V. UNIVERSITY INSTITUTE OF ENGINEERING & TECHNOLOGY

ABOUT THE INSTITUTE

University Institute of Engineering & Technology (UIET) was established by Panjab University as a Department in 2002. With the vision to be the front runner in Engineering Education and Research, the mission of University Institute of Engineering and Technology (UIET) is to produce professionally competent students for career in Engineering and Technology by providing value-based quality education. It offers four years Bachelor of Engineering (B.E), two years Master of Engineering (M.E), and full time Ph.D degrees in Biotechnology Engineering, Computer Science and Engineering, Information Technology, Electrical and Electronics, Electronics and Communication and Mechanical Engineering, Besides this, it also offers Master of Engineering programs in Computer Science and Engineering (Cyber security), Electrical Engineering (Power system), Microelectronics and Material Science & Technology. Five of its UG & 3 PG Program are NBA accredited. UIET has MOUs with industry leaders and with academia like Infosys, Spice Digital Limited, PGIMER, CSIO, C-DAC, the University of Western Australia, IIT Kanpur, IIT Roorkee, Nottingham Trent University, UK etc. The Pedagogy at UIET places high emphasis on the development and application of Engineering principles across disciplines and training students for addressing the challenges faced by industry, research organizations and the community at large. Hands on training in Design Laboratories, and networking with industry makes our students ready for research, teaching, product development and problem solving. UIET nurtures exchange relationships with institutes abroad, wherein our students are facilitated to participate in summer training programs.

The faculty attracts various sponsored research projects at the national and international level. A number of sponsored research projects from agencies like DIT, AICTE, DST, Department of Biotechnology Welcome Trust, Nifty etc. have led to the establishment of a number of specialized research laboratories which are freely available to students for their training & research. Some of the major projects that have developed UIET in recent years include, grants under TEQIP-III, a world Bank project and a Design Innovation Centre (DIC) from the Ministry of Education (MOE), Government of India, DBT-BUILDER grant, FIST, SAP grants, MeiTY sponsored multi-institutional grants for medical devices, NTU-PU faculty exchange & Research collaboration grants. UIET is on among the 100 institute for installation of 5G labs by DoT, govt. of India.

FACULTY

Designation	Name	Field of Research Specialization
Professors	Sukhwinder Singh **(DIRECTOR)**	Bio-medical Image Processing, Wireless Sensor networks
	Savita Gupta	Bio-medical Image Processing, Cognitive Enhancement & Sensor Networks & Sensor Networks
	J. K. Goswamy	Nuclear Structure Through Gamma Ray Spectroscopy, Materials Characterization for Sensor applications
	Sanjeev Puri	Polycystic Kidney Disease and Stem Cell Biology & Pathophysiology of kidney diseases
	Gurdeep Singh	Data Warehousing and Data Mining
	Harmesh Kumar Kansal	Advanced Manufacturing, Technology, Quality Control, Design and Welding Technology, Management
	Sunil Agrawal	Neural Networks & Applications, Signal Processing and Wireless Communication
	Vinay Kanwar	Numerical Analysis, Fluid Dynamics, Mechatronics and Automatic Control
	Manu Sharma	Active Vibration Control Product Design, Mechatronics and automation control
	Harish Kumar	Information Retrieval, Cyber Security, Next Generation Telecom Networks.
	Sakshi Kaushal	Cloud Computing, Security, Telecommunication Networks
	Sarbjeet Singh	Cloud Computing, Machine Learning, IOT, Social Networks Analysis
	Krishan Kumar	Cyber Security
	Amrinder Pal Singh	Rapid manufacturing, Composites, Automations
	Monika Randhawa	Theoretical High Energy Physics
	Naveen Aggarwal	Data Mining, Image Processing
	Ajay Mittal	Image processing, Computer Vision and Machine Learning
	Saurabh Bhatia	Numerical Analysis
	Arvind Rajput	Semiconductor and VLSI
	Roopali Garg	Electronics & Communication, Wireless Communication, Optical Communication
	Inderdeep Kaur Aulakh	Wireless Communication Networks, Cognitive Radio Networks
	Yajvender Pal Verma	Distributed Generation Micro and Optimization, Renewable Energy Integration and Electrical Market Issues
	Kalpana Dahiya	Operation Research
	Jaspreet Kaur	Microbial and Environmental Biotechnology
	Manoj Kumar Sharma	Active Noise Control, Control Systems, Renewable Energy Sources and Neural Networks &Fuzzy logic

	Naresh Kumar	Wireless and Mobile Communication
	Shuchi Gupta	Theoretical & Computational Condensed Matter Physics
	Damanjeet Kaur	Power Systems Optimization, Distribution Systems Planning Optimization Using AI Techniques
	Mukesh Kumar	Social Media Analysis, Natural Language Processing Machine Learning
	Veenu Mangat	Data Mining & Warehousing, Machine Learning
	Shankar Sehgal	Finite Element Model Updating, Microwave Joining, Design and Manufacturing
	Mandeep Kaur	Image Processing, Digital Forensics, Machine learning
	Amit Chauhan	Triblogy, Journal bearing, Metal Composite and wind energy charged for
	Vishal Gupta	Natural language Processing, information Retrieval
	Amandeep Verma nee Puri	Cloud Computing, Machine Learning, IoT
	Shailendra Kumar Arya	Enzyme Engineering, Waste Water Engineering
	Anupreet Kaur	Chemical Engineering. Water Remediation, Environmental Biotechnology
	Sumit Budhiraja	Signal Processing and Image Processing
	Deepak Kumar	Microgrids, Power Systems Issues
	Akashdeep	Machine Learning, Deep Learning, Digital image Process
	Rajesh Kumar	Biomedical devices, Nano Fluids, Automation, Nanomaterials CAD/CAM, Nanotechnology, Biomedical
	Mamta Juneja	Digital Image Processing, Data Mining, Machine Learning, Deep learning, Biomedical Imaging
	Preeti	Optical Communication (Wired and Wireless) and Optical Biosensor; Wireless Communication, Bio-signal Processing
	Jaget Singh	Antenna and Microwave Engineering
	Prashant Jindal	Nano Composites, Materials Characterization, 3D Printing, Biomedical Devices
	Charu Madhu	Nanophotonics, Optical Communication
	Nidhi	Bio-Signal Processing
	Makhan Singh	Software Engineering, Cloud Computing
	Nisha Tayal	Microcontroller, Embedded Systems and Automation Smart Grid
Associate Professors	Sanjay Vohra	Mechanics of solids
	Hema Setia	Polymer Science, Environmental Engineering
	Puneet Kaur	Power electronics
	Parveen Goyal	Manufacturing Process and Technology, Surface Alloying
	Neeraj Sharma	Optical Fiber Communication
	Monika	Software Engg.
	Sukesha	Embedded System, Automatic control
	Gaurav Sapra	Nano Technology, Wireless Communication, Digital Signal Processing, Microcontroller and Embedded system design
	Raj Kumari	Parallel & Distributed computing, Cloud computing
	Jaswinder Singh Mehta	Design Engineering, Industrial Engineering, Nano-fluidics
	Parul Gaur	Power Electronics, Optimization using PSO techniques and other Algorithm, Communication Engg.
	Preetika Sharma	Analog and Digital electronics, semiconductor Technologies, Nano Electronics
	Jagjit Singh	Matrix Analysis
	Nirmal Kaur	Parallel and Distributed Computing, Cloud Computing Image Processing
	Anil Kumar	Organic Chemistry
	Renu Thapar	B-Lactam Antibiotics
	Prashanta Kumar Nanda	Nuclear Medicine & Synthetic in Organic Materials
Assistant Professors	Vishal Sharma	VLSI and Microelectronics
	Harbhinder Singh	Theory of Machines and Robotics
	Amandeep Singh Wadhwa	Rot Dynamics Machines and Engineering Mechanics
	Sarpreet Kaur	Smart Grid, Power Systems Analysis, Designing of electrical Machines Using Finite Element Analysis
	Preeti Gupta	Digital System Design, Control System and Biometrics
	Vivek Pahwa	Electrical Machines and Drives, Power Systems Power Electronics
	Madhu Khatri	Nanotechnology & Environmental Biology
	Mary Chatterjee	Cancer Biology
	Sunil Bansal	Experimental High Energy Physics
	Sabhyata Uppal Soni	Digital Communication, Optical & Wireless Communication

	Suresh Kumar	Experimental Condensed Matter Physics/Material Science
	Neelam Goel	Bioinformatics, Soft Computing, Machine Learning
	Nishima	Nano Science and Nano Technology
	Preeti Aggarwal	Digital Image Processing, Medical Imaging, Data Mining
	Aditi Gupta	Power System Deregulation Congestion Management, Control System
	Amit Chaudhary	Semiconductor and VLSI
	Sharmelee Thangjam	Signal Processing
	Surjeet Singh	Solid state Hydrogen Storage and fuel Cell
	Rohit Kumar	Software Engineering
	Gagandeep Singh	Machine Design, Refrigeration and Air Conditioning
	Deepti Gupta	Wireless Sensor Networks
	Ravreet Kaur	Parallel and Distributed Computing, Computer Networks, Algorithm Analysis and Design
	Anjali Gupta	Sustainable Manufacturing with Minimum Quantity Lubrication, Nanofluidics
	Tukesh Soni	Mechanical Vibration, Electric Vehicles, Flywheel Energy Storage System, Internet of things, Artificial Intelligence
	Minto Rattan	Solid Mechanics
Temporary Faculty	Jyoti Sood	Theoretical Condensed Matter Physics
	Hitesh Kapoor	HR & Marketing
	Anu Jhamb	Human Resource Management
	Sarvjit Singh	Communication Systems
	Garima Joshi	Gesture Recognition and Machine Learning
	Daljeet Kaur	Material Science & Nanotechnology
	Rajni Sobti	Speech Recognition
	Sukhvir Singh	Wireless Networks, Machine Learning
	Renuka Rai	Theoretical Stochastic Processes
	Pardeep Kaur	Optical Fiber Communication & Embedded Systems
	Ranjana Bhatia	Environmental Microbiology, Agricultural Microbiology
	Prabhjot Kaur	Operation Research; Transportation and Assignment Problems
	Parminder Kaur	Biochemistry & Molecular Biology
	Minakshi Garg	Bioinformatics and Food Biotechnology
	Jyoti Sharma	Instability of Nano Fluids
	Rajneesh Singla	Image Processing, Network Security
	Sanjiv Kumar	Optical Communication
	Harvinder Kaur	Optical Communication
	Vijay Kumar	VLSI Design, Nanophotonics , Optoelectronics
	Gurpreet Kaur	Digital Signal Processing
	Kuldeep Singh Bedi	Power Electronics Photovoltaic System, Power System
	Amit Thakur	Carbon Nanotubes, Fibers, Material Characterization, Bio Composite

COURSES OFFERED (SEMESTER SYSTEM):

Course	Seats	Duration	Eligibility*	Admission Criteria
B.E. in Computer Science & Engineering	108+5 EWS +11NRI +27 FN	4 years	As per Joint Admission Committee (JAC 2026) Information Brochure 2026.	Based on JEE (Mains) Merit-2026
B.E. in Information Technology	108+5 EWS +11NRI+27 FN	4 years		
B.E. in Electronics & Communication	120+6 EWS +12 NRI+30 FN	4 years		
B.E. in Bio-Technology	81+4 EWS +8 NRI+ 20 FN	4 years		
B.E. in Electrical and Electronics	81+4 EWS +8 NRI+ 20 FN	4 years		
B.E. in Mechanical Engineering	81+4 EWS +8 NRI+ 20 FN	4 years		
M.E. in Computer Science & Engineering	20+2 NRI+5 FN	2 years	**Eligibility Conditions:** B.E./B.Tech. or equivalent degree in Computer Science & Engineering / Information Technology / Computer Engineering / Computer Science & Business Systems / Data Science / Artificial Intelligence and Machine Learning / Cyber Security / Software Engineering with at least 60% marks in aggregate from P.U. or any other	**Order of preference** 1st GATE Score 2nd marks in qualifying examination as per the eligibility conditions.

			recognized University as equivalent thereto.	
M.E. in Electronics & Communication	20+2 NRI+5 FN	2 years	**Eligibility Conditions:** B.E. or B.Tech. or equivalent degree in Computer Science and Engineering / Electrical / Electrical and Electronics / Electronics / Microelectronics / Electronics & Electrical Communication / Electronic and Telecommunication / Electronics and Communication / Information Technology / Instrumentation Engineering / M.Sc. Applied Physics / M.Sc. Physics with specialization in Electronics or M.Sc. in Electronics (as approved by AICTE) with at least 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	**Order of preference** 1st GATE Score 2nd marks in qualifying examination as per the eligibility conditions.
M.E. in Mechanical Engg.	20+2 NRI+5 FN	2 years	**Eligibility Conditions:** B.E./ B.Tech. in Mechanical / Automobile / Mechatronics / Industrial / Automation / CAD-CAM / welding / Robotics / Aeronautical / Metallurgy / Bio-Medical / Polymer / Instrumentation / Marine / Aerospace / Agriculture / Chemical / Metallurgy / Manufacturing / Material / Production Engineering / Technology with at least 60% marks in aggregate from Panjab University or any other University recognized by Panjab University thereto.	**Order of preference** 1st GATE Score 2nd marks in qualifying examination as per the eligibility conditions.
M.Tech. Microelectronics	12+3 SC/ ST +2 NRI + 4FN	2 years	**Eligibility Conditions:** B.E. / B.Tech. or equivalent degree in Computer Science and Engineering / Electrical / Electrical & Electronics / Electronics / Microelectronics / Electronics & Electrical Communications / Electronics & Telecommunication / Electronics & Communication / Information Technology / Instrumentation Engineering/ M.Sc. Applied Physics / M.Sc. Physics with specialization in Electronics or M.Sc. in Electronics (as approved by AICTE) with minimum 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	**Order of preference** 1st GATE Score 2nd marks in qualifying examination as per the eligibility conditions.
M.E. in Information Technology	20+2 NRI+5 FN	2 years	**Eligibility Conditions:** B.E. or B.Tech. or equivalent degree in Information Technology / Computer Science & Engineering / Computer Engineering / Electronics & Communication Engineering/ Electrical & Electronics Engineering / Computer Science & Business System /Data Science / Artificial Intelligence and Machine Learning / Cyber Security / Software engineering / Electronics and Computer Engineering / Robotics and Automation with at least 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent there to.	**Order of preference** 1st GATE Score 2nd marks in qualifying examination as per the eligibility conditions.

M.E. in Electrical Engg. (Power System)	20+2 NRI+5 FN	2 years	**Eligibility Conditions:** Any candidate who has completed B.E. / B.Tech. in Electrical / Electrical & Electronics Engineering with at least 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	**Order of preference** 1st GATE Score 2nd marks in qualifying examination as per the eligibility conditions.
M.Tech. Material Science & Technology	20+2 NRI+5 FN	2 years	**Eligibility Conditions:** BE / B.Tech degree in any engineering discipline (except Computer Science / IT) with atleast 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto OR M.Sc. degree in Physics / Chemistry / Applied Physics / Applied Chemistry / Biotechnology / Life Sciences / Material Science / Nanoscience / Nanotechnology with atleast 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	**Order of preference** 1st GATE Score 2nd marks in qualifying examination as per the eligibility conditions.
M.E. in Biotechnology	20+2 NRI+5 FN	2 years	**Eligibility Conditions:** B.E. / B.Tech. Biotechnology Engineering / Biochemical Engineering with at least 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	**Order of preference** 1st GATE Score 2nd marks in qualifying examination as per the eligibility conditions.
ME Computer Science and Engineering (Cyber Security)	15+2 NRI+4 FN	2 years	**Eligibility Conditions:** B.E. / B.Tech. or equivalent degree in Computer Science & Engineering / Information Technology / Computer Engineering / Computer Science & Business Systems / Data Science / Artificial Intelligence and Machine Learning / Cyber Security / Software Engineering with atleast 60% marks in aggregate from P.U. or any other recognised University by P.U. as equivalent thereto.	**Order of preference** 1st GATE Score 2nd marks in qualifying examination as per the eligibility conditions.
* 5% Concession is admissible in eligibility marks to SC/ST/BC/PWD Candidates. ** one seat in ME Biotechnology course of UIET, every year consecutively for four years, starting from session (2022-2023), be enhanced, as stipulated in DBT BUILDER grant received by UIET				

Ph.D. : Detailed scheme and syllabi of the courses are available at Panjab University official website https://phdadmissions.puchd.ac.in

SCHEME AND SYLLABI: Detailed scheme and syllabi of the courses are available at Panjab University official website: https://puchd.ac.in/syllabus.php?qstrfacid=5

THRUST AREAS: : Faculty is involved in research in thrust areas like Design and Manufacturing, Traffic Sensing and Information Technologies, Medical Devices and Restorative Technologies, Energy Harvesting and Management Technologies, Image Processing, computer Networking, Cloud Computing, Nano-Materials, Stem Cells, Wireless Communications, Power Systems, Composite Materials, New Physics Searches with Collider Experiments at LHC, CERN and KEK, Japan etc.

PLACEMENTS: The Training and Placement Cell (TPC) facilitates training and placement opportunities for students. Dedicated members of the team make continuous efforts to approach companies and to invite them on campus to recruit students and to provide them the placement and internship opportunities. Over the years, UIET has built a strong relationship with many companies that visit the institute on regular basis for student recruitments.

TPC also organizes special lectures and soft skills programs, wherein industry experts are invited to familiarize students with the latest developments in the industry and to guide them on interview preparation and group discussions skills. Soft skills play a vital role in the overall selection process.

On an average, around 55 companies visit UIET every year resulting in approximately 350 offers made to final year students who participate in the placement process.

University TECHNO Crats Society (UTECHNOS) at UIET was established with the motive to give a platform for students to accelerate their all round development. There are seven committees under UTECHNOS: Technical Committee, Academic &

Literary Committee, Sports Committee, Cultural committee, Brand Promotion Committee, Fund Management Committee and Discipline Committee. All committees are managed synergically by a group of students and faculty members. The student conveners, co-conveners and members for each committee are selected for tenure of one year by inviting applications from the interested students followed by interactions demonstrating individual's vision and zeal for the task. Number of clubs is registered under each committee. Each club has its own set of activities which are conducted throughout the year. Annual Tech Fest-cum-Cultural event GOONJ is organized under UTECHNOS for promotion of socio-cultural activities in addition to the technological upliftment of the students. Annual inter-college level sports-fest UMANG is organized under UTECHNOS to boost the enthusiasm among the students and to provide them with an opportunity to showcase their talent in the field of sports. In addition to this inter-branch and Intra-UIET sports events are organized under the flagship of Sports Committee. University Institute of Engineering and Technology Model United Nations (UIET-MUN) is organized annually under the Brand Promotion Committee to give an exposure about the current national and international issues. Besides this, UTECHNOS also caters to UIET-Campus-Life improvement initiatives.

Alumni Affairs Cell, UIET, Panjab University, Chandigarh: Since its inauguration the Alumni Affairs Office at UIET has successfully engaged with approx 9,500 alumni globally. Alumni are key to the growth of their institute. Keeping this in mind, the Alumni Affairs Cell aims at fortifying the bond between the alumni and their institution. Its mission is to bridge the gap between students and alumni, thereby facilitating an exchange of resources, opportunities, and mentorship. The Alumni Affairs Cell has successfully gathered and maintained a database of UIET alumni. This cell encourages alumni engagement through events and interactions with the students.

All these events and activities are carried forward by a devoted group of students called STAR (Student Team for Alumni Relations), which is supervised and supported by faculty members of UlET. The STAR regularly host a lot of events including Alumni Talks. These were interactive sessions also known as A-Talk sessions, which offer the students a chance to get answers to their most pressing questions about a specific career field.

UIET, PU also hosts an exhilarating Alumni Meet every year, bringing together graduates from various batches to celebrate their shared memories, forge new connections, and celebrate the accomplishments of the Alma Mater. The event is a testament to the enduring spirit of the University's community and of the impactful journeys undertaken by its alumni. This wide network will consist of Chapter India, USA, Europe, Oceania, Asia.

Sumit Grover, Senior Vice President of Tech Mahindra has been appointed as the President of UIET Global Alumni Association.

NTU-PU Science and Technology Partnership Centre (STPC)

Nottingham Trent University (NTU), United Kingdom had signed an agreement with Panjab University in February 2020 to develop areas of synergy for advanced research and training in engineering and science. Thereafter, NTU-PU Science and Technology Partnership Centre was established to facilitate longer-term research collaborations, broaden engagement through partnership, and to contribute to the development of key areas of research activity.

Further, to promote development of collaborative research projects with the Panjab University in Engineering and Sciences; Collaborative Research Grants were announced by NTU with the total funding up to £100,000 per annum for 3 years. The purpose of the funding was that academia at NTU and PU could work together on research projects. It supported bursaries for student assistants, software licencing, cloud computing credits, job outsourcing, and purchase of small components and consumables and other direct costs, for use in either the UK or India. The focussed areas under this collaboration included Medical Implants, Wearable Biochemical Sensors and Sensor Array for Lower Limb Prosthesis, Robotics, BTMS (Battery solutions), AI based automated solutions for industrial applications, Computational tools for disease detection, CAE/digital modeling/digital twins. A total of 9 projects with 9 faculty members as Principal Investigators (PI) from PU and 9 PIs from NTU involving 25 students from UIET were appointed as visiting researchers.

NTU-PU STPC has promoted six months internship of UIET students at NTU including bursary, Accommodation and Travel grants. Moreover it is also looking forward for Joint PhD and Master Degrees with exchange of students at PU and NTU, Collaborative Course curriculum development programs, Collaborative FDP/Workshops/Conferences, Purchase of common software as central repository for all projects.

Center would also explore prestigious collaborative grants under newer themes related to global challenges such as Smart Medical Devices and Health care, Identification of Biomarkers, Diagnostic Kits, Viral detections, Composite materials, Novel manufacturing, Water Desalination, Microfluidics, Gas Sensing Mechanism.

Team for PU attended symposium at NTU, UK in 2022 to discuss on the outcomes of all these projects and further International opportunities that could be leveraged.

NTU has now offered a fully sponsored Dual PhD program between PU and NTU wherein the research scholar will be fully funded for a period of 1 year residential PhD period in NTU, UK as a part of his / her dual PhD period. Scholar will have joint supervisors from both PU and NTU. This program has been an outcome of this successful STPC.

INNOVATION AND STARTUP ACTIVITIES

Design Innovation Centre (DIC)

The Ministry of Education (MoE) formerly known as MHRD, as a part of its 12th Five-year plan (2012-17) undertook a national initiative to set up a network of Design Innovation Centres (DICs) across the country. One Open Design School and a National Design Innovation Network have linked these DICs to evolve a nationwide ecosystem of resource and knowledge sharing to impart education and training to foster the innovative culture of designing products, processes and technologies of need to society. The MoE approved the establishment of a DIC at Panjab University, Chandigarh to focus on innovations around engineering products, add value to the available engineering designs and promote early-stage start-up companies. It has been working on Hub and Spoke model where UIET Panjab University is the Hub and CSIO, PEC and HSJIDS PU have been

its spokes. Several ideas are being perused for developing a new pedagogy in teaching and training in design, new fabrications and innovations. A number of design technologies for smart cities, biomedical devices, advanced materials, navigational and tourism aids, green environment, energy & traffic management, communication etc. are being taken up at the DIC at PU. Since its inception, DIC has trained more than 6000 students and conducted more than 100 courses and workshops. DIC trained students have been able to secure placements with handsome offers by global leaders like, Amazon, Microsoft, Google, Deloitee, Goldman Sachs, KPMG, Infosys etc. Some of the DIC interns have come out as winners at national Hackathons organized by AICTE, MHRD, Deloitte etc. More than 110 prototypes and Proofs of Concepts developed at the DIC hold high promise for commercialization with 16 patents filed already. Ten different types of clinical trials with the devices and technologies developed at the DIC are in progress at some of the most prestigious medical institutes, including AIIMS, PGIMER and GMCH. The DIC has led to catalyzing and supporting 14 Start Up companies, raising the bar of innovations and, the quality of research publications with more than 120 SCI journal publications.

Institution's Innovation Council

Institution's Innovation Council (IIC, scheme of MHRD) is a committee of faculty, students and experts from industry which conducts multiple activities to promote the Innovation and Entrepreneurship round the year in HEIs campuses. UIET, Panjab University, Chandigarh is one such HEI whose IICs aim is to streamline and strengthen the Innovation and startup ecosystem in the campus. The primary mandate of IIC is to encourage, inspire and nurture young students by supporting them to work with new ideas and transform them into prototypes. The objective is to prepare the students with the skills like Critical Thinking, Design Thinking, Innovative thought process and Entrepreneurial mindset. Several activities are conducted throughout the year to meet the desired target of IIC:

- Various Innovation, IPR and entrepreneurship-related activities are conducted in time bound fashion.
- Several reward innovations are Identified and their success stories are shared with the students.
- Periodic workshops/ seminars/ interactions with entrepreneurs and investors are organized
- Hackathons, idea competition, mini-challenges etc. are organized with the involvement of industries.
- A network with peers and national entrepreneurship development organizations is created. Innovative projects carried out by institution's faculty and students are highlighted on the Institutes IIC portal.

Technology Business Incubator at UIET (TBIU)

UIET has inculcated a culture to promote 'Make in India' Campaign of GoI among faculty and students and has setup a Technology Business Incubator at UIET (TBIU), Panjab University. TBIU has been created to provide a co-working ecosystem among faculty, students and industry by providing a common space at UIET. This space would primarily be utilized by Ventures that qualify as a nursery incubation project – initiated by one or more members of the academic staff, students and/or alumni of one of a premier institute, supported by the Institute, TBIU or some other technology promotion agency (government or nongovernment). UIET incubator provides a co-working platform where all engineering expertise converges. It provides an ecosystem to evolve and refine technologies and products that require expertise at the interphase of engineering sciences. To this end, TBIU facilitate the incubatees to utilise the resources in all engineering branches at UIET and even in Panjab University, depending upon technical needs of the project. It also connects the incubatees for the technology-downstream commercialisation aspects that may become available through TEC, CIIPP, CRIKC, DIC, IIC and other places in Chandigarh and around. In this respect, TBIU will function as a nodal centre, primarily for engineering technologies and enter into suitable MOUs with other Units and organisations to efficiently achieve the synergy required for traversing the journey of engineering students from laboratory to marketplace. It will function as a single point of contact to offer the facilities and resources at UIET for providing various services and consultancies to industry and other outside organisations.

Some of the recent success stories include AMTRON and Envinova Smartech.

AMTRON

DIC has significantly progressed towards generating startups headed by students of UIET. AMTRON a PSU of Assam has collaborated with DIC to work on novel technologies of 5G devices for medical diagnostic screening and data collection, 3D printing applications in prosthetics, dentistry, human anatomical structures and so on. DIC has also conducted two successful fully funded workshops for Project & Orthotic officers training in 3D printing devices in the year 2023 and 2024.

Envinova Smartech

Envinova Smartech, founded by the students of UIET mechanical branch (2018-22) and initially supported by DIC UIET and AICTE has seized the opportunity to establish a revolutionary solar hub at the Entry point of Ayodhya. This solar hub was inaugurated by the Municipal Commissioner and Vice Chairman at the Ayodhya Development Authority. This facility, equipped with features such as solar-powered laptop and mobile charging, CCTV surveillance, WiFi amenities, night lighting, branding digital screen, backlit billboards, and public seating, will provide various services in the public domain by operating on a sustainable system. This project is part of the social excellence initiative with Reliance - Campa, aiming to provide such facilities in every part of Ayodhya.

Dr. S.S. BHATNAGAR UNIVERSITY INSTITUTE OF CHEMICAL ENGINEERING & TECHNOLOGY PANJAB UNIVERSITY

ABOUT THE DEPARTMENT

Dr. S.S. Bhatnagar University Institute of Chemical Engineering and Technology, Panjab University, Chandigarh (http://www.uicet.puchd.ac.in) is a premier Institute in Northern India imparting quality education in Chemical Engineering, Food Technology and allied areas. Institute is currently running the courses in B.E. (Chemical Engineering), B.E.(Food Technology), Integrated B.E. (Chemical Engineering)-MBA, M.E. (Chemical Engineering), M.Tech. (Polymer), M.E. (Food Technology), M.Sc. (Industrial Chemistry) and M.E. (Chemical with specialization in Environmental Engineering). The faculty

of the institute is involved in guiding students under Faculty of Engineering & Technology to pursue their research leading to award of Ph.D. degree. The Institute was set up in 1958 in collaboration with Illinois Institute of Technology, Chicago, USA and continues to maintain global standards of excellence in education and research. The Institute has attained status of eminence in academia, R&D within India and abroad. Over the years, the Institute have been bestowed with research grants from premier funding agencies like DST, AICTE, UGC, DRDO, MOFPI, CSIR, ICAR, TEQIP, etc. The faculty works in collaboration with Industry, Research Organizations etc. contributing extensively towards high quality research.

FACULTY

Designation	Name	Field of Research Specialization
Professors	Anupama Sharma	Polymer Science Engineering, Synthesis of Biodegradable Polymers and their Nanocomposites, Nano cellulose Extraction and its Utilization
	Meenakshi Goyal	Chemical Technology (Inorganic & Organic), Science & Technology of Carbon
	Sanchita Chauhan	Modeling and Simulation, Environmental Engineering, Chemical Reaction Engineering
	Amrit Pal Toor	Mass Transfer and Environment Engineering
	Anupama Thakur **(Chairperson)**	Polymer Science Engineering
	Seema Kapoor	Thermodynamics, Energy Technology, Nano Biomaterials Engineering
	Ritu Gupta	Hydrodynamics, Process Dynamics & Control, Modeling & Simulation
	Urvashi Gupta	Hydrodynamic and Hydromagnetic Stability Problems for Viscoelastic Fluids, Micropolar Fluids and Nanofluids for Thermal Convection / Double-Diffusive Convection.
	Sushil Kumar Kansal	Mass Transfer, Environmental Engineering, Nano Technology
	Gaurav Verma	Polymers and Material Science, Nano Technology
	Gargi Ghoshla	Fermentation Technology, Cereal Technology
	Amit Sobti	Complex Flow Hydrodynamics
Associate Professor	Surinder Singh	Petroleum Engineering, Separation Technology, Energy & Environment
	Gaurav Rattan	Reaction Engineering, Pollution Control
Assistant Professors	Maninder Kaur	Power System, Energy and Environment
	Sonia Sharma	Nano Biomaterial
	Jodh Singh	Mechanical Engineering
	Nidhi Singhal	Management
	Harjit Kaur	Management
	Sanjeev Gautam	Experimental Condensed Matter Physics, Materials Science, Advanced Functional Materials
Assistant Professor (Temporary basis)	Twinkle Bedi	Database & Operating System

COURSES OFFERED (SEMESTER SYSTEM)

Course	Seats	Duration	Eligibility*	Admission Criteria
B.E. (Chemical Engineering)	89+11 NRI + 22 Foreign National	4 years	As per Joint Admission Committee (JAC 2026) Information Brochure 2026	Based on JEE (Main) Merit-2026 Admission to NRI and Foreign National through DASA
B.E. (Food Technology)	30+3 NRI+ 8 Foreign National	4 years	-do-	-do-
Integrated B.E. (Chemical)-MBA	36+5 NRI+ 9 Foreign National	5 years	-do-	-do-
M.E. (Chemical Engineering)#	10+2 NRI + 5 Foreign National	2 years	B.E./B.Tech (Chemical) 04 years or Five Year Integrated B.E. (Chem.)-MBA at least 60% marks in the aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	Order of Preference: 1st GATE qualified candidates on the basis of their valid GATE score. 2nd marks in qualifying examination as per eligibility conditions. Please visit www.puchd.ac.in and www.uicet.puchd.ac.in for update, if any
M.E. (Food Technology)#	10+1 NRI+ 3 Foreign National	2 years	B.E./ B.Tech. Degree in Food Technology / Dairy Technology / Agricultural Engineering / Food Engineering at least 60% marks in the aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	Order of Preference 1st GATE qualified candidates on the basis of their valid GATE score. 2nd marks in the qualifying examination as per eligibility conditions. Please visit

M.Sc.(Industrial Chemistry) #	10+2 NRI+ 4 Foreign National	2 years	B.Sc. (Three Year Course) with Mathematics and Chemistry as compulsory subjects/B.Sc. (Hons.) Chemistry with Mathematics as a compulsory subject/B.Sc.(Three Year Course) with Industrial Chemistry and Mathematics as compulsory subject at least 55% marks in the aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	**Order of Preference** 1st marks in the qualifying examination as per eligibility conditions. Please visit www.puchd.ac.in and www.uicet.puchd.ac.in for update, if any
Ph.D.	Subject to availability	3-6 years	See Ph.D Prospectus 2026	
* 5% Concession is admissible in eligibility marks to SC/ST/BC/PWD Candidates.				

TITLES OF SYLLABI: Detailed Syllabi available at http://puchd.ac.in/syllabus.php

B.E. (Chemical Engineering)

	Semester I		**Semester II**
Paper 1	Mathematics –I	Paper 1	Mathematics –II
Paper 2	Physics	Paper 2	Organic Chemistry
Paper 3	Inorganic Chemistry	Paper 3	Electrical & Electronics Engineering
Paper 4	Value added Course	Paper 4	Introduction to Engg and Technology
Paper 5	Computer Programming for problem solving	Paper 5	Communication Skills
Paper 6	Engineering Graphics	Paper 6	Electrical & Electronics Engineering Lab.
Paper 7	Engineering Graphics	Paper 7	Organic Chemistry Lab.
Paper 8	Engineering Workshop	Paper 8	Communication Skills Lab.
Paper 9	Physics Lab.	Paper 9	Universal Human Values
Paper 10	Inorganic Chemistry Lab.		
Paper 11	Computer Lab.		
Paper 12	Introduction to Env. science		
	Semester III		**Semester IV**
Paper 1	Material and Energy Balance	Paper 1	Heat Transfer
Paper 2	Fluid Flow	Paper 2	Chemical Engineering Thermodynamics
Paper 3	Mechanical Operations	Paper 3	Chemical Technology (Inorganic)
Paper 4	Strength of Materials	Paper 4	Energy Technology
Paper 5	Engg. Materials	Paper 5	Deptt. Elective I
Paper 6	Value added Course	Paper 6	Heat Transfer Lab.
Paper 7	Process Equipment Design	Paper 7	Chemical Technology (Inorganic Lab.)
Paper 8	Mechanical Operation Lab.	Paper 8	Deptt. Elective Lab. I
Paper 9	Fluid Flow Lab.	Paper 9	Comprehensive viva
	Semester V		**Semester VI**
Paper 1	Chemical Reaction Engineering-I	Paper 1	Chemical Reaction Engineering II
Paper 2	Mass Transfer I	Paper 2	Mass Transfer II
Paper 3	Chemical Technology (Organic)	Paper 3	Department Elective-II
Paper 4	Environmental Engineering	Paper 4	Department Elective III
Paper 5	Process Instrumentation	Paper 5	Open Elective I
Paper 6	Chemical Reaction Engineering Lab.	Paper 6	Mass Transfer Lab.
Paper 7	Chemical Technology (Organic Lab.)	Paper 7	Department Elective II Lab.
Paper 8	Environmental Engineering Lab.	Paper 8	Process Plant Design II
Paper 9	Process Plant Design I	Paper 9	Minor Project
	Semester VII		**Semester VIII**
Paper 1	Process Dynamics & Control	Paper 1	Six month Industrial Training/Research Training
Paper 2	Transport Phenomena		
Paper 3	Process Engineering Economics		
Paper 4	Open Elective II		
Paper 5	Process Dynamics & Control Lab.		
Paper 6	Process Modeling and Simulation Lab.		
Paper 7	Major Project		
Paper 8	Comprehensive Viva		
Paper 9	NSS/NCC/Sports proficiency/Community services/Professional activities		

B.E. (Food Technology)

	Semester I		**Semester II**
Paper 1	Mathematics –I	Paper 1	Physics
Paper 2	Organic Chemistry	Paper 2	Inorganic Chemistry
Paper 3	Electrical & Electronics Engineering	Paper 3	Mathematics –II
Paper 4	Introduction to Engg and Technology	Paper 4	Value added Course
Paper 5	Communication Skills	Paper 5	Computer Programming for problem solving
Paper 6	Electrical & Electronics Engineering Lab.	Paper 6	Engineering Graphics
Paper 7	Organic Chemistry Lab.	Paper 7	Engineering Graphics
Paper 8	Communication Skills Lab.	Paper 8	Engineering Workshop
Paper 9	Universal Human Values	Paper 9	Physics Lab.
		Paper 10	Inorganic Chemistry Lab.
		Paper 11	Computer Lab.
		Paper 12	Introduction to Env. science
	Semester III		**Semester IV**
Paper 1	Material and Energy Balance	Paper 1	Heat Transfer
Paper 2	Fluid Flow	Paper 2	Biochemistry & Nutrition
Paper 3	Mechanical Operations	Paper 3	Food Microbiology
Paper 4	Basics of Biology and Microbiology	Paper 4	Technology of Fruits and Vegetables
Paper 5	Food Chemistry	Paper 5	Technology of Meat, Fish & Poultry
Paper 6	Value added Course	Paper 6	Heat Transfer Lab.
Paper 7	Mechanical Operation Lab.	Paper 7	Biochemistry & Nutrition Lab
Paper 8	Fluid Flow Lab.	Paper 8	Food Microbiology Lab
Paper 9	Biology and Microbiology Lab	Paper 9	Meat, Fish & Poultry Processing Lab
Paper 10	Food Chemistry Lab	Paper 10	Fruits and Vegetables Processing Lab
		Paper 11	Comprehensive viva
	Semester V		**Semester VI**
Paper 1	Mass Transfer I	Paper 1	Reaction Engineering
Paper 2	Department Elective I	Paper 2	Mass Transfer II
Paper 3	Technology of Oil Seeds, Oils and Fats	Paper 3	Environmental Engineering
Paper 4	Technology of Cereal & Pulses	Paper 4	Deptt. Elective II
Paper 5	Principles of Food Preservation	Paper 5	Beverage Technology
Paper 6	Dairy Technology	Paper 6	Confectionary Technology
Paper 7	Cereal and Pulses Processing Lab	Paper 7	Beverage and Confectionary Processing Lab
Paper 8	Process Plant Design	Paper 8	Mass Transfer Lab.
Paper 9	Dairy Processing Lab.	Paper 9	Reaction Engineering Lab.
Paper 10	Oil Seeds, Oils and Fats Processing Lab	Paper 10	Environmental Engineering Lab.
		Paper 11	Minor Project
	Semester VII		**Semester VIII**
Paper 1	Process Dynamics & Control	Paper 1	Six month Industrial Training/Research Training
Paper 2	Open Elective I		
Paper 3	Food Regulation and Quality Control		
Paper 4	Packaging Technology		
Paper 5	Open Elective – II		
Paper 6	Quality Control and Packaging Lab.		
Paper 7	Process Dynamics & Control Lab.		
Paper 8	Major Project		
Paper 9	Comprehensive Viva		
Paper 10	NSS/NCC/Sports proficiency/Community services/Professional activities		

Integrated B.E. (Chemical)-MBA

	Semester I		**Semester II**
Paper 1	Mathematics –I	Paper 1	Physics
Paper 2	Organic Chemistry	Paper 2	Inorganic Chemistry
Paper 3	Electrical & Electronics Engineering	Paper 3	Mathematics –II
Paper 4	Introduction to Engg and Technology	Paper 4	Value added Course
Paper 5	Communication Skills	Paper 5	Computer Programming for problem solving
Paper 6	Management & Organizational Behavior	Paper 6	Engineering Graphics
Paper 7	Electrical & Electronics Engineering Lab.	Paper 7	Operations Research
Paper 8	Organic Chemistry Lab.	Paper 8	Engineering Graphics
Paper 9	Communication Skills Lab.	Paper 9	Engineering Workshop
Paper 10	Universal Human Values	Paper 10	Computer Lab.
		Paper 11	Physics Lab.
		Paper 12	Inorganic Chemistry Lab.

		Paper 13	Introduction to Env. science
	Semester III		**Semester IV**
Paper 1	Material and Energy Balance	Paper 1	Heat Transfer
Paper 2	Fluid Flow	Paper 2	Engg. Materials
Paper 3	Mechanical Operations	Paper 3	Chemical Technology- (Organic)
Paper 4	Chemical Technology (Inorganic)	Paper 4	Strength of Materials
Paper 5	Business Statistics	Paper 5	Production & Operations Management
Paper 6	Human Resource Management	Paper 6	Managerial Economics
Paper 7	Value added Course	Paper 7	Heat Transfer Lab.
Paper 8	Mechanical Operation Lab.	Paper 8	Chemical Technology- (Organic) Lab.
Paper 9	Fluid Flow Lab.	Paper 9	Comprehensive viva
Paper 10	Chemical Technology (Inorganic) Lab.	Paper 10	Process Equipment Design
	Semester V		**Semester VI**
Paper 1	Chemical Engineering Thermodynamics	Paper 1	Chemical Reaction Engineering-I
Paper 2	Energy Technology	Paper 2	Process Instrumentation
Paper 3	Mass Transfer I	Paper 3	Environmental Engineering
Paper 4	Deptt. Elective I	Paper 4	Mass Transfer II
Paper 5	Financial Accounting	Paper 5	Transport Phenomena
Paper 6	Business Analytics with R	Paper 6	Process Engineering Economics
Paper 7	Department Elective-II	Paper 7	Supply Chain and Logistics Management
Paper 8	Deptt. Elective Lab. I	Paper 8	Chemical Reaction Engineering Lab.
Paper 9	Process Plant Design I	Paper 9	Environmental Engineering Lab.
Paper 10	Department Elective II Lab.	Paper 10	Process Plant Design II
		Paper 11	Industrial Training (Management)
		Paper 12	Minor Project
	Semester VII		**Semester VIII**
Paper 1	Chemical Reaction Engineering II	Paper 1	Six month Industrial Training/Research Training
Paper 2	Process Dynamics & Control		
Paper 3	Department Elective III		
Paper 4	Open Elective I		
Paper 5	Open Elective II		
Paper 6	Project Management & Entrepreneurship		
Paper 7	Marketing Management		
Paper 8	Mass Transfer Lab.		
Paper 9	Process Dynamics & Control Lab.		
Paper 10	Process Modeling and Simulation Lab.		
Paper 11	Major Project		
Paper 12	Comprehensive Viva		
Paper 13	NSS/NCC/Sports proficiency/Community services/Professional activities		
Paper 14	Industrial Training (Management)		
	Semester IX		**Semester X**
Paper 1	Financial Management	Paper 1	Strategic Management
Paper 2	Legal Aspects of Business	Paper 2	Functional Subject-5
Paper 3	Functional Subject-1	Paper 3	Functional Subject-6
Paper 4	Functional Subject-2	Paper 4	Functional Subject-7
Paper 5	Functional Subject-3	Paper 5	Functional Subject-8
Paper 6	Functional Subject-4	Paper 6	Research Project (management)
Paper 7	Research Project (Management)	Paper 7	Seminar on Corporate Governance
Paper 8	Workshop on Multivariate Statistical Techniques	Paper 8	Workshop on Management Information Systems
Paper 9	Workshop on Communication and Soft Skills	Paper 9	Comprehensive Viva
Paper 10	Industrial Training (Management)-II		

M.E. (Chemical Engineering)

	Semester I		**Semester II**
Paper 1	Mathematical Methods in Chemical Engineering	Paper 1	Heat Transfer
Paper 2	Chemical Reaction Engineering	Paper 2	Elective**
Paper 3	Mass Transfer	Paper 3	Fluid Mechanics
Paper 4	Chemical Engineering Thermodynamics	Paper 4	Process Dynamics & Control
Paper 5	Transport Phenomena	Paper 5	Process Modeling & Simulation
		Paper 6	Process Modeling & Simulation
		Paper 7	Seminar

	Semester III		**Semester IV**
Paper 1	Open Elective*		Thesis
Paper 2	Research Methodology		
Paper 3	Preliminary Thesis#		
	Semester I		**Semester II**
Paper 1	Mathematical Methods in Chemical Engineering	Paper 1	Heat Transfer
Paper 2	Chemical Reaction Engineering	Paper 2	Elective**
Paper 3	Mass Transfer	Paper 3	Fluid Mechanics
Paper 4	Chemical Engineering Thermodynamics	Paper 4	Process Dynamics & Control
Paper 5	Transport Phenomena	Paper 5	Process Modeling & Simulation
		Paper 6	Process Modeling & Simulation
		Paper 7	Seminar
	Semester III		**Semester IV**
Paper 1	Open Elective*		Thesis
Paper 2	Research Methodology		
Paper 3	Preliminary Thesis#		

M.E. (Food Technology)

	Semester I		**Semester II**
Paper 1	Food Engineering	Paper 1	Food Packaging
Paper 2	Biochemical Engineering	Paper 2	Selected topics in Fruits and Vegetable Processing
Paper 3	Food Safety and Quality Management	Paper 3	Food Process Equipment Design
Paper 4	Selected Topics of Cereals, Oilseeds and Pulses	Paper 4	Electives
Paper 5	Functional Foods and Nutraceuticals	Paper 5	Food Product Development
Paper 6	Biochemical Engineering-I	Paper 6	Food Processing and Analysis
Paper 7	Food Process Engineering		
	Semester III		**Semester IV**
Paper 1	Analytical Techniques		Thesis
Paper 2	Research Methodology		
Paper 3	Preliminary thesis		

M.Sc. (Industrial Chemistry)

	Semester I		**Semester II**
Paper 1	Chemical Process Calculation	Paper 1	Chemical Engineering-II (Heat & Mass Transfer)
Paper 2	Chemical Engineering-I (Fluid Flow & Mechanical Operations)	Paper 2	Industrial Pollution Control and Abatement
Paper 3	Process Instrumentation	Paper 3	Pharmaceutical Chemistry
Paper 4	Organic synthesis	Paper 4	Physical Chemistry
Paper 5	Analytical techniques	Paper 5	Thermodynamic and Reaction Engineering
Paper 6	Fluid Flow & Mechanical Operation Lab.	Paper 6	Heat & Mass Transfer Lab
Paper 7	Analytical techniques Lab.	Paper 7	Physical Chemistry Lab.
Paper 8	Organic synthesis Lab.		
	Semester III		**Semester IV**
Paper 1	Organic Spectroscopy	Paper 1	Thesis
Paper 2	Chemical Technology		
Paper 3	Elective*		
Paper 4	Open Elective**		
Paper 5	Chemical Technology Lab.		

Scheme and Syllabi of all above UG and PG courses offered are based on the year of enrollment of the students and subject to change as per requirements.

VISION : To achieve national and international recognition in the field of chemical engineering and allied fields fulfilling the Panjab University's proud heritage through excellence in teaching, research and service.

MISSION :

- To develop human resource in Chemical Engineering, food technology and allied areas to cater to the requirements of industry, academics and R&D organizations, both at national and international levels, by providing value based high quality technical education.
- To equip the students with technical, research and personality development skills by providing them competitive and stimulated academic environment and to create awareness about the needs and requirements of the society and industry by regularly revising and reorienting courses and curriculum.
- To make significant contributions towards improving the quality of life by involving students in basic and applied research in collaboration with industries and research institutes to meet the changing needs of society.

THRUST AREAS: Agro Waste and Food Processing, Biomaterials, Biopolymers, Carbon Technology and its application, Chemical Reaction Engineering, Chemical Engineering Thermodynamics, Environmental Engineering, Food Product Development, Modeling and Simulation, Nanomaterials and their applications, Polymer Nanocomposites, Polymer Rheology

ALUMNI RELATIONS: Institute has a very strong alumni base. The alumni of the Institute occupy coveted positions in all spheres of Corporate, Academia and Government Sector in India and abroad. They are associated with industries like IOCL, Petronet-LNG, HMEL, Hindustan Unilever Ltd., Vedanta, Honeywell UOP, Loreal, Ranbaxy, ITC, Nestle, Wrigley, KBR, ONGC, Shell India Ltd., Cairn India, EIL, Bechtel, Fluor Daniel, GAIL and many more..

PLACEMENT: Numerous MNCs and many reputed companies are regularly visiting the institute. They includes; Universal Oil Products (UOP), Reliance Industries Limited (RIL), Petronet LNG, Indian Synthetic Rubber Limited (ISRL), Infosys, Kellogg Brown & Root (KBR), Samsung Engineering, Technip KT India Ltd., SRF Chemicals, ZS Associates, Jubilant Life Sciences, IOL Chemicals & Pharmaceuticals Limited, Chandigarh Distillers & Bottlers Limited, HPCL Mittal Energy Limited, EXL Service, Bechtel, Aakash Institute, Chambal Fertilizers, The Safety Masters, Fluor Daniel, Vedanta Resources Ltd, Mahindra & Mahindra, Gujarat Fluoro chemicals Limited, ITC Foods, Source Fuse Technologies, Nestle India, Cadbury, HMEL, Tirupati Life Sciences, Centrient Pharmaceuticals, Mount Meru Group etc. Students have over the year secured high GATE scores making their way to public sector companies like IOCL, BPCL, EIL, BARC, HPCL etc. The maximum package offered to the B.E. students during placements in the Institute is Rs. 19.25 lacs/annum.

UNIVERSITY CENTRE OF INSTRUMENTATION AND MICROELECTRONICS

ABOUT THE CENTRE

The University Centre of Instrumentation and Microelectronics (UCIM) was established in 1995 and offers M.Tech. (Instrumentation) and M.Sc. (Instrumentation) Courses, each of 2 years (4 semesters) duration. The objective of the centre is to generate trained manpower for Modern Sophisticated Instrumentation and for Microelectronics applications. The facilities available have been supplemented by combining it with the DST funded Sophisticated Analytical Instrumentation Facility (SAIF), Central Instrumentation Laboratory (CIL) and University Science Instrumentation Centre (USIC) which are housed in the same building.

FACULTY

Professor	Gaurav Verma **(Director)**
Associate Professors	H.P.S.Kang
	Ramesh Kumar Sharma
Assistant Professors	Poonam Kumari
	Anil Kumar

COURSES OFFERED (SEMESTER SYSTEM)

Course	Seats	Duration	Eligibility*	Admission Criteria
M.Tech (Instrumentation)	10+3 SC/ ST+2NRI + 3 Foreign National	2 years	B.E/B.Tech (Chemical / Computer / Electrical/ Electronics/Mechanical/ Production /Instrumentation/ Bio-medical Engineering or equivalent degree or M.Sc. in Physics / Electronics /Instrumentation in (as approved by AICTE) or Master of Computer Application from institutions recognized by AICTE / UGC with a minimum of 50% marks in aggregate.	**Weightage:** PU CET (PG) :50% Academic 50% **Note**: If seats remain vacant, the admission would be done based on merit list prepared from academic weightage of the eligibility qualifications.
M.Sc. (Instrumentation)	Offered (10) + 2 NRI + 3 Foreign National	2 years	B.Sc. (3Year) degree in Medical/Non-Medical/Any Steam of Science OR B.E/B.Tech in any discipline with minimum 50% Marks in aggregate.	PU-CET (PG) qualified for M.Sc. instrumentation Weightage: PUCET (PG): 60% Academics: 40% Note: if seats remain vacant, the admission would be done based on merit list prepared from academic weightage of the eligibility qualification

*5% concession is admissible in eligibility marks to SC/ST/BC/PWD candidates.

Common mode of admission condition for all ME/M.Tech/M.Sc. courses are as under:-

i) PU CET (PG)-2026 Entrance Test will be conducted for all PG courses i.e. M.Tech (Instrumentation) and M.Sc. (Instrumentation).
ii) CET Cell will prepare subject wise merit list of all appeared candidates & there will be no cut off / qualifying marks.
iii) The following order of preference is recommended for admissions to PG courses offered at UCIM:
   A. GATE qualified candidates on the basis of their valid GATE score.
   B. CET (PG) appeared candidates on the basis of rank scored by them in CET (PG).
   C. B.E. / B.Tech percentage of marks.

After exhausting all the candidates of GATE score and CET PG, then admission shall be done on the basis of B.E. /B.Tech percentage

TITLES OF SYLLABI: Detailed Syllabi available at https://puchd.ac.in/syllabus.php

M.TECH (INSTRUMENTATION)

	Semester I		Semester II
INS 61.01	Signal Processing-1	INS 62.01	Microprocessors in Instrumentation
INS 61.02	Analog & Digital Electronics	INS 62.02	Automatic Control System
INS 61.03	Transducers-I	INS 62.03	Analytical Instrumentation
INS 61.04	*Foundation of Measurement	INS 62.04	*Robotics
INS 61.05	*Photonics	INS 62.05	*Medical Instruments
INS 61.06	*Design of Mechanical Elements	INS 62.06	*Signal Processing-II
INS 61.07	*Process Dynamics & Control	INS 62.07	*Transducers-II
	Semester III		**Semester IV**
INS 71.01	*Computer Aided Design & Computer Aided Manufacturing	INS 72.01	Major Project & Thesis
INS 71.02	*Instrumentation for Special Applications		
INS 71.03	*Selected Topics		
INS 71.04	*Virtual Instrumentation		
INS 71.55	Major Project		

***Elective Subjects**

M.Sc (INSTRUMENTATION)

	Semester I		Semester II
SEM PO 11	Sensors, Transducers, and Actuators for Instrumentation	SEM PO 21	Microprocessor based Instrumentation & System Design
SEM PO 12	Signal conditioning, processing and interfacing techniques	SEM PO 22	Control System Design
SEM PO 13	Instrumentation methods of Analysis-I	SEM PO 23	Power Electronics
SEM PO 14	Principles of Test and Measuring Instruments	SEM PO 24	Process Control and Automation
SEM PO 15	Digital Electronics	SEM PO 25	Optical Instrumentation & Photonics
	Semester III		**Semester IV**
SEM PO 31	Biomedical Instrumentation	SEM PO 41	Seminars
SEM PO 32	Instrumental methods of Analysis-II	SEM PO 42	Comprehensive Viva
SEM PO 33	Advanced Fabrication Technique	SEM PO 43	Project Work & Project Report
SEM PO 34	Instrumentation Laboratory visit		
SEM PO 35	Project Work		

THRUST AREA: The Centre houses sophisticated instruments and facilities under SAIF viz-TEM, SEM, FE-SEM, MHz, NMR 500 MHz, LC-MS/MS, XRD powder, CHNS-O, UV-VIS-NIR, WD-XRF, FTIR, LIQUID NITROGEN PLANT, CONFOCAL MICROSCOPE, ICP-MS ICAP, HR-TEM, RF-DC SPUTTER COATER. GCMS, SAXS (Small angle X-ray scattering), Rheometer, TGA/DSC, Zeta Potential & Nano Particle Size Analyzer, Bet Analyzer, Spectroscopic Ellipsometer, Circular Dischroism (CD), (X-Ray Photoelectron Spectroscopy (XPS), Fluorescence, Polarimeter. The SAIF has undergone a rejuvenation phase by replacing some key instruments by state-of-art counterparts. The facilities of the centre go a long way in improving the quality of Research being carried out in Research Institutes and Universities in the entire region comprising the states of Punjab, Haryana, HP, UP, Rajasthan and even Eastern, Western and southern parts of the country. These facilities are also made available to the Industry. It also runs training programmes in technical skills for the benefit of scientific community and associated laboratory staff from different institutes.

TRAINING AND PLACEMENT CELL: The students in our department are less in number. Thus students are advised to submit their bio-data along with UIET students during the AVSAR UIET Job Fair conducted at University Campus.

ALUMNI RELATIONS: Department has its alumni association with strong alumni base.

SEMINARS / SYMPOSIA / WORKSHOP: Department is actively organizing large number of Seminars / Symposia / Workshop for the benefit of faculty/ students.