this, the bulk renewable power generation and consideration on ultra-high voltage AC / HV DC transmission systems for transfer of bulk amount of power over longer distances needs attention. Apart from the above, smart grids, substation design aspects, improvements in protection strategies, large and small signal analysis etc. too are the key aspects being discussed during the programme through design and simulations.

COURSE STRUCTURE

Semester - I

- Power System Dynamics
- Power System Analysis
- Power Electronics in Power System
- Renewable Energy Technology
- Protective Relaying and Switchgear
- Supplementary Course

Semester - I

- Power System Stability and Control
- Dept. Elective – I
- Dept. Elective-II
- Dept. Elective-III
- Minor Project
- Research Methodology and IPR

Semester III

- Major Project Part-I (full time)

Semester IV

- Major Project Part-II (full time)

Supplementary Course will be announced at the time of semester commencement.

PROJECT AREAS

- Power system modelling and analysis viz. Load flow analysis; Short circuit and transient stability studies; State estimation, Relay selection coordination, placement; Arc flash and motor starting analysis etc.
- Power system protection and switchgear – design, modelling and analysis
- Generation, transmission and distribution system planning and design
- Modelling, simulation and analysis of power system devices, electrical machines etc.
- Renewable integration and Power quality issues, Smart Grid
- Testing and condition monitoring of HV power apparatus, fault diagnosis
- HV engineering, insulation coordination and planning
- Substation equipment and design, communication system design
- AI applications to power system optimization problems
- Reliability analysis, forecasting of wind and solar system energy

SALIENT FEATURES OF THE DEPARTMENT

- Qualified faculty members with doctorate from IISc, NITs and having industry exposure
- Well-developed laboratories, having latest equipment being used by various industries
- Expert lecture sessions and Industry visits are the regular features
- High-end tool like OPAL – RT and D-Space available for advanced research work
- Software like PSIM, MATLAB / Simulink, ANSYS, MAGNET, PSIM, Motorsolve, SPEED ETAP, PSCAD, NEPLAN, Altair SolidThinking – Embed, Compose & Activate, and online open access tools are extensively used for design, modelling, simulation and analysis
- The switchgear and protection laboratory is built with latest relays explaining schemes of over current, distance, and differential protection relaying system, synchronization of alternators and high voltage generation.
- The high voltage laboratory is equipped with 100 kV AC and DC voltage generation set up, 300 kV, 3 kJ Impulse voltage generator, oil test set – up, dielectric constant meter as well as IR measuring unit.
- Tools for power electronics applications e.g. inverters, choppers, speed control of motors, SMPS, UPS, enable students to carryout projects very effectively
- Set-ups for characteristics of power switching devices like IGBT, MOSFET etc.
- Placement of students in leading industries through campus and off – campus interviews e.g. GE, Crompton Greaves (I) Ltd., Bombardier Transportation Ltd., Hitachi HiRel Power Electronics Ltd., Infosys, GETCO, Raychem RPG Ltd. etc.
- Based on competencies, ample opportunity for training and major projects at industries like Hitachi HiRel Power Electronics Ltd., AMTECH Electronics, Electrotherm (I) Ltd., L & T, Colorrol Ltd., ABB, GETCO, ERDA, J K Lakshmi Cement, BHEL, Raychem RPG Ltd, etc.





- Department is actively involved in research and consultancy activities
- Research papers published in international journals and reputed national / international conferences
- Major research areas pursued are – Power Electronics and Drives, High Voltage Engineering, Power System Analysis, Permanent Magnet Machine Design and Control, AI applications in Power Systems and Power Electronics
- Three doctoral students graduated recently and few more are pursuing their research
- Training services offered to industries and academia have been very successful
- Consultancy services offered in the domains design of filters, HV testing of equipment, testing of ac motors, design and analysis of power electronic circuits, power system simulation & analysis, software development for equipment design etc.



M. Tech. in Mechanical Engineering

(CAD/CAM)



ABOUT THE PROGRAMME

The CAD/CAM Program involves integration of Computer-Aided Design (CAD) and Computer –Aided Manufacturing using a wide range of computer-based tools that assist engineers in their design and manufacturing activities. It involves both software and special-purpose hardware. The capabilities of modern CAD systems include reuse of design components, ease of design modification and versioning, automatic generation of standard components of the design, validation/verification of designs against specifications and design rules, simulation of designs, finite element analysis and automated design of assemblies etc. Developed CAD models results in real-time process simulation and Computerized Numerically Controlled

COURSE STRUCTURE

Semester - I

- Analysis of Manufacturing Processes
- Computer Aided Design
- Advanced Machine Design
- Advanced Theory of Machines
- Industrial Automation
- Computer Aided Engg. Laboratory
- Design and Dynamics Laboratory

Semester - I

- Computer Aided Machining
- Department Elective-I
- Department Elective-II
- Department Elective-III
- Research Methodology & IPR
- Computer Aided Manufacturing and Automation Lab
- Minor Project

Semester III

- Major Project Part-I (full time)

Semester IV

- Major Project Part-II (full time)

PROJECT AREAS

- Finite Element Analysis and design optimization of critical components of various machines
- Design & optimization of various manufacturing processes, etc.
- Fatigue and Fracture Analysis of Machine Components
- Kinematic Analysis and Synthesis
- Dynamic Analysis
- Stress Analysis
- Vibration Analysis
- Pressure Vessel and Piping Design

M. Tech. in Mechanical Engineering

(Thermal Engineering)



ABOUT THE PROGRAMME

Thermal Engineering has an increasingly dominant role to play in the vital areas of Power Generation, Automobiles, Refrigeration & Air-conditioning and Energy sectors. The M.Tech in Mechanical Engineering (Thermal Engineering) programme is designed to provide a sound and an in-depth knowledge and training in various aspects of design, manufacture, testing, control and evaluation of Thermal Equipment and Systems. The course content aims at developing the necessary analytical and technical competence among the engineers and is tailor made to prepare post graduates ready to take up developmental and research activities related to Thermal Engineering.

COURSE STRUCTURE

Semester - I

- Advanced Thermodynamics
- Advanced Fluid Mechanics
- Heat Transfer Processes
- Modelling & Optimization of Thermal Systems
- Energy Conservation and Management
- Thermo-Fluid Engg. Laboratory
- Computational Laboratory I

Semester-II

- Computational Fluid Dynamics and Heat Transfer
- Department Elective-I
- Department Elective-II
- Department Elective-III
- Research Methodology & IPR
- Computational Laboratory-II
- Minor Project

Semester III

- Major Project Part-I (full time)

Semester IV

- Major Project Part-II (full time)

PROJECT AREAS

- Biomass Gasification
- Refrigeration and Air Conditioning Engineering
- Automobile Engineering
- Energy Conservation Management and Audit
- Computational Heat Transfer and Fluid Flow Analysis
- Molecular level analysis using computational method
- Heat Exchanger Design and Network Synthesis

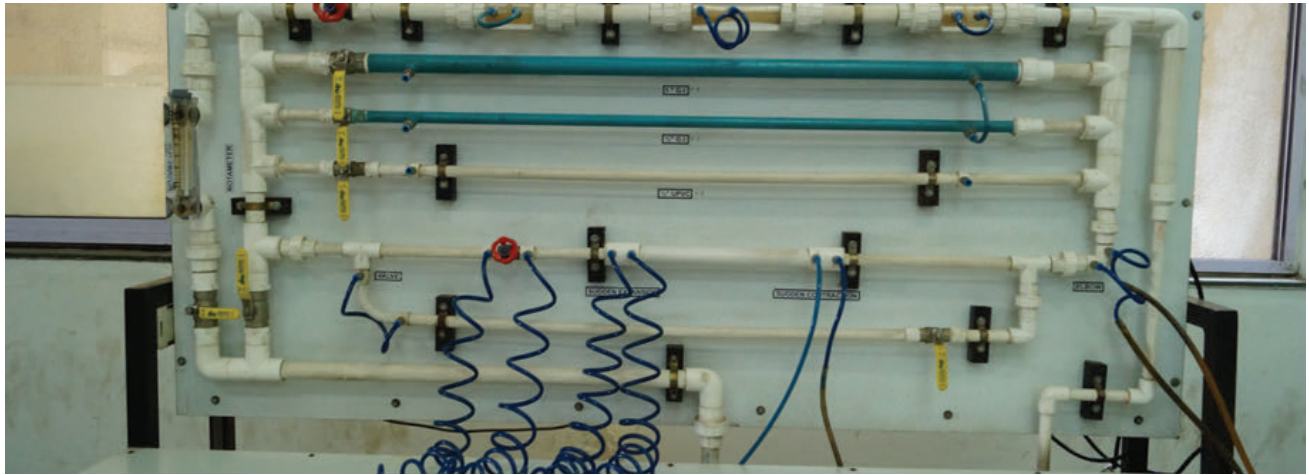
SALIENT FEATURES OF THE DEPARTMENT

The facilities in the Department include well equipped laboratories/research facilities in the areas of

- Thermal Insulation and Heat Transfer
- I C Engine and alternate fuel
- Biomass Gasification
- Fluid Mechanics and Fluid Power
- Flow Visualisation & Wind Tunnel Testing
- Kinematics and Dynamics
- Robotics
- Material Technology and Metallurgy
- CAD/CAM Centre

Computational facilities in the Department includes various software such as- ANSYS, CREO, MathCAD, AutoCAD, Autodesk, NX7, Hyper works, Automiation Studio, CATIA, SLT for vibration analysis, Dynafoam, HTRI, Machine Design online, MiniTab, Solid works, EES, and Techplot





- The Department offers consultancy and testing services to the industries in various areas related to Mechanical Engineering. The projects undertaken by the Department include - Redesign of Heat Setting Chambers for Stenter machine, Design of Transportation System for Stenter machine, Thermal Insulation Properties Evaluation, Materials of Construction for Ammonia / Urea Plant, 3D Geometric Modelling using Solid Works, Finite Element Analysis of Gate Valve, Finite Element Analysis of Ball Valve, etc.
- The Department has undertaken various externally funded research projects sponsored by ISRO, Dept. of Science and Technology (DST) and Gujarat Council on Science and Technology (GUJCOST).

NATIONAL LABORATORY FOR TESTING AND DEVELOPMENT OF THERMAL INSULATIONS

This laboratory is first of its kind in the country established for the testing and development of thermal insulations as per various National and International Standards. The Laboratory is the outcome of a project under the National Facilities in Engineering and Technology with Industrial Collaboration (NAFETIC) Scheme of the All India Council for Technical Education (AICTE), New Delhi. Among the facilities available in the Laboratory include a Guarded Hot Plate System used for thermal conductivity determination in the temperature range of -10 °C to 350 °C according to ASTM C177 and ISO 8302. The laboratory facilities are being actively utilized by various industries for the testing of the quality of thermal insulations.



M. Tech. (By Research)

ABOUT THE PROGRAMME

The M. Tech. (by Research) programme is aimed at working professionals who are interested in exposure to serious research in different disciplines offered by various departments of Institute of Technology. The programme emphasizes on multidisciplinary and rigorous learning and research work. Faculty members with vast research experience will be involved in the teaching and research process. Exposure to the current technology, linkages to various research laboratories namely Physical Research Laboratory (PRL), Ahmedabad, Institute of Plasma Research (IPR), Gandhinagar and Space Application Centre (ISRO), Ahmedabad, connections to industry and active involvement of faculty members in research projects funded by DST, ISRO-Respond, GUJCOST, European Space Agency, Institute of Engineers (IE) etc. are the best features of this programme. To boost up the research work, institute library is equipped with more than 700 e-journals-ASCE, ACM, IEEE online, Science Direct etc. Strong networking with leading Indian and foreign communities has been established by MoUs signed with the well-known organizations such as IEEE, IIT-Gandhinagar, University of Southern California, Florida Atlantic University, SAC-ISRO, CSIR-CBRI and industries like NVIDIA, INFOSYS, Mitsubishi Electric India Pvt. Ltd. etc. This will provide distinctive opportunity to the students to undertake the research work and carry out innovation as a part of this programme.

M. Tech. (by Research) is offered by the following departments:

- Chemical Engineering
- Civil Engineering
- Computer Science and Engineering
- Electrical Engineering
- Electronics & Communication Engineering
- Instrumentation & Control Engineering
- Mechanical Engineering

ELIGIBILITY, ADMISSION CRITERIA & SELECTION PROCEDURE:

Candidate can do M.Tech (By Research) only as an External candidate. Duration of the programme would be minimum 3 years and maximum period of 5 years from the date of joining

A candidate seeking admission to M. Tech (by Research) in any of specialized area must fulfil the following criteria:

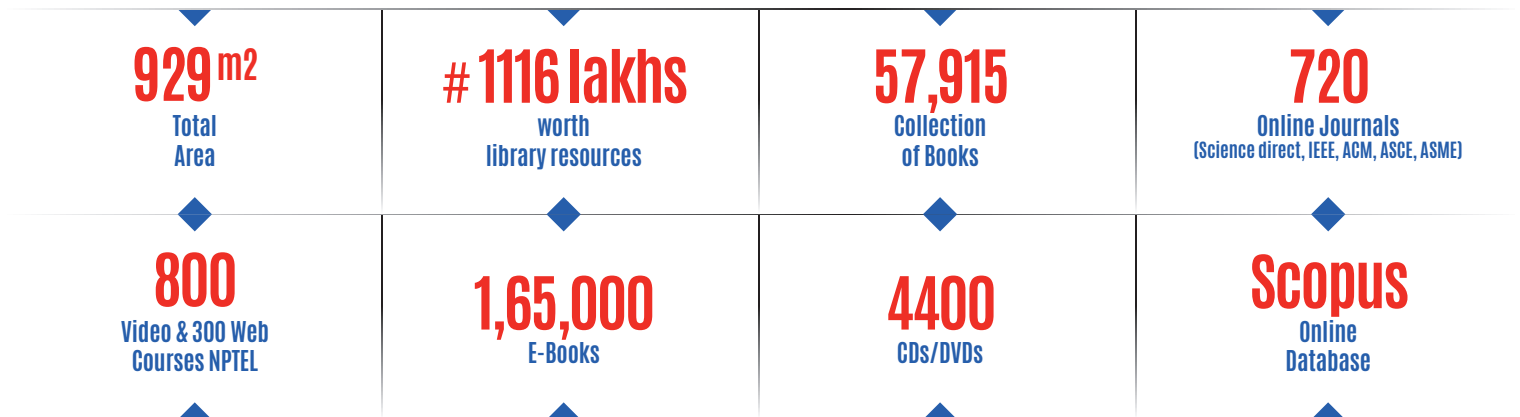
- He/she should have passed the qualifying examination of Bachelor of Engineering/ Bachelor of Technology from a recognized University with minimum % of marks as prescribed by the AICTE from time to time or equivalent Cumulative Grade Point Index (CGPI)
- The candidates who are applying M.Tech (By Research- External) should also have minimum experience of three (03) years in R&D related work in research organization or institute after graduation. They will also be required to submit a 'No Objection Certificate' from their employers for taking up this programme.
- The University will invite applications from the candidates through advertisement in the press or in the website. Candidates, who intend to get admission for M. Tech (By Research), have to apply on-line in a prescribed pro forma. Admission will be based on by an interview by a committee consisting of the Dean of the Faculty of Technology and Engineering (FoTE), concerned Head of the Department and concerned faculty member (who has proposed a research area and who will be guiding student on admission). After interview by the committee, and on the recommendation of the committee, admission will be confirmed on payment of prescribed fees.

Library Resource Center



The Library aims to facilitate learning, teaching, research, training and consultancy activities at the Institute. The Institute of Technology Library is one of the best engineering libraries in the State.

Web based open source library software called KOHA has been adopted to make the resource center fully automated. A web based catalogue is also available on the internet for inquiring about the books.



The center has adopted latest information technology mediums like CD, DVD, text as well as graphic scanners and biometric readers. The Library portal gives access to journals, magazines, videos, CDs and along with linking the Central Library Resource Center of the university.



THE LIBRARY OFFERS THE FOLLOWING SERVICES

Circulation, reference, online catalog access, audio visual resources viewing, users' personal profile access, In-house reading, reprography, orientation programs, Media Clipping, Resources sharing via Inter library loan across the country, current awareness service for new arrivals and new happening, worldwide access via remote login, space Knowledge Repository

INSTITUTIONAL MEMBERSHIP

The Library is an Institution Member of:

- The British Library – Ahmedabad,
- Institute of Engineers – Kolkata,
- Indian Society for Earthquake Technology (IETE),
- Developing Library Network (DELNET),
- Indian Geotechnical Society (IGS),
- American Information Resource Center – Mumbai.

DIGITAL LIBRARY

Keeping in tune with global developments, we create Knowledge Repository, archival of Intellectual property of NU Community by use of Dspace where the collection like faculty publication, Masters Dissertations, Ph.D Thesis etc. are available in PDF format and can be access and download from anywhere in the campus.

Library has also organise the other activities like Screening TED Talks, Book Review, Storytellers, Celebration of National & International Days, Training of online Databases etc) to ITNU Users etc.

STUDENT SECTION

The student section looks after admission, registration, student records, semester end examinations, scholarships, concessions, issue of identity cards, bonafide certificates, provisional passing certificate etc.



CANTEEN

The Institute also houses a large canteen offering wholesome and nutritious lunch, breakfast, dinner, snacks and beverages.



SAFETY & SECURITY

To ensure proper safety & security in the campus, a team of trained guards and supervisors remains available round the clock within its premises. The university is under 24x7 surveillance with the help of hi-tech CCTV Cameras.



REMOTE CENTRE OF IIT-BOMBAY

Under an MOU signed with IIT Bombay in May 2004, the institute has set up a remote centre of the Distance education Programme of IIT Bombay, The programme is now known as Centre for Distance Engineering Education Programme (CDEEP) of IIT-Bombay. Under this programme some of the courses of PG level, senior UG level and expert lectures being delivered at IIT Bombay are transmitted live via VSAT network and received at the institute. Students attend these lectures in specially designed class room with facility to have audio and video interaction with the faculty. The network supports two way audio and video interaction. The students of the institute benefit immensely from good quality expert lectures.

EDUSAT NETWORK

ISRO has taken the initiative to launch a state of the art Communication satellite to provide communication channels dedicated to education and training. Institute of technology has installed a Satellite Interactive Terminal (SIT) to participate in AICTE's Expert lectures and courses which are delivered through EDUSAT channel. The SIT terminal is interfaced with the Intranet so that the lectures received can be viewed on any PC across the campus giving students the wide accessibility to such programmes.



STUDENTS STORE

A student's store, which is run on a no-profit-no-loss basis, provides all necessary study material, stationery, instruments etc. to the students.



TRANSPORTATION

The Institute provides transport facility for the convenience of students from the area of their residence to the Institute and back on payment basis. For this, the Institute has its own fleet of 40 buses that ply on pre-decided routes.



HEALTH CENTER AND AMBULANCE

The Institute has made special arrangement to provide Medical Facilities on the campus by appointing a fulltime doctor who is available at Health Centre, and the campus has 24x7 Ambulance facility.

BANKING AND ATM SERVICE

To serve the banking needs of the students within the campus, full-fledged bank branch of the Kalupur Commercial Co-operative Bank Limited, a scheduled bank operates. Along with this, for the convenience of the students, ATM facility is also provided within the campus.



SPORTS

The campus has a cricket and football ground, volleyball court, lawn tennis court and basketball ground. The other facility consists of indoor games such as table tennis, chess, carom etc. can avail by students. The Annual Sports Festival is a regular feature. A full-fledged gymnasium with modern equipment is also available for students.



ISRO'S INDO -US UNIVERSITY PROGRAMME

ISRO has signed MOU with several Ivy League Universities of US like Harvard, Yale Princeton, and Cornell etc. to provide distance higher learning to engineering institutions in India. According to this MOU, renowned professors from these universities will come to India and deliver courses. Institute of Technology, Nirma University is among the first few institutes selected to participate in this programme. Under this MOU, lectures will be beamed through EDUSAT network and projected live to the students in specially equipped class room. There will be two way i.e. audio and video communication for interaction with speaker.

EKLAVYA CHANNEL

Eklavya is an Educational channel of Govt. of India where lectures (live and recorded) are broadcast using INSAT satellite. Regular courses are broadcast from different IITs. A well-equipped classroom has been set up where direct satellite broadcast of lecture is received and projected to the students.



OTHER FACILITIES

A separate Yoga Hall is situated at Student Activity Center, 2nd Floor NIM Mess Building. In order to provide round the clock electricity, two generators sets of 500 kVA each and one generator of 250 kVA, remain operational in the campus. Cleanliness in the campus is given importance & maintenance activities are continuously monitored by the estate department. Campus is also has sewage treatment plant and also uses its canteen waste to generate compost for gardening purposes.

IDEA LAB

Institute of Technology of Nirma University has started an innovative program called the "Idea-Lab" to support, nurture and cultivate amongst the students the spirit of innovation, design, and research towards technology for meaningful purposes. The idea-lab provides a small seed-funding for early-stage exploration of an innovative R&D project idea which can be used to build quick and simple proto-types. The ideas funded are mainly technical, exploratory, innovative in nature with a potential to impact science and society. Many of these ideas are multi-disciplinary, involving students from different departments and institutes. Some of our idea projects have been presented at national level, winning accolades and awards in national level competitions held by Wipro, awarded and further funded by national scientific journals or international organizations IEEE or winning national level competition. In this endeavor, the students are guided technically and logistically by faculty-members as mentors.

The Idea-Lab thus serves as a **"Technology Incubator"** and also aims to support ideas with good technology product and commercial potential to the next business incubation stage through interested entrepreneurs via external funding.



Looking Beyond Curriculum

STUDENT ASSOCIATIONS

Throughout the year, student associations serve as a pivot, around which diverse activities revolve and play a significant role in the development of students through co-curricular and extra-curricular activities.

These association conduct several events like expert lectures, competitions, blood donation camps, awareness programmes etc. all round the year. The institute also encourage these association to conduct state/national level technical festivals including a national level mega event NU Tech.

The objectives of the student associations are as

- To promote disciplined corporate, intellectual, civic and cultural life amongst the students.
- To foster activities to bring out the creative talents of the students and to promote the study (including discussion) of subjects of national and international importance.
- To encourage amongst students, the awareness of the responsibilities of an individual in a democratic society.
- To promote social service activities and to know the latest developments.

The following associations are presently functioning:

<p>ACES <i>Association of Computer Engineering Students</i></p>	<p>AMS <i>Association of MCA Students</i></p>	<p>CHESA <i>Chemical Engineering Student Association</i></p>	<p>CSI <i>Computer Society of India</i></p>
<p>ECO <i>Electronics & Communication Organization</i></p>	<p>EESA <i>Electrical Engineering Student Association</i></p>	<p>MESA <i>Mechanical Engineering Student Association</i></p>	<p>ORCESS <i>Organization of civil engineering students</i></p>
<p>ISA <i>(The International Society of Automation) STUDENTS' CHAPTER</i></p>	<p>IEEE <i>Institute of Electrical & Electronics Engineering</i></p>	<p>GSAC <i>Google Student Ambassador Club</i></p>	<p>IL² <i>Invincible Leaders' League</i></p>
<p>INFOCRATS</p>	<p>ISTE <i>Indian Society for Technical Education</i></p>	<p>SOCIETY OF AUTOMATIVE ENGINEERS <i>(SAE Nirma Collegiate Club)</i></p>	<p>ROBOTECH CLUB</p>
<p>ER <i>Enchanted Rhythm</i></p>			

CO-CURRICULAR ACTIVITIES

The institute hosts industrial visits, training, seminars, conferences for the overall development of students. National level competitions like ROBOCON, SAE-BAJA, etc. gives students opportunities to work beyond the classroom and engage in interdisciplinary areas. Such engagement enhances the students researching, reading, writing, critical thinking and presentation skills.

Sports

The campus has a cricket and football ground, volleyball court, lawn tennis court and basketball ground. The other facility consists of indoor games such as table tennis, chess, carom etc. can avail by students. The Annual Sports Day is a regular feature. A full-fledged gymnasium with modern equipment is also available for students.



Volleyball, Football, Basketball,
Cricket, Lawn Tennis,
Table Tennis, **Carom**,
Chess, Tug of War, **Athletics**



SPORTS COMPETITIONS

- Annual Sports Meet
- Inter Institute - University Level
- AbhimNU - State Level Inter-University
- Fresher Cup (for first year only)
- Nirma Cup
- Techno Cup (only for Cricket)



ATHLETICS EVENTS

100 m, 200 m, 400m, 800 m, 1500 m, 4 × 100 m Relay Race, Long Jump, High Jump, Triple jump, Discuss Throw, Shot Put, Javelin Throw



Cultural & Other Activities

VAUDEVILLE & NUZEAL are the two biggest and the most sought after annual cultural festivals of the Institute of Technology, Nirma University. Every year, these festivals mark the confluence of music, dance, art, culture, literature and loads of talent. The fests include events like solo-duet classical singing, solo-duet-group dance, debate, extempore, drama, mono acting, cartooning, Mr. and Ms. ITNU.



THE EVENTS OF THE CULTURAL FESTIVAL ARE:

- Drama
- Cartooning
- Skit
- Group Dance
- Mime
- Solo Dance
- Mono Acting/Mimicry
- Folk Dance
- Debate
- Singing – Solo
- Elocution
- Singing - Duet
- Collage
- Group Song
- Vocal
- Rangoli
- On the spot painting
- Instrumental



RAMZAT: Ras-Garba is organized after Navratri festival. All students, staff members, faculty members, HODs and HOIs of constituent institutes of Nirma University and officers of the University participated in this festival. The Winner in different categories are awarded trophies.



FRESHER'S ORIENTATION

The Institute organizes a unique orientation programme of five days for the new entrants to foster interaction between students and ensure a smooth transition from an environment of school life to professional studies. Various lectures on Time Management, coping with stress, Human relations, Positive attitude, Communication skills, etc. are delivered by eminent speakers to the students.

SOCIAL ACTIVITIES

- Blood Donation camp
- Literacy campaign in slum area
- Educational campaign in nearby schools



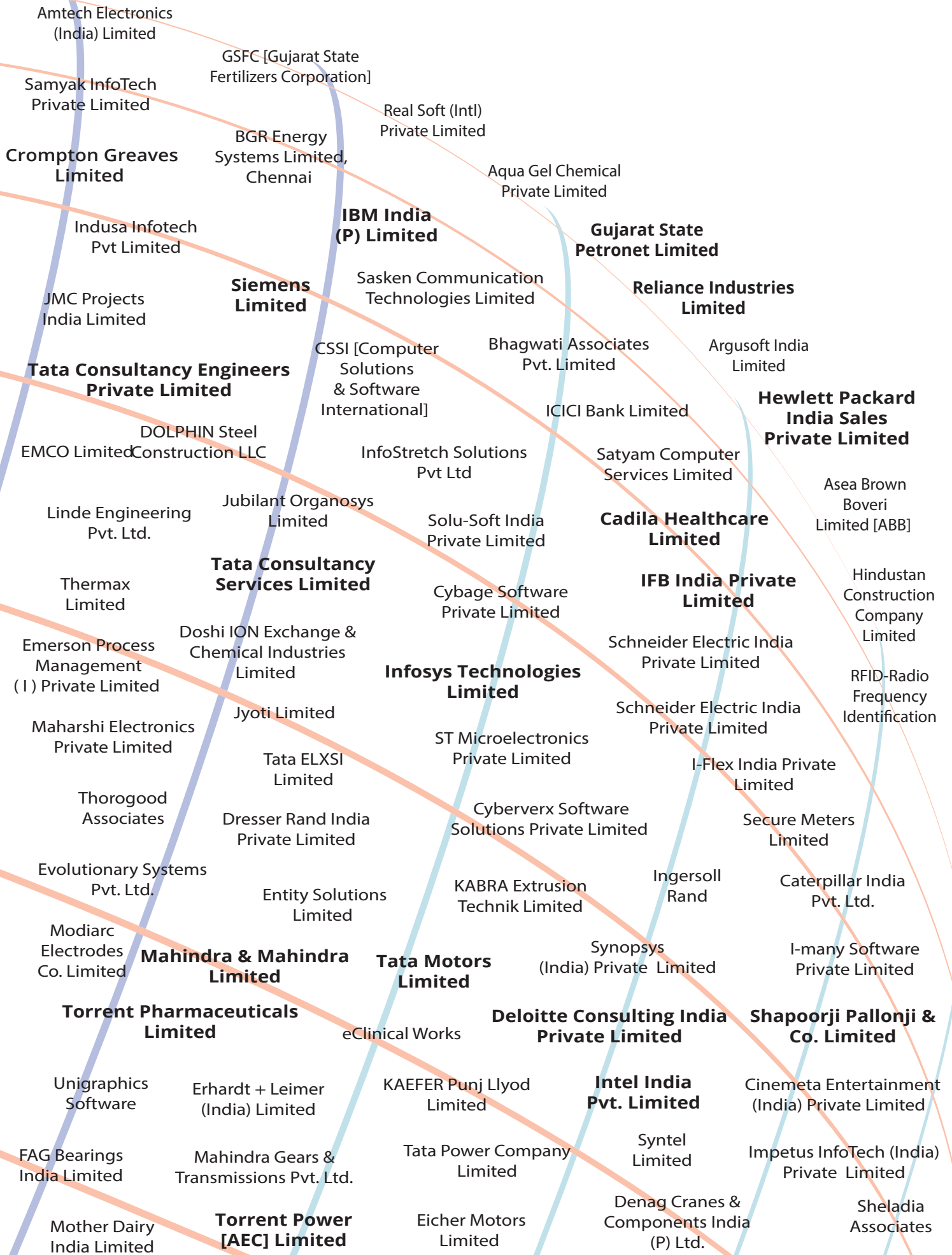
ADVENTURE ACTIVITIES

- Mountaineering activities
- Tracking in Himalaya
- Basic rock climbing course
- Desert trekking camp
- Tracking in the forest of Gujarat
- Know Your Border Programme

OTHER ACTIVITIES

- NCC (National Credit Core)
- National Days Celebration
- International Yoga Day
- Special days Celebration like Flag Day, Communal Harmony Day etc.
- NSS (National Social Service) for Girls and Boys
- NU Tech (Technical Fest)





Information About Alumni Association

Nirma Institute of Technology Alumni Association (NITAA)

NITAA has been established by Nirma Institute of Technology for the contacts with Alumni and subsequent interaction with students and institute faculty. Active participation of Alumni members is the strength of NITAA. It is note worth that the Alumni are spread all across globe for higher studies as well as for jobs.



10,000 +

Members on AlmaConnect

₹ 20 Lacs +

Worth Scholarship Given

(Till Date) 101 +

Gives Student Scholarships

Since Year
2002

Publishes SETU Magazine



Program provided me understanding of design and construction aspects in detail which given me base to interact with people of the world of construction. In my career of 17 years, worked with various types of projects such as Power generation, Buildings, infrastructures, Telecommunication & Transmission line. Apart from technical understanding, program also master us in interpersonal skills, communication skills & presentation skills, which helped in convincing the people & mitigating all such challenges.

Harishchandra jakhmala, Dy. General Manager M.Tech (Civil) 2002
Kalpataru Power Transmission Ltd, Gandhinagar

This institute offers seamless combination of academics and practical training which results in overall skill development. The faculties are dedicated experts in their respective fields and are committed towards shaping the future prospects of the students. The institute provides the apt mix of academics, industrial exposure, positive attitude and leadership with a focus on career enhancement.



Raja I Bagga, Lead Engineer -Structure M.Tech (Civil) 2006
Neilsoft Limited, Ahmedabad



Nirma University gives a great opportunity for students to broaden their knowledge beyond their field of studies within an multicultural environment. The friendly attitude of the professors and their willingness to always offer a helping hand has made me feel a part of the U family. My 2 years in M.Tech spent here were splendid and has helped me to grow better professionally and personally.

Sunil Mishra M.Tech (CSE) 2012

Sr. Engineer, Mastercard

If you are determined to hold your dreams, Nirma will make you reach there backed by an excellent infrastructure, professor's expertise in domain. Experience. Nirma is appreciated @ corporate level, "Nirma students have a zeal to execute the things which are inhabited in culture of Nirma". Nirma have the expert professors for upcoming trending technologies like Machine Learning, Artificial Intelligence, Security, etc. Nirma brings out the talent in you & makes you believe in yourself.



Sunil Mishra M.Tech (CSE) 2012

Sr. Software Engineer, INTEL Technology India Pvt. Ltd., Bangalore



Nirma University gave me plenty of freedom to choose subjects of my interest, do my own research, come up with different ideas and implemented those. I could do beyond the course content and built fantastic resume that people will come looking for. College professor are very supportive and possess domain of expertise making great future leaders.

Saumil Kapadia M.Tech (CSE) 2014

Harman International

Well-experienced faculties and research-driven culture equips with cutting edge knowledge and cultivates such habits and intelligence that motivates a student to excel in life. Coursework is revised every year to prepare students for the contemporary trends in industry based on experts' feedback from both industry and past alumni. Placements are also amazing as many top companies hires for internships and jobs.



Devharsh Trivedi M.Tech (CSE) 2016

Senior Software Engineer, Philips Innovation Campus Bangalore



Faculties allow students to have projects on multiple subjects combined (which is a really good thing). Practicals' schedule is also well placed and allows students to give ample time on their project at the same time learning new things. Regarding internships, really good chance for those having networking expertise as the world is moving towards more and more networking technologies.

Chirag Kharwar M.Tech (CSE) 2015

Qualcomm, Bangalore

The resources available and the curriculum aids the student to accentuate their learning experience. This association not only helped me in growing personally and technically, but also helped me in achieving the goals of my life – starting with working as Graphics Engineer in Intel Tech pvt ltd.



Palak Raina M.Tech (CSE) 2017

INTEL Technology India Pvt. Ltd., Bangalore



Nirma was the turning point in my life that paved way for huge success in my career. Be it technical explorations or presentation skills, they sharpened all those must-have-skills and gave a soldier-like disciplined training during my Masters to prepare for the next phase of life where all of it reaped huge benefit.

Richa Jha M.Tech (EC) 2013

INTEL Technology India Pvt. Ltd., Bangalore

"How the toughest thing can be understood in the easiest way?" – I learn this from Nirma. After DRDO, I worked with Keysight Technologies for two and a half years and then I joined Qualcomm. Thanks to the institute for bringing me to the point where I am today.



Anjali Lahoti M.Tech (EC) 2015

Senior hardware design engineer, Qualcomm, Bangalore



All-time support and motivation of the faculty members is the key being followed in Nirma. Constant interaction with world class companies to build correct curriculum gives a great opportunity for students to broaden their knowledge. Not to mention but Nirma was and will be one of the best engineering collage of all time because of all the offering it has for students.

Viren Gajjar M.Tech (EC) 2011

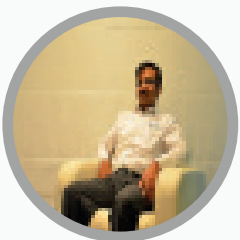
Technical manager, Synapse Techno Design Innovations Pvt. Ltd., Bangalore

It provided me with a conceptual framework for Embedded technology. The overall curriculum has an excellent balance between general concepts of Embedded systems and specializations in different areas. The most interesting part was the importance given to lab, practical assignments and seminars."



Fagun Pathak M.Tech (EC) 2014

R&D Firmware Engineer-II, Broadcom Inc., San Diego, California



One can't ask for a better place than Institute of Technology-Nirma University to step up and nurture students to be prepared to take on the world. Institute of Technology-Nirma University has exactly done this for me and today I envision to do it for my students – be change makers for a better tomorrow.

Dr. Rajendrasinh Jadeja M.Tech (EE) 2004

Dean, Faculty of Engineering, Marwadi University

The faculty groomed us with the latest Technological happenings day in and day out. Nirma provided us with well-equipped laboratory, library, internet facility, transportation which has been constantly of great support. The guest lectures and training programme's organised were of real boon to the students. All I can say is those were moments of change and life is on a fast track since.



Mihir Shah M.Tech (EE) 2011

Converter Control Engineer, Bombardier Transportation India Pvt. Ltd., Vadodara, India



Nirma University has highly equipped laboratories with latest industry standard equipment and instruments that gave me hands on experience of on the field professional experience of an Electrical Engineer. I also believe that the curriculum and project which was part of my course was accurately and precisely designed to keep the pace with state-of-art Electrical Engineering technologies, which led me to be here as a researcher in a project by Australasian Centre for Rail Innovation and Central Queensland University, Australia

Madhuri Mishra Pathak M.Tech (EE) 2014

Academic Researcher, Ph.D. Candidate, Central Queensland University, Australia.

Nirma University completely focuses on a student's overall development right from the start, and when one graduates from the course, has a very clear mind-set for setting up his carrier. Another important aspect is to brush-up the fundamentals when you start your post-grad studies, especially when you are starting your studies after a break.



Palash Mankad M.Tech (EE) 2014

Senior Executive Officer (O & M), Macquarie Group, Ahmedabad



Nirma Institute of technology provides all the essential nutrients aiding to individuals wholesome growth. Qualities like Professionalism, Spirituality, Consistency, Ethics, Leadership, Etiquette and Technicality are very well weaved within an individual with utmost perfection. Assisting this process of development is a beautiful infrastructure, brilliant mentors, dense library, transparent communicative portals, interlaced course structure and many more.

Thaker Nirav Nareshkumar M.Tech (ME) 2017

Xylem Water Solution

I have gained not only the technical knowledge but the best possible experiences with all the stakeholders involved here. For my research and master's degree work, I not only had best resources but best facilities and guides and mentors. I would like to emphasize on one thing, it's been an overall development for me right from building up the confidence and the perception to face real world challenges.



Nihar Thakkar M.Tech (ME) 2017

Junior Research Fellow, IIT Bombay

Recruiter Speaks

We are extremely happy in getting associated with Nirma University for recruiting the M.Tech (CASAD) students as Interns / Permanent employees here at DUCON Consultants Pvt Ltd. We see extremely high level of dedication and commitment from the Nirma University students and the same is maintained year on year. The level of education and discipline in the Students that have been recruited thus far from NIRMA University is commendable and we look forward to our continued association with NIRMA University in the years to come."

Mr. Utsav D. Shah, Director,
DUCON Consultant Private Limited, Ahmedabad

Nirma alumnus working in our environment have helped us gain new heights in a rather short period of time. Their dedication, clarity about structural behaviour and overall design approach have streamlined our design process to a great extent.

Mr. Devang Patel, Director,
SID Consultants, Ahmedabad

The major attributes seen in the P.G. students of Structural Engineering from Nirma University are good technical knowledge, proper understanding of fundamentals, curiosity towards learning new things & good communication skills. It is our one of the preferred institute for recruitment of Structural Engineers.

Mr. Bhavin Shah, CEO,
VMS Engineering & Design Services (P) Ltd., Ahmedabad

"At Arm India, we work on latest processor and systems built on Arm architecture and technologies. We have been hiring students from Nirma University into our engineering teams and also for internship. We find that the courses offered by Nirma are very relevant to needs for our organization and semiconductor industry in general. We appreciate Nirma University's effort to stay in touch with business, latest technologies and trends."

Mr. Vasant Vaghamshi, Director of Engineering,
ARM Embedded Technologies (I) Ltd. Bangalore

We are very happy to express our sincere thanks to NIT. We have been recruiting Nirma students since last 8+ years and it has been wonderful journey. The students are creating a wonderful performance in Project execution, Product release and taking challenges in Industrial environment. The students are helping to increase VLSI eco-system growth. Interestingly Nirma students are trained with Industry needs. They showing attitude for quick learning, dedication towards work and taking challenges in Industry. We are happy with the curriculum, students and teachers to build VLSI-Eco system.

Mr. Nilesh Ranpura, Delivery Manager ASIC,
eInfochips, Ahmedabad

"We are hiring M.Tech candidates from Institute of Technology, Nirma University since last year or so. Our experience so far has remained fruitful with Nirma University. Its indeed our pleasure to hire candidates from one of the most reputed Institution. Candidates who were hired for the faculty positions from Nirma University have been found performing well. We would be more than happy to visit Nirma Campus again for our future recruitment".

HR Department
Amiraj College of Engineering and Technology

"Its our proud privilege to be a recruitment partner with one of the most prestigious university of India "NIRMA University". NIRMA students have zeal and passion to live up the expectation and have proved them-self to be asset for us. Looking for long and everlasting collocation in years to come".

Mr. Mayank Singh Campus Lead - Gujarat,
Tata Consultancy Services

Industry Institute Interaction (III) Cell

The Institute of Technology emphasizes the importance of linkages at national and international levels in order to cater to the core areas of research and development in the form of transfer of technology, curriculum development, continuing education programmes, testing and consultancy, development of industrial manpower, expert lectures by industry experts, students' projects, Industrial visits, internships, training and placement, student and faculty exchange etc.

With this view in mind, the III Cell was envisaged to be a dedicated cell for Industry Institution Interaction facilitating all the training, career counseling and placement related activities.



INFRASTRUCTURE AND AMENITIES

The III cell is fully equipped with all modern amenities. The rooms are air-conditioned and equipped with multimedia and audio-visual equipment to facilitate effective interaction. Additionally, the following facilities are also available for Recruiters on campus:

- Dedicated access to Computer Lab for conducting online tests
- Air-conditioned halls for presentations
- Conference Rooms
- Interview Rooms
- Skype / Video Conferencing
- Internet / Wi-Fi access
- Guest House for Corporate Visitors
- Food Court
- ATM Facilities
- Health Club and Gym

TRAINING AND CAREER COUNSELING

III Cell organizes periodic training / workshops to orient students about industry expectations. Additionally, students undergo soft skills training to improve learning in areas like Communication, Resume writing, Presentation Skills, Group discussions and Personal Interviews. Counselor at Institute level also assists students to address career aspirations.



CAMPUS PLACEMENTS

On Campus Placement Process is organized by inviting leading organizations from diverse fields. To be a part of the socioeconomic development of the nation and to strengthen the vision of our institution, professional and growth-oriented organizations, we lay emphasis on Institute-Industry interaction during the placement process, which ensures a mutually beneficial outcome. This process enables students to explore new avenues while laying the foundations of their careers. On one hand it helps in not only placing students in their aspirational sectors but also helps organisations avail the best talent available in the campus.

INDUSTRIAL TRAINING FOR THE STUDENTS

Training is an integral part of learning. It makes them industry ready to face for real world problems. Students are placed at various industries for a period 6 to 8 weeks and under supervision and guidance of respective industry personnel.

Students also go to Industry for full time projects in 8th Semester. The faculty guide is assigned during the same for regular monitoring and evaluation.



Ragging is strictly prohibited inside and outside the University campus. The Anti-Ragging Committee constituted for this purpose by the Institute is empowered to take an immediate action against any untoward incident and also to counsel the fresher. Students seeking admission shall have to furnish undertaking in this regard. To enhance familiarity and to acclimatize the fresher to the academic and social environment of the campus, the institute organizes an orientation session in the first week of the new academic calendar.

As per UGC guideline, student will be required to give an undertaking in the proforma and signed by the candidate and his/her parent/guardian to the effect that he/she is aware of the University's approach towards ragging and the punishment to which he/she shall be liable, if found guilty of ragging.

PREVENTION OF SEXUAL HARASSMENT OF WOMEN AT WORK PLACE

In pursuance of the directions of the Hon'ble Supreme Court of India, the University has constituted a Complaints Committee for the solution, settlement or prosecution for the acts of sexual harassment to women. The sexual harassment includes:

- Physical contact and advances
- Showing pornography
- A demand or request for sexual favours
- Any other unwelcome physical, verbal or non-verbal conduct of sexual nature.
- Sexually coloured remarks

Any such act will be viewed very seriously and stern action will be taken against the person concerned.



EQUAL OPPORTUNITY CELL

Equal Opportunity Cell is set up with an aim to ensure equality and equal opportunities to the disadvantaged group through proper implementation of policies, skills and programmes. The Cell works under the guidance of University level Advisory Committee and follow the framework and guidelines prepared by the Advisory Committee.



WOMEN'S DEVELOPMENT CELL

In pursuance of the directions issued by the UGC and MHRD, Govt. of India the Nirma University has set up a Women Development Cell (WDC) and prescribed norms to sensitize the community with regard to gender related issues and create a gender friendly environment at the campus.

Tuition and Other Fees

M.Tech. (Regular) Institute of Technology For The Year 2019-20

No.	Particulars	Amount (in Rupees)
1	*Fee (Per Annum)	₹ 2,42,000/-
2	Other Fees	
a	Initial Post Graduation Registration Fee (One Time)	₹1,000/-
b	Examination Fee, Semester Grade Report, etc: (Per Annum)	₹ 11,000/-
	Total Other Fees (a+b+c)	₹ 12,000/-
3	Security Deposit (Refundable)	₹ 10,000/-
	Total (1+2+3)	₹ 2,64,000/-
4.	Eligibility Certificate (if required)	₹ 1,000/-

* Fees are subjected to revision due to implementation of 7th pay commission

While paying Fees Cheques or DD should be as per CTS-2010

Institute of Technology For The Year 2019-20 PIO/FN students from all countries except SAARC

No.	Particulars	Amount (in Rupees)
1	*Fee (Per Annum)	\$ 5,000/-
2	Other Fees	
a	Initial Post Graduation Registration Fee (One Time)	₹ 1,000/-
b	Examination Fee, Semester Grade Report, etc: (Per Annum)	₹ 11,000/-
	Total Other Fees (a+b)	₹ 12,000/-
3	Security Deposit (Refundable)	₹ 10,000/-
	Total (1+2+3)	\$ 5,000 + ₹ 22,000/-
4.	Eligibility Certificate (if required)	₹ 1,000/-
5.	International Student Processing Charges (One Time Non-Refundable)	₹ 30,000/-

While paying Fees Cheques or DD should be as per CTS-2010

Institute of Technology For The Year 2019-20

PIO/FN students from SAARC Countries

No.	Particulars	Amount (in Rupees)
1	*Fee (Per Annum)	₹ 2,42,000/-
2	Other Fees	
a	Initial Post Graduation Registration Fee (One Time)	₹ 1,000/-
b	Examination Fee, Semester Grade Report, etc: (Per Annum)	₹ 11,000/-
	Total Other Fees (a+b)	₹ 12,000/-
3	Security Deposit (Refundable)	₹ 10,000/-
	Total (1+2+3)	₹ 2,42,000/- + ₹ 22,000/-
4.	Eligibility Certificate (if required)	₹ 1,000/-
5.	International Student Processing Charges (One Time Non-Refundable)	₹ 30,000/-

While paying Fees Cheques or DD should be as per CTS-2010

Institute of Technology For The Year 2019-20

The Children of Indian Working in Gulf Countries and South East Asia

No.	Particulars	Amount (in Rupees)
1	*Fee (Per Annum)	\$ 5,500/-
2	Other Fees	
a	Initial Post Graduation Registration Fee (One Time)	₹ 1,000/-
b	b) Examination Fee, Semester Grade Report, etc: (Per Annum)	₹ 11,000/-
	Total Other Fees (a+b)	₹ 12,000/-
3	Security Deposit (Refundable)	₹ 10,000/-
	Total (1+2+3)	\$ 5,500/- + ₹ 22,000/-
4.	Eligibility Certificate (if required)	₹ 1,000/-
5.	International Student Processing Charges (One Time Non-Refundable)	₹ 30,000/-

While paying Fees Cheques or DD should be as per CTS-2010

B Hostel Fees (Cheque in favour of Nirma Education and Research Foundation)			
	Particulars		Amount (in Rupees)
	Hostel Fees Non AC Room on twin sharing (Per annum)		₹65,000/-
	Hostel Fees AC Room with attached washroom (Per annum)		₹95,000/-
	Hostel Fees with AC Room (without attached washroom (Per annum)		₹80,000/-
	Non-AC Dormitory (6 Seater)		₹55,000/-
	Hostel Electricity Advance Non A/C (Per annum)		₹5,000/-
	Hostel Electricity Advance with A/C (Per annum)		₹12,000/-
	Laundry Service Advance (Per annum)		₹3,750/-
	Mess Advance (For 10 months)		₹38,500/-
			Subject to revision

Institute of Technology For The Year 2019-20
M.TECH BY RESEARCH

No.	Particulars	Amount (in Rupees)
1	Annual Fee (Per Annum)	₹ 1,00,000/-
2	Other Fees	
a	Initial Post Graduation Registration Fee (One Time)	₹1,000/-
b	Examination Fee, Semester Grade Report, etc: (Per Annum)	₹ 11,000/-
c	Course Work Fee (One Time)	₹ 15,000/-
	Total Other Fees (a+b+c)	₹ 27,000/-
3	Security Deposit (Refundable)	₹ 10,000/-
	Total (1+2+3)	₹ 1,37,000/-
4.	Eligibility Certificate (if required)	₹ 1,000/-
	Admission Process Fee	₹ 1,250/- + Applicable Tax

PAYMENT MODE



Application processing charges: Online Payment through Credit Card / Debit Card / Net Banking.

All fees (except hostel fees): By Cheque (payable at par) or demand draft drawn in favour of "Institute of Technology, Nirma University" payable at Ahmedabad.

IMPORTANT DATES

Events	PG Admission 2019
Online Application Process Begins	14 th May 2019 (Tuesday)
Online Application Process Ends	24 th June 2019 (Monday)
Written test for Non-GATE candidates and Interview of GATE / Non-GATE candidates of all the departments	6 th July 2019 (Saturday)
Interview/Presentation for M. Tech. (By Research) candidates	20 th July 2019 (Saturday)
Last date for payment of fees	15 th July 2019 (Monday)



CONTACT DETAILS:-

Member Secretary (PG-ENGG. Admissions)

Postgraduate and Research Center,
Institute of Technology, Nirma University,
Sarkhej-Gandhinagar Highway,
Ahmedabad 382481, Gujarat – India.

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Email ID

Email: pgadmissions.it@nirmauni.ac.in

Website URL

www.nirmauni.ac.in/ITNU/MTechAdmission

Office Timings

Office Timings 10:00 a.m. to 4.00 p.m. (Monday to Friday & Odd - Saturdays)



Email ID : pgadmissions.it@nirmauni.ac.in