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V. FACULTY OF ENGINEERING AND TECHNOLOGY

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

ABOUT THE INSTITUTE

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, TEQIP-III, etc. The faculty works in collaboration with Industry, Research Organizations and Statutory Bodies contributing extensively towards high quality research.

FACULTY:

Designation	Name	Field of Research Specialization
Professors	U.S. Shivhare	Food Engineering
	Meenakshi Goyal	Chemical Technology (Inorganic & Organic), Science & Technology of Carbon
	Neeta Sharma	Inorganic Chemistry, Applied/Environmental Chemistry, Analytical Techniques/Chemistry
	Sanchita Chauhan (Chairperson)	Modeling and Simulation, Environmental Engineering, Chemical Reaction Engineering
	Amrit Pal Toor	Mass Transfer and Environment Engineering
	Anupama Sharma	Polymer Science Engineering, Synthesis of Biodegradable Polymers and their Nanocomposites, Nanocellulose Extraction and its Utilization
	Anupama Thakur	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.
Associate Professors	Sushil Kumar Kansal	Mass Transfer, Environmental Engineering, Nano Technology
	Subodh Kumar Agrawal	Heat Transfer
	Gaurav Verma	Polymers and Material Science, Nano Technology
Assistant Professors	Gargi Ghoshal	Fermentation Technology, Cereal Technology
	Maninder Kaur	Power System, Energy and Environment
	Amit Sobti	Complex Flow Hydrodynamics
	Baljinder Kaur Gill	Chemical Engineering Thermodynamics
	Gaurav Rattan	Reaction Engineering, Pollution Control
	Surinder Singh	Petroleum Engineering, Separation Technology, Energy & Environment
	Sonia Sharma	Nano Biomaterial
	Jodh Singh	Mechanical Engineering
	Nidhi Singhal	Management
	Harjit Kaur	Management
Sanjeev Kumar Gautam	Experimental Condensed Matter Physics, Materials Science, Advanced Functional Materials	
Assistant Professors (Temporary basis)	Twinkle Bedi	Database & Operating System

COURSES OFFERED (SEMESTER SYSTEM)

Course	Seats	Duration	Eligibility*	Admission Criteria
B.E. (Chemical)	89+11 NRI + 4 Foreign National	4 years	As per Joint Admission Committee (JAC 2020) Information Brochure 2020	Based on JEE (Main) Merit-2020 Admission to NRI and Foreign National through DASA
B.E. (Food Technology)	30+3 NRI+ 2 Foreign National	4 years	-do-	-do-

Integrated B.E. (Chemical)-MBA	36+5NRI+ 2 Foreign National	5years	-do-	-do-
M.E. (Chemical)#	20+2 NRI + 1 Foreign National	2 years	B.E./ B.Tech. (Chemical) 04 years or Five Year Integrated B.E.(Chemical)-MBA at least 60% marks in the aggregate (in case students are awarded degree in CGPA, they must have the conversion formula issued by the concerned University or head of the department) in the qualifying examination i.e. B.E./B.Tech. (Chemical) (04 years) or Five Year Integrated B.E. (Chemical)- MBA or any other equivalent qualifying degree as approved by the PU Syndicate.	The candidate shall be admitted on the basis of the PU-CET (P.G.) merit conducted by Panjab University, Chandigarh. Based on Entrance Test P.U. – CET (P.G.). The merit list of eligible P.U.-CET (P.G.) qualified candidates shall be as per the following criteria:- Academic Marks: 50% PU – CET (P.G.): 50% GATE qualified candidates will be exempted from the PU-CET (P.G.). However, in case of eligible GATE qualified candidates the merit list will be as per GATE Score obtained and shall be offered the seat in first instance. <u>Please visit www.puchd.ac.in and www.uicet.puchd.ac.in for update, if any.</u>
M.Tech. (Polymer)#	15+5 Part-time+2 NRI + 1 Foreign National	2 years	B.E./B.Tech.(Chemical) 04 years or Five Year Integrated B.E.(Chemical)- MBA at least 60% marks in the aggregate (in case students are awarded degree in CGPA), they must have the conversion formula issued by the concerned University or head of the department) in the qualifying examination i.e. B.E./B.Tech. (Chemical) (04 years) or Five Year Integrated B.E. (Chemical)- MBA or any other equivalent qualifying degree as approved by the PU Syndicate. OR Master's degree in Technical Chemistry/Applied Chemistry/ Industrial Chemistry/Chemistry (with Mathematics upto graduation) or an equivalent examination) with at least 55% marks in aggregate from Panjab University (in case students are awarded degree in CGPA, they must have the conversion formula issued by the concerned University or head of the department) or any other University recognized by Panjab University as equivalent thereto.	The candidate shall be admitted on the basis of the PU-CET (P.G.) merit conducted by Panjab University, Chandigarh. Based on Entrance Test P.U. – CET (P.G.). The merit list of eligible P.U.-CET (P.G.) qualified candidates shall be as per the following criteria:- Academic Marks: 50% PU – CET (P.G.): 50% GATE qualified candidates will be exempted from the PU-CET (P.G.). However, in case of eligible GATE qualified candidates the merit list will be as per GATE Score obtained and shall be offered the seat in first instance. <u>Please visit www.puchd.ac.in and www.uicet.puchd.ac.in for update, if any.</u>
M.E. (Chemical with specialization in Environmental Engineering)#	10+1 NRI+ 1 Foreign National	2 years	B.E./B.Tech.(Chemical (04 years) or Five Year Integrated B.E.(Chemical)-MBA at least 60% marks in the aggregate (in case students are awarded degree in CGPA, they must have the conversion formula issued by the concerned University or head of the department) in the qualifying examination i.e. B.E./B.Tech. (Chemical) (04 years) or Five Year Integrated B.E.(Chemical)- MBA or any other equivalent qualifying degree as approved by the PU Syndicate.	The candidate shall be admitted on the basis of the PU-CET (P.G.) merit conducted by Panjab University, Chandigarh. Based on Entrance Test P.U. – CET (P.G.). The merit list of eligible P.U.-CET (P.G.) qualified candidates shall be as per the following criteria:- Academic Marks: 50% PU – CET (P.G.): 50%

				GATE qualified candidates will be exempted from the PU-CET (P.G.). However, in case of eligible GATE qualified candidates the merit list will be as per GATE Score obtained and shall be offered the seat in first instance. <u>Please visit www.puchd.ac.in and www.uicet.puchd.ac.in for update, if any.</u>
M.E. (Food Technology)#	10+1 NRI+ 1 Foreign National	2 years	B.E./B.Tech. degree in Food Technology/Dairy Technology/Agricultural Engineering/Food Engineering/Chemical Engineering/ Chemical Technology (04 years) or Five Year Integrated B.E.(Chem)-MBA or any other equivalent qualifying degree as approved by the PU Syndicate at least 60% marks in the aggregate (in case students are awarded degree in CGPA, they must have the conversion formula issued by the concerned University or head of the department).	The candidate shall be admitted on the basis of the PU-CET (P.G.) merit conducted by Panjab University, Chandigarh. Based on Entrance Test P.U. – CET (P.G.). The merit list of eligible P.U.-CET (P.G.) qualified candidates shall be as per the following criteria:- Academic Marks: 50% PU – CET (P.G.): 50% GATE qualified candidates will be exempted from the PU-CET (P.G.). However, in case of eligible GATE qualified candidates the merit list will be as per GATE Score obtained and shall be offered the seat in first instance. <u>Please visit www.puchd.ac.in and www.uicet.puchd.ac.in for update, if any.</u>
M.Sc.(Industrial Chemistry) #	17+2 NRI+ 1 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 or any other equivalent examination as approved by the Syndicate, Panjab University, Chandigarh. A candidate seeking admission must have obtained a minimum at least 55% marks in the aggregate (in case students are awarded degree in CGPA, they must have the conversion formula issued by the concerned University or head of the department) in the qualifying examination mentioned.	Based on Entrance Test P.U.-CET-(P.G.). The merit list of eligible P.U.-CET-(P.G.) qualified candidates shall be as per the following criteria: Academic Marks : 50% P.U. CET (PG) : 50% <u>Please visit www.puchd.ac.in and www.uicet.puchd.ac.in for update, if any.</u>
Ph.D.	Subject to Availability	3-6 years	As per P.U. guidelines applicable to Ph.D. admission	See General Important Guidelines

* 5% Concession is admissible in eligibility marks to SC/ST/BC/PwD Candidates.

These courses will be run only if the number of candidates admitted are ≥ 5 .

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	Chemistry (Organic)

Paper 3	Chemistry (Inorganic)	Paper 3	Electrical & Electronics Engineering
Paper 4	Communication Skills	Paper 4	Material & Energy Balance
Paper 5	Engineering Graphics	Paper 5	Computer Programming for problem solving
Paper 6	Engineering Workshop	Paper 6	Electrical & Electronics Engineering Lab.
Paper 7	Physics Lab.	Paper 7	Chemistry (Organic) Lab.
Paper 8	Chemistry (Inorganic) Lab.	Paper 8	Computer Lab.
Paper 9	Communication Skills Lab.		
	Semester III		Semester IV
Paper 1	Physical Chemistry	Paper 1	Heat Transfer
Paper 2	Fluid Flow	Paper 2	Chemical Engineering Thermodynamics
Paper 3	Energy Technology	Paper 3	Mechanical Operations
Paper 4	Strength of Materials	Paper 4	Numerical Methods in Chemical Engineering
Paper 5	Open Elective I	Paper 5	Engineering Materials
Paper 6	Process Equipment Design	Paper 6	Heat Transfer Lab.
Paper 7	Physical Chemistry Lab.	Paper 7	Mechanical Operation Lab.
Paper 8	Fluid Flow Lab.		
	Semester V		Semester VI
Paper 1	Numerical methods in Chemical Engineering	Paper 1	Chemical Reaction Engineering-II
Paper 2	Energy Technology	Paper 2	Mass Transfer-II
Paper 3	Chemical Reaction Engineering-I	Paper 3	Process Dynamics & Control
Paper 4	Mass Transfer-I	Paper 4	Chemical Technology (Organic)
Paper 5	Chemical Technology (Inorganic)	Paper 5	Departmental Elective-I (Petroleum Processing Engineering)
Paper 6	Process Plant Design-I (Pr)		
Paper 7	Chemical Engineering Computation lab (Pr)		
	Semester VII		Semester VIII
Paper 1	Transport Phenomena	Paper 1	Process Instrumentation
Paper 2	Environmental Engineering	Paper 2	Process Engineering Economics
Paper 3	Process Modelling and Simulation (Pr)	Paper 3	Project work (Pr)
Paper 4	Industrial Training	Paper 4	Comprehensive viva (Pr)
Paper 5	Process Plant Design-II (Pr)	Paper 5	Literature survey and Report Writing and Seminar (Pr)
Paper 6	Project work (Pr)	Paper 6	Open Elective-II
Paper 7	Open Elective - I	Paper 7	Open Elective-III
Paper 8	Department Elective-II	Paper 8	Department Elective-III

B.E. (FOOD TECHNOLOGY)

	Semester I		Semester II
Paper 1	Mathematics -I	Paper 1	Mathematics -II
Paper 2	Chemistry (Organic)	Paper 2	Physics
Paper 3	Electrical & Electronics Engineering	Paper 3	Chemistry (Inorganic)
Paper 4	Material & Energy Balance	Paper 4	Communication Skills
Paper 5	Computer Programming for problem solving	Paper 5	Engineering Graphics
Paper 6	Electrical & Electronics Engineering Lab.	Paper 6	Engineering Workshop
Paper 7	Chemistry (Organic) Lab.	Paper 7	Physics Lab.
Paper 8	Computer Lab.	Paper 8	Chemistry (Inorganic) Lab.
		Paper 9	Communication Skills Lab.
	Semester III		Semester IV
Paper 1	Element of Bio & Food Science	Paper 1	Heat Transfer
Paper 2	Fluid Flow	Paper 2	Food Chemistry
Paper 3	Biochemistry & Nutrition	Paper 3	Food Microbiology
Paper 4	Chemical Engineering Thermodynamics	Paper 4	Processing of Cereals & Pulses
Paper 5	Mechanical Operations	Paper 5	Strength of Materials
Paper 6	Element of Bio & Food Science Lab	Paper 6	Process Equipment Design
Paper 7	Biochemistry & Nutrition Lab	Paper 7	Heat Transfer Lab
Paper 8	Fluid Flow Lab	Paper 8	Processing of cereal and Pulses Lab
Paper 9	Mechanical Operations Lab	Paper 9	Food Chemistry Lab
		Paper 10	Food Microbiology Lab
	Semester V		Semester VI
Paper 1	Heat Transfer	Paper 1	Numerical Methods in Chemical Engineering
Paper 2	Mass Transfer -I	Paper 2	Mass Transfer-II

Paper 3	Processing of Cereal & Pulses	Paper 3	Chemical Reaction Engineering-I
Paper 4	Processing of Fruits and vegetables	Paper 4	Processing of oil seeds, oils and fats
Paper 5	Beverage Technology	Paper 5	Processing of milk and milk products
Paper 6	Confectionery Technology	Paper 6	Chemical Engineering Computation Lab (Pr)
Paper 7	Beverage & Confectionary Technology(Pr)	Paper 7	PPD-II Lab (Pr)
Paper 8	PPD-I (Pr)		
Semester VII		Semester VIII	
Paper 1	Process Dynamics and Control	Paper 1	Environmental Engineering
Paper 2	Open Elective I	Paper 2	Department Elective II
Paper 3	Process Engg. Economics	Paper 3	Open Elective II
Paper 4	Departmental Elective- I	Paper 4	Open Elective III
Paper 5	Project Work (Pr)	Paper 5	Departmental Elective III
Paper 6	Literature Survey, report writing and Seminar (Pr)	Paper 6	Project work (Pr)
Paper 7	Industrial Training	Paper 7	Process Modelling and Simulation Lab (Pr)
		Paper 8	Comprehensive Viva (Pr)

INTEGRATED B.E. (CHEMICAL)-MBA

Semester I		Semester II	
Paper 1	Mathematics -I	Paper 1	Mathematics -II
Paper 2	Chemistry (Organic)	Paper 2	Physics
Paper 3	Electrical & Electronics Engineering	Paper 3	Chemistry (Inorganic)
Paper 4	Material & Energy Balance	Paper 4	Communication Skills
Paper 5	Computer Programming for problem solving	Paper 5	Managerial Economics
Paper 6	Management & Organizational Behavior	Paper 6	Engineering Graphics
Paper 7	Electrical & Electronics Engineering Lab.	Paper 7	Engineering Workshop
Paper 8	Chemistry (Organic) Lab.	Paper 8	Physics Lab.
Paper 9	Computer Lab.	Paper 9	Chemistry (Inorganic) Lab.
		Paper 10	Communication Skills Lab.
Semester III		Semester IV	
Paper 1	Fluid Flow	Paper 1	Heat Transfer
Paper 2	Mechanical Operations	Paper 2	Physical Chemistry
Paper 3	Chemical Engineering Thermodynamics	Paper 3	Strength of Materials
Paper 4	Engineering Materials	Paper 4	Process Equipment Design
Paper 5	Business Statistics	Paper 5	Energy Technology
Paper 6	Operations Research	Paper 6	Production & Operations Management
Paper 7	Workshop on Business Research	Paper 7	Open Elective I
Paper 8	Fluid Flow Lab.	Paper 8	Physical Chemistry Lab.
Paper 9	Mechanical Operations Lab.	Paper 9	Heat Transfer Lab.
Semester V		Semester VI	
Paper 1	Heat Transfer	Paper 1	Numerical Methods in Chemical Engineering
Paper 2	Mass Transfer-I	Paper 2	Energy Technology
Paper 3	Process Plant Design -I (Pr)	Paper 3	Chemical Reaction Engg-I
Paper 4	Chemical Technology -Organic	Paper 4	Chemical Engineering Computation Lab (Pr)
Paper 5	Departmental Elective-I	Paper 5	Mass Transfer-II
Paper 6	Operations Research	Paper 6	Process Plant Design-II (Pr)
		Paper 7	Open Elective-I
		Paper 8	Managerial Economics
Semester VII		Semester VIII	
Paper 1	Chemical Reaction Engineering-II	Paper 1	Transport phenomena
Paper 2	Process Dynamics and Control	Paper 2	Environment Engineering
Paper 3	Industrial Training-I	Paper 3	Process Modelling and Simulation (Pr)
Paper 4	Project Work (Pr)	Paper 4	Project Work (Pr)
Paper 5	Process Engineering Economics	Paper 5	Comprehensive Viva (Pr)
Paper 6	Literature Survey, Report Writing and Seminar (Pr)	Paper 6	Open Elective-III
Paper 7	Open Elective-II	Paper 7	Department Elective-III
Paper 8	Department Elective-II	Paper 8	Financial Accounting
Paper 9	Marketing Management	Paper 9	Business Environment
Semester IX		Semester X	
Paper 1	Financial Management	Paper 1	Strategic Management
Paper 2	Project Management and Entrepreneurship	Paper 2	Business Law
Paper 3	Supply Chain and Logistics Management	Paper 3	Strategic Cost Management
Paper 4	Marketing Research & Consumer Behaviour	Paper 4	Human Resource Management

Paper 5	Organizational Behaviour	Paper 5	Management of Financial Services
Paper 6	Elective-I	Paper 6	Business Process Reengineering
Paper 7	Technology Management & Excellence	Paper 7	Elective-II
Paper 8	Industrial Training (Management)-II	Paper 8	Research Project (management) Pr
Paper 9	Research Project (Management) (Pr)	Paper 9	Comprehensive Viva Management (Pr)
Paper 10	Workshop on Developing Entrepreneurial Skills (Pr)	Paper 10	Seminar on Corporate Governance (Pr)
Paper 11	Workshop on Communication and Soft Skills (Pr)	Paper 11	Workshop on Management Information Systems (Pr)

M.E. (CHEMICAL ENGINEERING)

Semester I		Semester II	
Paper 1	Mathematical Methods in Chemical Engineering	Paper 1	Heat Transfer
Paper 2	Fluid Mechanics	Paper 2	Research Methodology
Paper 3	Mass Transfer	Paper 3	Chemical Reaction Engineering
Paper 4	Chemical Engineering Thermodynamics	Paper 4	Process Dynamics & Control
Paper 5	Transport Phenomena	Paper 5	Process Modeling & Simulation
		Paper 6	Process Modeling & Simulation (Pr)
		Paper 7	Seminar (Pr)
Semester III		Semester IV	
Paper 1	Open Elective		Thesis
Paper 2	Elective		
	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	Research Methodology
Paper 5	Functional Foods and Nutraceuticals	Paper 5	Food Product Development
Paper 6	Biochemical Engineering-I (Pr)	Paper 6	Food Processing and Analysis (Pr)
Paper 7	Food Process Engineering (Pr)		
Semester III		Semester IV	
Paper 1	Analytical Techniques		Thesis
Paper 2	Electives		
	Preliminary thesis		

M.SC. (INDUSTRIAL CHEMISTRY)

Semester I		Semester II	
Paper 1	Chemical Engineering-I	Paper 1	Chemical Engineering-II
Paper 2	Chemical Technology (Organic)	Paper 2	Chemical Technology (Inorganic)
Paper 3	Process Instrumentation	Paper 3	Engineering Materials
Paper 4	Analytical Techniques	Paper 4	Industrial Management
Paper 5	Material & Energy Balances	Paper 5	Chemical Reaction Engineering
Paper 6	Numerical Analysis	Paper 6	Chemical Engineering Lab.-II (Pr)
Paper 7	Chemical Engineering Lab.-I Pr)	Paper 7	Chemical Technology Lab. (Inorganic) (Pr)
Paper 8	Chemical Technology Lab. (Organic) (Pr)	Paper 8	Materials Lab. (Pr)
Paper 9	Analytical Techniques Lab. Pr)	Paper 9	Computer Applications (Pr)
Semester III		Semester IV	
Paper 1	Thermodynamics		Thesis
Paper 2	Industrial Pollution Control		
Paper 3	Elective		
Paper 4	Open Elective		

M.TECH. (POLYMER)

Semester I		Semester II	
Paper 1	Polymer Physics	Paper 1	Polymer Processing Techniques
Paper 2	Polymer Chemistry & Characterization	Paper 2	Polymer Reaction Engineering
Paper 3	Macromolecular Hydrodynamics	Paper 3	Composite Materials
Paper 4	Polymer Materials	Paper 4	Polymer Product Design

Paper 5	Numerical Methods	Paper 5	Process Modeling & Simulation in Polymer Systems
Paper 6	Chemical Engineering Fundamentals	Paper 6	Process Modeling & Simulation Lab(Pr)
Paper 7	Polymer Science Laboratory-I (Pr)	Paper 7	Seminar (Pr)
Paper 8	Computer Applications (Pr)		
Semester III		Semester IV	
Paper 1	Elective		Thesis
Paper 2	Open Elective		
Paper 3	Preliminary Thesis		
Paper 4	Polymer Science Lab.-II (Pr)		

M.E. (CHEMICAL WITH SPECIALIZATION IN ENVIRONMENTAL ENGINEERING)

Semester I		Semester II	
Paper 1	Mathematical Methods in Chemical Engineering	Paper 1	Heat Transfer
Paper 2	Fluid Mechanics	Paper 2	Research Methodology
Paper 3	Mass Transfer	Paper 3	Chemical Reaction Engineering
Paper 4	Chemical Engineering Thermodynamics	Paper 4	Process Dynamics & Control
Paper 5	Transport Phenomena	Paper 5	Process Modeling & Simulation
Paper 6	Air Pollution Control Engineering	Paper 6	Solid Waste Management
		Paper 7	Process Modeling & Simulation (Pr)
		Paper 8	Seminar (Pr)
Semester III		Semester IV	
Paper 1	Open Elective		Thesis
Paper 2	Elective		
Paper 3	Waste Water Treatment Technology		
	Preliminary Thesis		

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.

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.

PLACEMENTS Over the year 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 Fluor 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 about Rs. 16lacs/annum (2018-19).

UNIVERSITY INSTITUTE OF ENGINEERING & TECHNOLOGY

ABOUT THE INSTITUTE

University Institute of Engineering and Technology (UIET) was established by Panjab University as a constituent institute in 2002. With the vision to be a front runner in engineering education and research, the mission of UIET is to produce professionally competent students for careers in engineering and technology by providing value-based quality education. It offers four years Bachelor of Engineering (B.E), two years Master of Engineering and full time Ph.D degrees in Biotechnology, Computer Science and Engineering, Information Technology, Electrical and Electronics, Electronics and Communication and Mechanical Engineering. It offers 8 post graduate programs in Biotechnology, Computer Science and Engineering, Information Technology, Electrical, Electronics and Communication, Mechanical Engineering, Microelectronics and Material Science & Technology. Five UG Programs have got NBA accreditation, namely Biotechnology, Computer Science and Engineering, Electrical and Electronics, Electronics and Communication and Mechanical Engineering. UIET has a number of MOUs with industry leaders and academia, including 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 and community. 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 take summer training, if they like.

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, etc. have led to the establishment of a number of specialised research laboratories which are freely available to students for learning by working. 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 Human Resource Development (MHRD), Government of India.

FACULTY: REGULAR

Designation	Name	Field of Research Specialization
Professors	Savita Gupta (Director)	Bio-medical image Processing, cognitive Enhancement & Sensor Networks & Sensor Networks
	Renu Vig	Signal Processing and Fuzzy Logic
	Sukhwinder Singh	Bio-medical image Processing, Wireless Sensor networks
	J. K. Goswamy	Nuclear Structure through gamma ray spectroscopy, Materials Characterisation for Sensor applications
	Sanjeev Puri	Polycystic Kidney Disease and Stem Cell Biology & Pathophysiology of kidney diseases
	Surdeep Singh	Data warehousing and data mining
	Harmesh Kumar Kansal	Advanced Manufacturing Technology, Quality Control, Design and Manufacturing Welding Technology
	Sunil Agrawal	Neural Networks & Applications, Signal Processing and Wireless Communication
	Vinay Kanwar	Numerical Analysis Fluid Dynamics
	Manu Sharma	Active Vibration Control Product design
	Krishan Kumar	Cyber Security
	Harish Kumar	Information Retrieval, Cyber Security Next Generation Telecom Networks.
	Sakshi Kaushal	Cloud Computing, Security, Telecommunication Networks
	Sarbjee Singh	Cloud Computing, Machine Learning, IOT, Social Networks Analysis
	Amrinder Pal Singh	System Modelling and Control, Dynamic Analysis nano composites, wear
	Naveen Aggarwal	Data Mining, Image Processing
	Ajay Mittal	Image processing Computer vision and machine learning
Associate Professors	Manoj Kumar Sharma	Active Noise Control, Control Systems, Renewable Energy Sources and Neural Networks & Fuzzy logic
	Sanjay Vohra	Mechanics of Materials
	Monika Randhawa	Theoretical High Energy physics
	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
Veenu Mangat	Data Mining & Warehousing, Machine Learning	
Kalpna Dahiya	Operations Research	

	Mukesh Kumar Shankar Sehgal	Social Media Analysis, Natural Language Procession, Machine Learning Finite element model updating, Microwave joining, Design and Manufacturing
Assistant Professors	Shuchi Gupta	Theoretical & Computational condensed matter physics
	Jaget Singh	Antenna and Microwave Engineering
	Saurabh Bhatia	Numerical Analysis
	Sharmelee Thangjam	Signal Processing
	Deepak Kumar	Microgrids ,Power systems issues
	Naresh Kumar	Wireless and Mobile Communication
	Vishal Sharma	VLSI and Microelectronics
	Sumit Budhiraja	Signal Processing and Image Processing
	Mandeep Kaur	Image Processing, Digital Forensics, Machine Learning
	Jaspreet Kaur	Microbial And Environmental Biochemistry
	Hema Setia	Polymer Science, Environmental Engineering
	Anupreet Kaur	Chemical Engg.
	Vishal Gupta	Natural Language Processing, Information Retrieval
	Amandeep Verma nee Puri	Parallel & Distributed Computing, Cloud Computing
	Makhan Singh	Software Engg, Cloud computing
	Puneet Jai Kaur	Software Engg
	Shailendra Kumar Arya	Enzyme Engineering, Waste water Engineering
	NishaTayal	Microcontroller, Embedded systems and Automation Smart grid
	Harbhinder Singh	Theory of Machines and Robotics
	Surjeet Singh	Rotodynamics Machines and Heat Transfer
	Damanjeet Kaur	Power systems optimization, Distribution systems Planning Optimization using AI Techniques
	Poonam Sood	Vibration Control, Model Updating , FEM
	Amandeep Singh Wadhwa	Rotodynamics Machines and Engineering Mechanics
	Jaswinder Singh Mehta	Design Engineering, Industrial Engg.
	Amit Chauhan	Triblogy, journal bearing, Metal Composite and wind energy
	Prashant Jindal	Nano Composites, materials chacterization, 3d Printing, Biomedical Devices
	Rajesh Kumar	CAD/CAM, Robotics, Nano technology
Preetika Sharma	Analog and Digital Electronics, semiconductor technologies, Nano Electronics	
Sarpreet Kaur	Smart Grid, Power Systems Analysis, designing of Electrical machines using Finite element Analysis	
Preeti Gupta	Digital System Design, Control System and Biometrics	
Neeraj Sharma	Optical Fiber Communication	
Charu Madhu	Nanophotonics, Optical Communication	
Nidhi	Bio Signal Processing	
Puneet Kaur	Power Electronics	
Preeti	Optical Communication (wired and wireless) and Optical Biosensor; Wireless Communication, Biosegnel Processing	
Amit Chaudhary	Semiconductor and VLSI	
Parveen Goyal	Manufacturing Process and Technology, Non-Conventional Machining	
Anjali Gupta	Machine Design, Rotodynamics Machines machining, Machining Tribiology, Nano Fluity	
Gaurav Sapra	Nano Technology, Wireless Communication, Digital Signal Processing, Microcontroller and Embedded System design	
Parul Gaur	Power Electronics, Optimization using PSO techniques and other Algorithm, Communication Engg.	
Raj Kumari	Parallel & Distributed Computing, Cloud Computing	
Suksha	Embedded System, Automatic Control	
Monika	Software Engg.	
Mamta Juneja	Digital Image Processing, Data Mining Machine Learning, Deep learning, Biomedical Imaging	
Akashdeep	Machine Learning, Deep Learning, Digital Image Processing,	
Nirmal Kaur	Parallel and distributed computing, Cloud Computing image processing	

Rohit Kumar	Software Engineering
Gagandeep Singh	Machine Design, Refrigeration and Air Conditioning
Aditya Kaushik	Numerical Analysis
Tukesh Soni	Mechanical Vibration
Minto Rattan	Solid Mechanics
Anil Kumar	Organic Chemistry
RenuThapar	B-Lactam Antibiotics
Prashanta Kumar Nanda	Nuclear medicine & Synthetic inorganic materials
Madhu Khatri	Nanotechnology & Environmental Biology
Mary Chatterjee	Cancer Biology
Jagjit Singh	Matrix Analysis
NeelamGoel	Bioinformatics, Soft Computing, Machine Learning
Sunil Bansal	Experimental High Energy Physics
Aditi Gupta	Power System Deregulation Congestion Management, Control System
Suresh Kumar	Experimental Condensed Matter Physics/Material Science
VivekPahwa	Electrical Machines and drives, Power systems power Electronics
Sabhyata Uppal Soni	Digital Communication , optical & Wireless Communication
Nishima	Nano Science And Nano Technology
Yogita	Data Mining & Databases
Preeti Aggarwal	Digital Image Processing, Medical Imaging, Data Mining
Ravreet Kaur	Parallel and distributed computing, computer networks, algorithm analysis and design
Deepti Gupta	Wireless Sensor Networks

TEMPORARY FACULTY:

Designation	Name	Area of Specialization
Assistant Professors	Jyoti Sood	Theoretical condensed Matter Physics
	Hitesh Kapoor	HR & Marketing
	Anuj hamb	Human Resource Management
	Geetu	Quantum Information Processing
	Sarvjit Singh	Communication Systems
	Garima Joshi	Gesture Recognition and Machine Learning
	Daljeet Kaur	Material Science & Nanotechnology
	RajniSobti	Speech Recognition
	Sukhvir Singh	Wireless Networks, Machine Learning
	RenukaRai	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
	MinakshiGarg	Bioinformatics and Food biotechnology
	Jyoti Sharma	Instability of nano fluids
	Dhirti	Medical Image Processing
	AnaahatDhindsa	Image Processing
	Jatinder Singh	VLSI Design, Digital Design
	Rajneesh Singla	Image processing, Network Security
	Sanjiv Kumar	Optical Communication
	Harvinder Kaur	Optical Communication
	AnuPriyaMinhas	Plant and Microbial Biotechnology
Vijay Kumar	VLSI Design, Nanophotonics , Optoelectronics	
Gurpreet Kaur	Digital Signal Processing	
Kuldeep Singh Bedi	Power Electronics firewall Photovoltaic System, Power System	
Amit Thakur	Carbon Nanotubes, Fibers, Material Characterization, Bio Composite	
Mamta Sharma	Experimental Condensed Matter Physics/Material Science	

In addition to the regular faculty, UIET is utilizing the expert knowledge of senior faculty of other departments of Panjab University and from professional institutes like PEC University of Technology, National Institute of Pharmaceutical Education & Research(NIPER), Institute of Microbial Technology (IMTECH) and NITTTR, Chandigarh, College of Engineering & Technology, etc as Guest Faculty.

COURSES OFFERED (SEMESTER SYSTEM):

Course	Seats	Duration	Eligibility*	Admission Criteria
B.E. in Computer Science & Engineering	108+5 EWS +11NRI+5 FN	4 years	As per Joint Admission Committee (JAC 2020) Information Brochure 2020	Based on JEE (Mains) Merit-2020
B.E. in Information Technology	108+5 EWS +11NRI+5 FN	4 years		
B.E. in Electronics & Communication	120+6 EWS +12 NRI+ 6 FN	4 years		
B.E. in Bio-Technology	81+4 EWS +8 NRI+ 4 FN	4 years		
B.E. in Electrical and Electronics	81+4 EWS +8 NRI+ 4 FN	4 years		
B.E. in Mechanical	81+4 EWS +8 NRI+ 4 FN	4 years		
M.E. in Computer Science & Engineering	20+2 NRI+ 1 FN	2 years	Eligibility Conditions: B.E. or B.Tech. or equivalent in Computer Science and Engineering / Information Technology with at least 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	Mode of admission: Preference will be given to GATE qualified candidates. Candidate appearing for PU-CET (PG) will be given admission if some seats will be left vacant after the GATE qualified candidates admissions.
M.E. in Electronics & Communication	20+2 NRI+ 1 FN	2 years	Eligibility Conditions: B.E. or B.Tech. or equivalent degree in Electronics / Electronics & Communication Engineering / Electronic and Telecommunication Engineering with at least 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	Mode of admission: Preference will be given to GATE qualified candidates. Candidate appearing for PU-CET (PG) will be given admission if seats are left vacant after the GATE qualified candidates admissions.
M.E. in Mechanical Engg.	20+2 NRI+ 1 FN	2 years	Eligibility Conditions: B.E./B.Tech. in Mechanical Engineering / Production Engineering with at least 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	Mode of admission: The admission shall be made on the basis of Entrance Test P.U. CET (PG) to be conducted by the Panjab University. GATE qualified candidates shall be exempted from the P.U.-CET (P.G.) Test. However, in case of eligible GATE qualified candidates, the merit list shall be as per the GATE Score obtained and shall be offered the seat at the first instance.
M.Tech. Microelectronics	12+3 SC/ ST+2 NRI + 1FN	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.	Mode of admission: Preference will be given to GATE qualified candidates. Candidates appearing for PU-CET (PG) will be given admission if seats are left vacant after the GATE qualified candidates" admissions.

M.E.in Information Technology	20+2 NRI+ 1 FN	2 years	Eligibility Conditions: B.E. or B.Tech. or equivalent degree in Information Technology / Computer Science & Engineering / Electronics & Communication Engineering / Electrical & Electronics Engineering / Computer Science & Electronics Engineering / Software Engineering with at least 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	Mode of admission: Preference will be given to GATE qualified candidates. Candidate appearing for PU-CET (PG) will be given admission if some seats will be left vacant after the GATE qualified candidates admissions.
M.E. in Electrical Engg. (Power System)	20+2 NRI+ 1 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.	Mode of admission: Preference will be given to GATE qualified candidates. Candidate appearing for PU-CET (PG) will be given admission if some seats will be left vacant after the GATE qualified candidates admissions.
M.Tech. Material Science & Technology	20+2 NRI+ 1 FN	2 years	Eligibility Conditions: M.Sc. (Physics), M.Sc. (Chemistry), B.E. (Mechanical/ Electrical/ Electronics and communication/ Civil/Production) with at least 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto.	Mode of admission: Preference will be given to GATE qualified candidates. Candidate appearing for PU-CET (PG) will be given admission if some seats will be left vacant after the GATE qualified candidates admissions.
M.E. in Biotechnology	20+2 NRI+ 1 FN	2 years	Eligibility Conditions: B.E. / B.Tech. Biotechnology Engineering with at least 60% marks in aggregate from Panjab University or any other University recognized by Panjab University as equivalent thereto	Mode of admission: Preference will be given to GATE qualified candidates. Candidate appearing for PU-CET (PG) will be given admission if some seats will be left vacant after the GATE qualified candidates admissions.
ME Computer Science and Engineering (Cyber Security)	15+2 NRI+ 1 FN	2 years	Eligibility Conditions: B.E. or B.Tech. or equivalent degree in Computer Science & Engineering/ Information Technology with atleast 60% marks in aggregate from P.U. or any other recognised University.	Mode of admission: Admission will be done on the basis of GATE Score. In Case of left over seats, admission will be done on the basis of Entrance Test P.U.-CET- (P.G.) to be conducted by the Panjab University.

Common mode of admission conditions for all M.E./M.Tech. courses are as under:

- (i) PU CET (PG)-2020 Entrance Test will be conducted for all PG courses of all branches of UIET.
- (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 course offered at UIET:
 - 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.
- (iv) 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.

Ph.D.

S. No.	Name of the Department	Number of Seats	Duration of course	Eligibility/ Admission Criteria
1.	Computer Science Engineering	14	3-6 years	See M.Phil./Ph.D. Prospectus 2020
2.	Information Technology	20		
3.	Electrical and Electronics Engineering	40		
4.	Bio-Technology	11		
5.	Mechanical Engineering	16		
6.	Electronics & Communication Engineering	17		
7.	Applied Science	03		

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>

BACHELOR OF ENGINEERING (COMPUTER SCIENCE AND ENGINEERING)			
SEMESTER I		SEMESTER II*	
Paper 1	Calculus	Paper 1	Differential Equations and Transforms
Paper 2	Introduction to Computer Science and Engineering	Paper 2	Communication Skills
Paper 3	Programming Fundamentals	Paper 3	Applied Chemistry
Paper 4	Physics Course 1	Paper 4	Digital Electronics and Logic Design
Paper 5	Ethics and Self Awareness	Paper 5	Object Oriented Programming
Paper 6	Introduction to Environment Science	Paper 6	Workshop Practice
SEMESTER III		SEMESTER IV	
Paper 1	Data Structures	Paper 1	Analysis and Design of Algorithms
Paper 2	Database Systems	Paper 2	Web Technologies
Paper 3	Discrete Structures	Paper 3	Operating Systems
Paper 4	Microprocessors	Paper 4	Software Engineering
Paper 5	Economics	Paper 5	Computer Architecture and Organization
Paper 6	Vocational Training (After 2 nd Semester)		
SEMESTER V		SEMESTER VI	
Paper 1	Data Communication and Networks	Paper 1	Computer Networks and Security
Paper 2	Technical Communication and Soft Skills	Paper 2	Linear Algebra and Probability Theory
Paper 3	Computer Graphics	Paper 3	Modeling and Simulation
Paper 4	Artificial Intelligence	Paper 4	Compiler Design
Paper 5	Principle of Programming Languages	Paper 5	Option: Any of the following 1. Software Testing and Quality Assurance 2. Soft computing 3. Data Mining and Analysis 4. Mobile Application Development 5. Data Acquisition and interfacing 6. Multimedia Computing
Paper 6	Theory of Computation		
Paper 7	Industrial Training (after 4 th semester)		
Paper 8	Principles of Designing (optional)		
SEMESTER VII		SEMESTER VIII (Option-I)	
Paper 1	Digital Image Processing	Paper 1	Management
Paper 2	Advance Database Systems	Paper 2	Network Science: Structural Analysis and Visualization
Paper 3	Cyber Laws and IPR	Paper 3	Elective-IV Option: Any of the following 1. Building Enterprise Applications 2. Expert Systems 3. Machine Learning and Computational Intelligence 4. Distributed Computing 5. Pattern Recognition
Paper 4	Elective-II Option: Any of the following 1. Software Project Management 2. Natural Language Processing 3. Business Inteligence 4. Wireless Sensor Networks 5. Sensor Systems and Application	Paper 4	Elective-V Option: Any of the following 1. Software Agents 2. Human Computer Interaction 3. Information retrieval and Management 4. Cryptography and Network Security 5. Advance Image Processing
Paper 5	Elective-III Option: Any of the following 1. Agile Software Development 2. Neural Networks 3. Cloud Computing 4. Mobile Computing 5. Smart System Design Project-I Industrial Training (After 6 th Semester) *subject to any change by competent authority.	Paper 5	Project-II Option-2 Industrial Training

BACHELOR OF ENGINEERING (INFORMATION TECHNOLOGY)			
SEMESTER I		SEMESTER II*	
Paper-1	Calculus	Paper-1	Differential Equations and Transforms
Paper-2	Introduction to Information Technology	Paper-2	Communication Skills
Paper-3	Programming Fundamental	Paper-3	Physics Course 2
Paper-4	Physics Course 1	Paper-4	Workshop Practice
Paper-5	Ethics and Self Awareness	Paper-5	Introduction to Environmental Science
Paper-6	Basic Electrical Engineering	Paper-6	Object Oriented Programming using C++

SEMESTER III		SEMESTER IV	
Paper-1	Linear Algebra and Probability Theory	Paper-1	Elective-I (from Humanities and Social Sciences) 1. Economics 2. Introduction to Psychology 3. Sociology 4. Russian Language
Paper-2	Social and Professional Aspects of Information Technology	Paper-2	Discrete Structures
Paper-3	Data Structures	Paper-3	Microprocessor & Assembly Language Programming
Paper-4	Digital Electronics	Paper-4	Computer Networks
Paper-5	Computer Architecture & Organization	Paper-5	Operating System
		Paper-6	Web and Open Source Technologies
		Paper-7	Educational Tour
SEMESTER V		SEMESTER VI	
Paper-1	Database Management Systems	Paper-1	Data Warehouse and Data Mining
Paper-2	Wireless Communication Technologies	Paper-2	Agile Software Development
Paper-3	Network Security and Cryptography	Paper-3	Theory of Computation
Paper-4	Design and Analysis of Algorithms	Paper-4	Artificial Intelligence
Paper-5	Professional Elective-I (<i>Choose any one from the following</i>) 1. Java Programming/Technologies 2. UNIX Network Programming 3. Python Programming	Paper-5	Professional Elective-II (<i>Choose any one from the following</i>) 1. Advanced Computer Networks 2. Computer Graphics 3. Advanced Cryptography 4. Software Engineering
Paper-6	Industrial Training(after 4 th semester)		
SEMESTER VII		SEMESTER VIII	
Paper-1	Digital Signal Processing	Paper-1	Digital Image Processing
Paper-2	Agile Software Development	Paper-2	Embedded System Design
Paper-3	Compiler Design	Paper-3	Java Technologies
Paper-4	Elective-II (<i>Choose any one from the following</i>) 1. Cloud Computing 2. Artificial Intelligence 3. Principle of Telecommunication	Paper-4	Elective-III (<i>Choose any one from the following</i>) Theory of Computation Soft Computing Natural Language Processing
Paper-5	Project-I	Paper-5	Seminar
Paper-6	Industrial Training (after 6 th Semester)	Paper-6	Project II
		OR	
		Paper-1	Industrial Training 6 months

*subject to any change by competent authority.

BACHELOR OF ENGINEERING (ELECTRONICS & COMMUNICATION ENGINEERING)			
SEMESTER-I*		SEMESTER-II*	
Paper-1	Calculus	Paper-1	Differential Equations and Transforms
Paper-2	Introduction to Electronics	Paper-2	Ethics and Self Awareness
Paper-3	Workshop Practice	Paper-3	Physics Course 1
Paper-4	Applied Chemistry	Paper-4	Introduction to Environmental Science
Paper-5	Communication Skills	Paper-5	Analog Electronic Circuits – I
Paper-6	Computer Programming	Paper-6	Digital Design
SEMESTER-III		SEMESTER-IV	
Paper-1	Linear Algebra & Complex Analysis	Paper-1	Communication Engineering
Paper-2	Signals and Systems	Paper-2	Microcontroller & Interfacing
Paper-3	Microprocessor and Applications	Paper-3	Computer Networks
Paper-4	Electronic Devices and Circuits	Paper-4	Analog Electronic Circuits-I
Paper-5	Electronics Measurements & Instrumentation	Paper-5	Probability and Random Processes
Paper-6	Elective (from Humanities and Social Sciences) 1. Economics 2. Introduction to Psychology 3. Sociology 4. French Language 5. Russian Language 6. Entrepreneurship and Project management	Paper-6	Electromagnetic Theory

SEMESTER-V		SEMESTER-VI	
Paper-1	VLSI Design	Paper-1	Microwave & Radar Engineering
Paper-2	Digital Signal Processing	Paper-2	Fiber Optic Communication Systems
Paper-3	Antennas & Wave Propagation	Paper-3	Digital Communication
Paper-4	Digital System Design	Paper-4	Control Systems
Paper-5	Advanced Microcontrollers & Applications	Paper-5	Power Electronics
Paper-6	Departmental Elective Course-1 (Any one of the following) 1. Data Structures and Algorithms 2. Audio and Visual Systems 3. Bio-medical Electronics	Paper-6 & 7	Departmental Elective Course-II(Any one of the following) 1. Information Theory & Coding 2. Satellite communications 3. Data Acquisition and Hardware Interfacing 4. Speech and Audio Processing Project-1
Summer Training			
SEMESTER-VII		SEMESTER-VIII	
Paper-1	Wireless & Mobile Communication	Paper-1 & 2	Departmental Elective Course-V, VI 1.Digital Image Processing 2.Advanced Digital Communication 3.Neural Networks & Fuzzy Logic 4.HDL based Systems 5. Wireless Sensor Networks
Paper-2	Embedded System Design	Paper-3& 4	Departmental Elective Course-VII, VIII 1.Optical Networks 2.MEMS and Microsystems 3. Imaging and Additive Manufacturing 4. Advanced Digital Singnal Processing
Paper-3	Departmental Elective Course-III (Any one of the following) 1.Operation Research 2.Operating Systems 3.Nano Technology 4. Adaptive Signal Processing		Seminar-II
Paper-4	Departmental Elective Course-IV 1. Computer Architecture and Organization 2. Artificial Intelligence 3.High Speed Semiconductor Devices		Option-2 Industrial Training
Paper-5	Seminar-I Project-II Summer Training		

*subject to any change by competent authority.

BACHELOR OF ENGINEERING (BIOTECHNOLOGY)

SEMESTER-I*		SEMESTER-II*	
Paper-1	Calculus	Paper-1	Differential Equation and Transform
Paper-2	Basic Biology	Paper-2	Communication Skills
Paper-3	Computer Programming	Paper-3	General Chemistry
Paper-4	Physics Course 1	Paper-4	Workshop Practice
Paper-5	Ethics and Self Awareness	Paper-5	Basic Biotechnology
Paper-6	Introduction to EnvironmentScience	Paper-6	Fundamentals of Biotechnology and Bioengineering
SEMESTER-III		SEMESTER-IV	
Paper-1	Process Calculations	Paper-1	Molecular Biology
Paper-2	Microbiology	Paper-2	Thermodynamics
Paper-3	Biochemistry	Paper-3	Chemical Reaction Engineering
Paper-4	Cell Biology & Genetics	Paper-4	Industrial Biotechnology
Paper-5	Linear Algebra and Operations Research	Paper-5	Immunology &Immuno-technology
Paper-6	Elective 1. Economics 2. Introduction to Psychology 3. Sociology		
SEMESTER-V		SEMESTER-VI	
Paper-1	Enzyme Engineering & Technology	Paper-1	Recombinant DNA Technology

Paper-2	Bio-Process Engineering	Paper-2	Bio-Informatics
Paper-3	Animal Cell Culture & Biotechnology	Paper-3	Bioreactor Design and Operation
Paper-4	Transport Phenomena	Paper-4	Down Stream Processing
Paper-5	Bioinstrumentation	Paper-5	Open Elective(Biomaterials)
Paper-6	Training of 4- 6 weeks after 4 th semester exams		
SEMESTER-VII		SEMESTER-VIII	
Paper-1	Environmental Biotechnology	Paper-1	Major Project
Paper-2	Food Biotechnology	Paper-2	Enzyme catalyzed Organic Synthesis
Paper-3	Plant Tissue Culture	Paper-3	Project Management and Entrepreneurship
Paper-4	Bio-analytical Techniques	Paper-4	Modeling and Simulation of Bioprocesses
Paper-5	Minor Project	Paper-5	Elective Nanobiotechnology Microbial Biodiversity
Paper-6	Training of 4- 6 weeks after 6 th semester exams		

*subject to any change by competent authority.

BACHELOR OF ENGINEERING (ELECTRICAL & ELECTRONICSENGINEERING)

SEMESTER-I		SEMESTER-II	
Paper-1	Calculus	Paper-1	Differential Equation and Transform
Paper-2	Introduction to electronics	Paper-2	Ethics and self awareness
Paper-3	Applied Chemistry	Paper-3	Physics Course I 1. Oscillation and optics 2. Quantum and statistical physics 3. Physics of Materials
Paper-4	Communication Skill	Paper-4	Computer Programming
Paper-5	Basic Electrical Engineering	Paper-5	Introduction to environment science
Paper-6	Workshop Practice	Paper-6	Electrical Measurement and instrumentation
		Paper-7	Innovative product design (Summer Vacations training)
SEMESTER-III		SEMESTER-IV	
Paper-1	Electric Machinery-I	Paper-1	Numerical Analysis
Paper-2	Network Analysis and Synthesis	Paper-2	Electric Machinery-II
Paper-3	Analog and Digital Electronics	Paper-3	Control Engineering
Paper-4	Linear Algebra and Complex Analysis	Paper-4	Power Systems-I
Paper-5	Elective (from Social Sciences) One of the following 1. Economics 2. Introduction to Psychology 3. Sociology 4. German Basics for Engineering Students	Paper-5	Microprocessor and Interfacing
SEMESTER-V		SEMESTER-VI	
Paper-1	Power Systems-II	Paper-1	Computer Aided Power Systems Analysis
Paper-2	MicroControllers	Paper-2	Programmable Logic Controller and Distributed Control System
Paper-3	Communication Engineering	Paper-3	Signals and Systems
Paper-4	Electromagnetic Field Theory	Paper-4	Energy Management & auditing
Paper-5	Control Engineering-II	Paper-5	Power Electronics
Paper-6	Vocational Training after Fourth Semester Subjects offered by DIC (OPTIONAL)		Subjects offered by DIC (OPTIONAL)
Paper-7	Principles of Designing and Engineering Processes	Paper-6	Sensors based Application Systems
SEMESTER-VII		SEMESTER-VIII	
			Option-I
Paper-1	Power Electronic and Drives	Paper-1	Non – Conventional Energy Sources
Paper-2	Electrical Insulation in Power Apparatus & Systems	Paper-2	Wireless Communication
Paper-3	Digital Signal Processing	Paper-3	Elective –II 1. Electrical Machine Design 2. High Voltage AC-DC 3. FACTS

Paper-4	Elective-I 1. Electrical Traction 2. Electrical Power Generation 3. Electrical utilization and illumination	Paper-4	4. Embedded System Design Elective -III 1. Cyber Laws and IPR 2. Marketing Management 3. Financial Management 4. Entrepreneurship and Project Management
Paper-5	Minor Project	Paper-5	Major Project
Paper-6	Seminar		Option-II
Paper-7	Vocational Training after Sixth Semester	Paper-1	Six Month Industrial Training
*subject to any change by competent authority.			

BACHELOR OF ENGINEERING (MECHANICAL)			
SEMESTER-I*		SEMESTER-II	
Paper-1	Calculus	Paper-1	Differential Equations and Transforms
Paper-2	Engineering Mechanics-I	Paper-2	Ethics and Self-Awareness
Paper-3	Introduction to Manufacturing Processes	Paper-3	Physics of Materials
Paper-4	Applied Chemistry	Paper-4	Engineering Mechanics-II
Paper-5	Communication Skills	Paper-5	Engineering Graphics
Paper-6	Introduction to Environmental Science	Paper-6	Computer Programming (MATLAB Programming for Engineers)
SEMESTER-III		SEMESTER-IV	
Paper-1	Applied Thermodynamics-I	Paper-1	Applied Thermodynamics-II
Paper-2	Mechanics of Materials-I	Paper-2	Mechanics of Materials-II
Paper-3	Theory of Machines-I	Paper-3	Theory of Machines-II
Paper-4	Machine Drawing	Paper-4	Numerical Analysis
Paper-5	Manufacturing Processes	Paper-5	Manufacturing Technology- I
Paper-6	Math-3	Paper-6	Fluid Mechanics
SEMESTER-V		SEMESTER-VI	
Paper-1	Design of Machine Elements-I	Paper-1	Design of Machine Elements -II
Paper-2	CAD/CAM (Computer Aided Design & Manufacturing)	Paper-2	Finite Element Methods
Paper-3	Robotics	Paper-3	Mechanical Vibrations
Paper-4	Mechanical Measurement	Paper-4	Heat Transfer
Paper-5	Manufacturing Technology- II	Paper-5	Materials and Heat Treatment
Paper-6	Fluid Machinery-II	Paper-6	Non Conventional Manufacturing
Paper-7	Vocational Training- 1 (After 4th Semester)		
Paper-8	Optional- Principles of Designing.		
SEMESTER-VII		SEMESTER-VIII	
Paper-1	Refrigeration and Air Conditioning	Paper-1	Mechatronics
Paper-2	Automatic Controls	Paper-2	Operation Research
Paper-3	Automobile Engineering	Paper-3	Computational Fluid Dynamics
Paper-4	Total Quality Management	Paper-4	Elective-II
Paper-5	Minor Project	Paper-5	a. Experimental Stress Analysis b. Metrology c. Mechanical Handling d. Bearings and Lubrication e. Plastic and Rubber Technology f. Advanced Fluid Machinery g. Production and Operations Management h. Theory of elasticity & plasticity i. Advanced Mechanics of Materials -2 j. Advances in Engineering Materials k. Mechanical Behavior of Materials-2 l. Rotor Dynamics m. Imaging And Additive manufacturing Major Project Option-2 Industrial Training
Paper-6	Vocational Training after 6th semester		
Paper-7	Elective-I a. Thermal Plant Engineering b. Gas Dynamics		

	c. Advanced Mechanics of Materials-I d. Work Study e. Mechanical Behavior of Materials-1 f. Vehicle Dynamic g. Materials Design h. Renewable Energy Sources		
*subject to any change by competent authority.			

ME COMPUTER SCIENCE AND ENGINEERING			
SEMESTER I		SEMESTER II	
Paper 1	Advance Algorithms	Paper 1	Digital Image Processing
Paper 2	Advance Databases	Paper 2	Research Methodology
Paper 3	Advance Computer Networks	Paper 3	Soft Computing
Paper 4	Option: Any of the following i. Software Testing and Quality Management ii. Advance Software Engineering iii. Project Management iv. Business Intelligence v. Building Enterprise Applications	Paper 4	Option: Any of the following I. Data Warehousing and Mining II. Machine learning III. Data Acquisition and Hardware Interfacing
Paper 5	Option: Any of the following i. Advance Computer Architecture ii. Parallel and Distributed Computing iii. Cloud Computing iv. Modeling and Simulation	Paper 5	Option: Any of the following I. Network Security II. Multimedia Computing and Communications III. Wireless Networks IV. Telecommunication Technologies
		Paper 6	Research Seminar
SEMESTER III		SEMESTER IV	
Paper 1	Option: Any of the following i. Natural Language Processing ii. Machine Vision iii. Open Source Software iv. Information Retrieval	Paper 1	Thesis
Paper 2	Option: Any of the following i. Cyber Laws & IPR ii. Business Process Re-Engineering iii. Technology Management iv. Human Resource Development and Training Methods		
Paper 3	Preliminary Thesis Work		

M.E. (ELECTRONICS & COMMUNICATION ENGINEERING)			
SEMESTER-I		SEMESTER-II	
Paper-1	Advanced Digital Signal Processing	Paper-1	Embedded System Design
Paper-2	Fiber-Optic Communication Systems	Paper-2	Digital Image Processing
Paper-3	Advanced Digital Communication	Paper-3	Wireless & Mobile Communication
Paper-4	Digital System Design	Paper-4	Elective-II (Any one of the following) Network Programming PLC & SCADA VLSI Design Nano Electronics
Paper-5	Elective-I (Any one of the following) 1. Advanced Mathematics 2. Modeling & Simulation of Communication Systems 3. Information Theory & Coding	Paper-5	Elective -III(Any one of the following) 1. Advanced Computer Networks 2. Multimedia Communication 2. Satellite Communications 3. Design & Applications of New Materials 4. RF & Microwaves
Paper-6	Research Seminar-I	Paper-6	Research Seminar-II
SEMESTER-III		SEMESTER-IV	
Paper-1	11. Elective- IV (Any one of the following) 12. 1. Neural Network & Fuzzy Logic 13. 2. Simulation & Modeling 14. 3. Smart Systems Technologies	Paper-1	Thesis

Paper-2	15. Elective-V (Any one of the following) 16. 1. Advanced Antenna Systems 17. 2. Cryptography & Network Security 18. 3. Imaging and Additive Manufacturing 19. 4. HRD & Training Methods 20. 5. Research Methodology		
Paper-3	Preliminary Thesis Work		

M.E. (MECHANICAL ENGINEERING)

SEMESTER-I		SEMESTER-II	
Paper-1	Advanced Engineering Mathematics	Paper-1	Fluid Dynamics
Paper-2	Design of Experiments	Paper-2	Advanced Manufacturing Processes
Paper-3	Continuum Mechanics	Paper-3	Advances in Engineering Materials
Paper-4	Advanced Heat Transfer	Paper-4	Structural Dynamics
Paper-5	Elective-I	Paper-5	Elective-II
a	Quality Control and Reliability	a	Advanced Mechanics of Materials
b	Manufacturing Science	b	Experimental Stress Analysis
c	Welding Techniques	c	Mechanical Behavior of Materials
d	Tool and Cutter Design	d	Composite Materials
e	Condition Monitoring and Fault Diagnosis	e	Model Updating
f	Industrial Tribology	f	Advanced Control System
g	Gas Dynamics	g	Mechatronics
		h	Imaging and Additive Manufacturing
SEMESTER-III		SEMESTER-IV	
Paper-1	Advanced Machine Design		Thesis Work
Paper-2	Elective-III		
a	Finite Element Method		
b	Modelling of Manufacturing Systems		
c	Computational Fluid Dynamics		
d	Vibration Testing		
e	Optimization Techniques		
f	Materials Design		

M.TECH (MICROELECTRONICS)

SEMESTER-I		SEMESTER-II	
Paper-1	Semiconductor Device physics	Paper-1	Measurement and Characterization Techniques.
Paper-2	Integrated Circuit Technology.	Paper-2	Architecture of VLSI System.
Paper-3	MOS Integrated Circuit Modeling.	Paper-3	Analog and Mixed Signal Device Design.
Paper-4	Hardware Description Languages and VLSI Design.	Paper-4	Advanced Memory Technology and Design.
Paper-5	Elective- I (Any one of the following) 1. Computer Aided Design Methodologies and Tools. 2. Material Science & Engineering. 3. Embedded System Design	Paper-5	Elective- II (Any one of the following) 1. Digital Integrated Circuits and Systems. 2. MEMS and Microsystems. 3. RF and High Speed Digital Design
Paper-6	Research Seminar- I	Paper-6	Research Seminar-II
SEMESTER-III		SEMESTER-IV	
Paper-1	Low Power Digital CMOS Design	Paper-1	Thesis
Paper-2	Elective- III (Any one of the following) 1. Microelectronic Packaging and Testing 2. Nano Scale Devices and Systems		
Paper-3	Preliminary Thesis Work		

ME (INFORMATION TECHNOLOGY)

SEMESTER I		SEMESTER II	
Paper- 1	Advanced Algorithm Analysis	Paper- 1	Agile Software Development
Paper- 2	Object oriented Analysis and Design	Paper- 2	10. Multimedia Systems
11. Paper- 3	12. Advanced Digital Signal Processing	13. Paper- 3	14. Embedded System Design
15. Paper- 4	16. Wireless and Mobile Communication	17. Paper- 4	18. Research Seminar II
19. Paper- 5	20. Information Security	21. Paper 5	22. Elective-II Any one of the following
23. Paper- 6	24. Research Seminar I	25. a)	26. Research Methodology

27.	28.	29.	b)	30.	Advances in Soft Computing
31.	32.	33.	c)	34.	Theory of Computation
35.	36.	37.	Paper 6	38.	Any one of the following
39.	40.	41.	a)	42.	Software Testing and Quality Management
43.	44.	45.	b)	46.	HRD and Training Methods
47.	48.	49.	c)	50.	Advanced Digital Image Processing
SEMESTER III			SEMESTER IV		
Paper- 1	Elective-III (Any one of the following)		Paper 1	Thesis Work	
a)	Network Management and Security				
b)	User Interface Design				
c)	Cloud Computing				
Paper- 2	Elective-IV (Any one of the following)				
a)	Big Data and Analytics				
b)	Advanced Data Mining				
c)	Advanced Computer Networks				
Paper – 3	Project Based Thesis Work - I				

MASTER OF ENGINEERING (ELECTRICAL & ELECTRONICS)

M.E (EEE)				
	SEMESTER-I		SEMESTER-II	
Paper-1	Advanced Power System Analysis		Paper-1	Power Systems Dynamics and Stability
Paper-2	Power System Operation And Control		Paper-2	EHVAC Transmission
Paper-3	Optimization Techniques		Paper-3	Advanced Neural Networks and Fuzzy Logic
Paper-4	Digital Control Systems		Paper-4	Elective-I
Paper-5	Power Quality			1. Advanced Power Electronic and Drives
				2. Modeling and analysis of Electrical Machines
				3. Applied Instrumentation
			Paper-5	Elective-II
				1. Advanced Power System Protection
				2. Fast Transients in Power Systems
			Paper-6	Research Seminar
SEMESTER-III			SEMESTER-IV	
Paper-1	Elective-III		Paper-1	Thesis
	1. Power System Deregulation			
	2. Power System Reliability			
Paper-2	Elective-IV			
	1. HVDC Transmission			
	2. Flexible AC transmission Systems (FACTS)			
Paper-3	Preliminary Thesis			

M.TECH MATERIAL SCIENCE & TECHNOLOGY

SEMESTER-I		SEMESTER-II	
Paper-1	Materials and their Properties	Paper-1	Advanced Material Characterization
Paper-2	Material Characterization-MST-	Paper-2	Ceramics and Biomaterials
Paper-3	Physics of Nano-materials	Paper-3	Solid State Phase Transformations
Paper-4	Thermodynamics MST	Paper-4	Semiconductors and Optoelectronics
Paper-5	Research Methodology MST	Paper-5	Polymers
SEMESTER-III		SEMESTER-IV	
Paper-1	Magnetism and Superconductivity		Thesis Work
Paper-2	Nanomaterials		
Paper-3	Preliminary Thesis Work		

MASTER OF ENGINEERING (BIOTECHNOLOGY)

SEMESTER-I		SEMESTER-II	
Paper-1	Advances in Biochemistry	Paper-1	Research Methodology
Paper-2	Biotechniques	Paper-2	Bioprocess and Bioreactor Engineering
Paper-3	Microbial Biotechnology	Paper-3	Enzyme Engineering
Paper-4	Bioseparation and Bioprocess technology	Paper-4	Genetic Engineering
Paper-5	Elective I	Paper-5	Elective II
a	Stem Cell Biology	a	Advances in Biomaterials

b	Cell & Cell Technology	b	Biopharmaceutical Technology
c	Food Processing and Biotechnology	c	Protein Engineering
SEMESTER-III		SEMESTER-IV	
Paper-1	Elective III	Paper-1	Thesis Work – II
a	Nano Biotechnology and Nano Devices		
b	Agriculture Biotechnology		
c	Bioprocess Control & Instrumentation		
Paper-2	Elective IV		
a	Biological Waste Water Engineering		
b	Biostatistics & Computer Applications		
c	Polymer Science & Engineering		
Paper-3	Thesis Work – I		

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, Transparent Ceramic Material and Technologies, Medical Image Processing, Computer Networking, Cloud Computing, Nano-Materials, Stem Cells, Wireless Communications, Power Systems, Composite Materials etc.

PLACEMENTS: The objective of Training and Placement Cell (TPC) is to provide the best training and placement opportunities to students. Efforts are made by the dedicated members of the team to approach companies and to invite them on campus to recruit students and to provide them the placement and internship opportunities. Over the past many years, UIET has built a strong relationship with many companies that visit UIET on regular basis to recruit students.

TPC also organizes special lectures and soft skills programs regularly, wherein experts from industry are invited and they make students aware about the latest happenings in the industry and guide them about how to appear for interviews and prepare for group discussions, as soft skills play vital role in the selection process.

On an average, around 55 companies visit UIET every year and close to 350 offers are made to final year students who participate in the placement process. The highest package in the session 2019-20 was 41 LPA, given by Microsoft, and the average package was around 7 LPA.

The major recruiters in the session 2019-20 include Google, Microsoft, Amazon, Samsung, Airtel, Goldman Sachs, Deloitte, KPMG, Infosys, Capgemini, ZS Associates, ZScaler, Mu-Sigma, Utrade, Gemini Solutions, Quark etc.

ALUMNI AFFAIRS OFFICE –UIET

The Alumni Affairs Office for UIET was established in the year 2013. Since then we have successfully engaged with over 8000 plus alumni worldwide.

The Alumni Affairs Office aims to establish a better alumni network with a vision to inspire and engage alumni in a mutually beneficial lifelong relationship for constant growth and development of UIET and its alumni network. Its mission is to enable intra -alumni network and foster alumni engagement through mentor-mentee relationship among current students as well as the Alumni, It promotes events & forums that add relevance and value to alumni network and to build a collaborative network of change agents which leads to positive impact on society. We are delighted to inform that we have been able to achieve most of our goals due to full dedication and hard work presented by the Students Team for Alumni Relations and constant support by our faculty members. Here is a summary of the Events we have conducted so far and the tasks accomplished in the last five years.

Alumni database: The Alumni Affairs Office has successfully been able to gather and maintain an Alumni Database from the batches of 2006 to batches of 2018. Our aim is to keep the Alumni database up to date as much as possible. The Alumni database comprises of all the personal information related to our alumni ranging from name, contact no., to current location, company and job profile along with data for higher studies.

Successfully organised 3 Alumni Interactions for Placements: The Alumni Affairs Office has successfully organized 3 Alumni Interaction for placements. The Flagship event is organized for the 3rd year students of UIET every year in the month of August. The main aim of the event to provide opportunities to the students to get placed in the top companies and give heads up about GD and PI preparation for the placement drives. The event comprises of Mock GDs, modulated by the experienced UIET Alumni along with PIs comprising of Interview panel made up of UIET Alumni.

Technical Lecture and Seminars for the students of UIET: Many experts across all over India are invited to deliver talks in their respective areas in all the departments of engineering in UIET. The brief summary of various events organized by Alumni Cell are presented here:-

In the month of April 2018, Mr. Divyanshu Malhotra (film director, writer, and producer) Mr. Munish Kumar (Founder and CEO of Ominous Solutions) Mr. Sharan Mavi (IP core engineer at JIO) visited UIET on 6th April during UIET Alumni Meet. They guided their juniors regarding choosing the creative field as a career, importance of art in our life and career, corporate life in tech and trends in 2018 and entrepreneurship.

In the month of May, 2018, on May 05, Alumni Cell organised Degree Award function for engineering students (2017 pass out students of UIET)

In the month of August, 2018, Alumni Cell organised Alumni interaction at orientation program of first year 2018 batch.

In the month of November, 2018, on 12th November, Mr. Darpan Kalra from Amazon delivered a talk on The Power with in you, after graduating from UIET in 2013, Mr. Darpan got placed from the campus itself and worked with a MNC for a while before joining a

startup company as a Software Engineer where he worked for 2 years to gain quality work experience. Later, he completed masters from a Renowned University of the Ivy League from the United States, 'Cornell University'. He guided students the path for a better career. On 23rd November Alumni organised STAR Farewell. On 30th November, Alumni Cell organised Scribbling day.

In the month of December, 2018. On 11th December Alumni meet up was organised, Mr. Ashish Chawla, from KPMG shared his experiences to give student idea about the jobs and career. After completing his graduation from UIET in 2007, he worked for various companies. He started off his career as an information security analyst at HCL. Then he worked for Quadrant risk management and Protiviti as a Consultant. Later, he worked at Ernst & Young as a senior consultant. Then, he completed his post-graduation from IIM BANGALORE and now he is working with KPMG.

In the month of January, 2019. On 25th January, Alumni session was organised for Mr. Prince who was pass out in year 2012. He has started his career as a Software Engineer and working as a Lead Research Engineer in Monotype. He took a session focusing on Machine Learning and its necessity in the corporate world. On 29th January, Alumni Interactive session was organised in which two successful Alumni Mr. Kunaal Satija and Mr. Hardik Dhamija, shared their experiences at doing job and at building a start up. Both are passed out from same batch together started their career at Utrade Solutions and then build a start up. Mr. Kunaal Satija, founder and Mr. Hardik Dhamija, co-founder at ED Urev. Their learning app, ED Urev was awarded as the best app of 2017 by Google play store.

In the month of February, 2019. On 1st February, Alumni Meet was organised, Mr. Amit Jindal, a successful Alumnus working in INFOSYS USA, and having experience of about 11 years of doing job in technical field, has given students the idea about how things are in technical field in foreign countries. Mr. Preetoj Singh, working in Germany shared his experience in non-technical field.

In the month of May, 2019. On 25th May, degree award function for engineering students (2018 passout) was organized by Alumni Cell.

In the month of August 2019. On 6th August, an alumni talk was organized by alumni cell. The talk was given by alumni Mr. Vishal Kohli, passout from batch 2006. He is a creative director at Fish Eye Group, and also writer and director of the Punjabi movie "Unnikki". On 12th August, a panel discussion was organized including three alumni Mr. Karan Pratap Singh, passout from batch 2012, did his M.tech from Georgia Tech University, Mr. Sahil Relhan, did his MBA from FMS, Delhi University and manager at Pidilite Ltd., Mr. Akhil Jain worked at Goldman Sachs for 2 years. On 14th August, an alumni talk was arranged at orientation ceremony by Mr. Ashish Chawla, Associate Director at KPMG.

In the month of September 2019. On 30th September an alumni talk was organized welcoming Mr. Sahil Dhupar, worked at ZS associates for 2 years and Eli Lily Pharma Company presently. He has also cleared CFA level -1. He talked to students about how to get a placement off-campus.

In the month of October 2019. On 1st October 2019, a movie promotional event was organized by Alumni cell, as the creative director, producer and writer were UIET Alumni, Mr. Vishal Kohli and Mr. Vipul Kamboj. The UIET alumni and the star cast of movie were present at UIET for their promotions.

In the month of November 2019. On 22nd November, UIET Alumni Cell organized scribbling day event for the final year students of UIET. On 29th November, a talk was organized including four of the UIET Alumni. Mr. Sharad Wali, EEE pass out currently working at product manager at Amazon. Mr. Bodhan, Masters from University of New Jersey and works at Facebook currently. Mr. Harsimran, did his Masters from University of Utah, also works at Facebook and Mr. Vivek Sharma all the alumni shared their view about job prospects and shared their experiences with students.

Many more events have been organised.

- **Active Role in NBA Accreditation:** The office played its role in accreditation through maintaining the database for the UIET Alumni. The office also invited Alumni from various fields to interact with the NBA committee for their feedback.
- **Setting up of IPR Cells for UIET:** The office has been also instrumental in setting up of IPR Cell in UIET.
- **Scholarship Disbursement:** The Alumni Cell of UIET is offering two scholarships and sponsoring the internship of two final year students in abroad. This initiative has been started in 2016 and two sponsorships are given to the students.

All of this would not have been possible without consistent support and guidance from the UIET administration and the faculty. We express our gratitude towards the faculty and administration, and wish to see a much better year ahead.

UNIVERSITY CENTRE OF INSTRUMENTATION AND MICROELECTRONICS (UCIM)

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:

Designation	Name
Professor	Ganga Ram Chaudhary (Director)
Associate Professor	H.P.S.Kang
Assistant Professor	Poonam Kumari, Ramesh K Sharma, Anil K Sharma

COURSES OFFERED (SEMESTER SYSTEM)

Course	Seats	Duration	Eligibility Criteria	Admission Criteria
M.Tech (Instrumentation)	10+3 SC/ ST + 2NRI + 1 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) with minimum 50% marks in aggregate.	GATE qualified only GATE Score:50% Academic weightage:50%
M.Sc. (Instrumentation)	20+2NRI + 1 Foreign National	2 years	B.Sc. (Medical / Non-medical / Physics / Electronics / Instrumentation Science / Computer Science / Vocational Physics/ Electronics) or B.E. (E & TC / Instrumentation / Electrical and Electronics/ Electronics & Electrical Communication Engineering) with minimum 50% marks in aggregate	The merit list will be made on the basis of academic Weightage of the eligibility qualification.

*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>

M.TECH. (INSTRUMENTATION)

SEMESTER-I		SEMESTER-II	
Course Id.	Title of Course	Course Id.	Title of Course
INS 61.01	Signal Processing-I	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	
Course Id.	Title of Course	Course Id.	Title of Course
INS 71.01	*Computer Aided Design & Computer Aided Manufacturing	INS 71.04	* Virtual Instrumentation
INS 71.02	*Instrumentation for Special Applications	INS 71.55	Major Project
INS 71.03	*Selected Topics	INS 71.01	Major Project & Thesis
			* Elective Subject

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 components, devices and assemblies	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	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, NMR 400 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, AA SPECTROMETER, RF-DC SPUTTER COATER. 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.

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