2019-20

Department of Chemical Enineering and Technology

TRAINING AND PLACEMENT BROCHURE

CONTENTS

"The University will seek not merely to turn out man as engineers, scientists, doctors, merchants, theologians but also as men of high character probity and honour, whose conduct through life will show they bear hallmark of a great university."

- Mahamana Pt. Madan Mohan Malviya

FROM DIRECTOR'S DESK

Greetings from Indian Institute of Technology (BHU), Varanasi.

In this age of liberalization, privatization, and globalization, there is an ever increasing industry requirement for professionals who have high employability index and required competencies with an inquisitive mindset for innovations. Our collective and continuous commitment is to create vibrant and technology savvy environment where excellence is the credential. Our students imbibe all personality traits, values of the cultural city of Kashi and diversity of the BHU campus within which this Institute exists. This uniqueness helps our students in successfully carrying out their responsibilities as a member of a cross-functional team in any organization.

I am confident that our students will prove their mettle and will contribute immensely towards the growth and success of your organization. Looking into the great achievements of various alumni of this Institute, I am sure that you and your organization is going to have a wonderful experience of intern and full-time hiring at this Institute and this relationship will go beyond for having other kinds of engagements as well for mutual benefits.

Professor Pramod Kumar Jain
Director, IIT (BHU) Varanasi

PROFESSOR IN-CHARGE'S DESK

It gives me immense pleasure to extend to you a most cordial invitation to participate in the campus recruitment programme of Indian Institute Technology (BHU) Varanasi. With an increasing thrust being placed on Institute-Industry-Interaction, it is my sincere belief that your esteemed organization and IIT (BHU) Varanasi stand to gain immensely from this symbiotic relationship.

Our Institute holds the pride of place being pioneers in the field of engineering and-technical education in the country and has a glorious heritage. We have been continuously ranked among elite by our peers and our constant pursuit of excellence has made our Institute a facal point in technical education for students and faculty members also. Admissions to the institute take place through the reputed Joint Entrance Examination (JEE).
As IIT(BHU) Varanasi we take care to groom our students according to the industry. Our students get a lot of Industrial Exposure by frequent Industrial visits.
I forward herewith our brochure providing a profile of the Institute , as well as detailing the various programmes/courses offered by the Departments and Centres. It would be our proud privilage to host you, and we would only be most delighted to be invited in such a partnership. Looking forward to a mutually beneficial relationship and with regards.

Professor Anil Kuvmar Agrawal
Training and Placement Officer, IIT (BHU) Varanasi

ABOUT THE DEPARTMENT

Department of Industrial Chemistry was established in 1921 at Banaras Hindu University. Subsequently, it was renamed as the Department of Chemical Engineering and Technology in 1956. The Department has established several benchmarks of achievements in teaching and research. It modernizes its programmes to impart education in upcoming areas of chemical engineering.

Currently it is ranked among the nation's top departments in chemical engineering. The Department is endowed with faculty members who are dedicated teachers and distinguished researchers and carry out cutting-edge research in all modern areas of chemical engineering, as well as in inter-disciplinary areas like environmental biotechnology, biosciences, hydrogen energy, and others.

The Department provides a vibrant and creative learning environment for our students. We also participate extensively in R&D and consulting for a host of chemical and processing industries in India. Our alumni (graduates with Bachelors, Masters and PhD degrees from our department) have distinguished themselves both in academia and industry, and continue to inspire our current generation of students. The Department invites you to explore more about it through this website, and also invite you to personally visit the department to learn more.

TIMELINE

1920

- Established as Department of Industrial Chemistry(1921)

1930

- 2 Year M.Sc(Tech) course introduced(1935)

1940

- Four Year Bachelor course in Engineering introduced(1949)

1950

- Renamed as Department of Chemical Engineering and Technology(1956)

1960

- Two year Master degree in Chemical Engineering introduced(1963)

1970

1980

1990

- Special Assistance under SAP/COSIST Programs of UGC(1993)
- IFFCO Chair granted by IFFCO(1997)
- UGC Centre of Advanced study(1999)

2000

- DST-FIST(Level-1)(2004)
- UGC Centre of Advanced study Phase II(2005)

2010

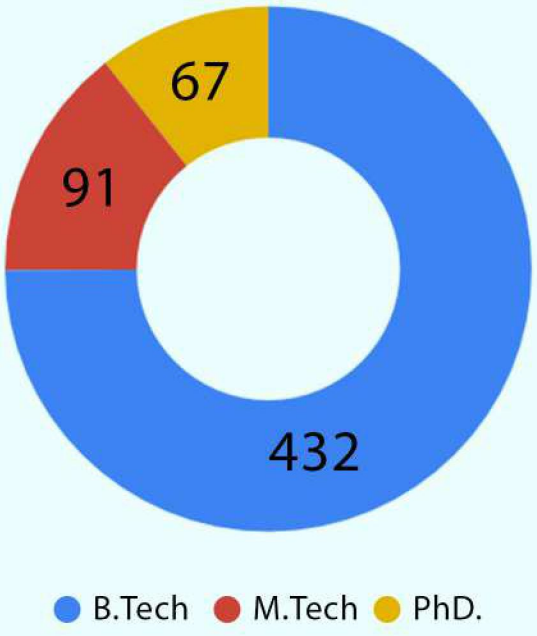
- UGC Centre of Advanced study Phase III(2010)
- Conversion to IIT-BHU(2012)
- DST-FIST(Level 1further fornext 5 years)(2013)

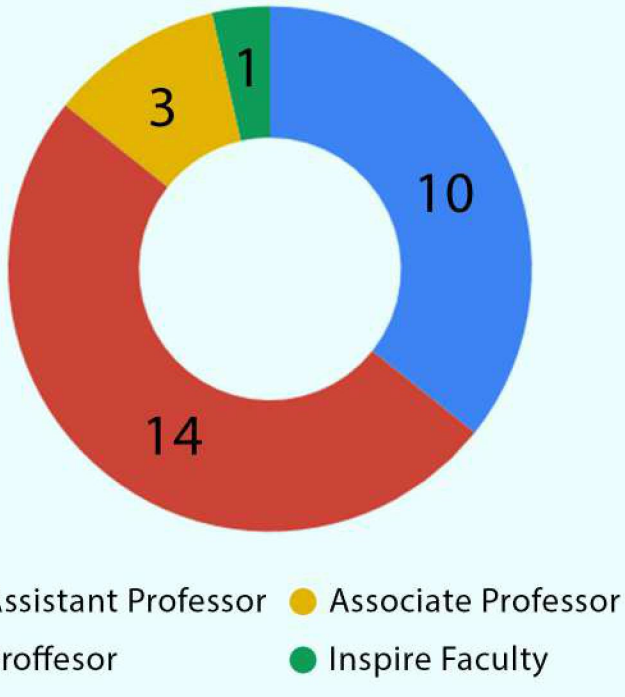
ACADEMICS

FACULTY

- Degrees from renowned colleges from top national and international universities.
- Bestowed with several prestigious awards.
- Involved in cutting edge industrial and state funded research.
- Holding various administrative and managerial offices.
- Authors of several renowned books and publications in journals of national and international repute.
- Offering consultation to industries and the government and mentorship to student startups.
- Serve as visiting faculty in reputed universities.
- Enjoy full academic autonomy to update their curriculum to keep pace with the modern developments and innovate on the current teaching methods.
- By close interaction with the students , our faculty members guide and inspire students towards success.

DEMOGRAPHICS





COURSE STRUCTURE

- Heat Transfer Operations
- Mass Transfer Operations
- Chemical Reaction Engineering
- Fluid Mechanics
- Fluid Flow and Mechanical Operations
- Petroleum Refinery Engineering
- Process Engineering and Plant Design
- Transport Phenomenon
- Process Dynamics & Control
- Numerical Methods in Chemical Engineering
- Computational Fluid Dynamics
- Multi Component Distillation
- CAD and Simulation Laboratory
- Computer Programming
- Heat Transfer Operations
- Energy Resources and Utilization
- Chemical Engineering Thermodynamics
- Reactor Design and Analysis
- Heterogeneous Catalysis
- Process Instrumentation
- Equipment Design
- Industrial Pollution Control
- Biochemical Engineering
- Electrochemical Engineering

ELECTIVES OFFERED

- Ubiquitous Computing
- Network Security
- Parallel Computing and Distributed Systems
- Machine Learning
- Data Mining
- Supply Chain Manangement
- Students also undergo Diploma Courses in BHU

RESEARCH AND DEVELOPMENT

THE DEPARTMENT HAS A STATUS OF CAS BY THE UGC AND A DST-FIST ASSISTED DEPARTMENT

Areas of research

- Catalysis and reaction engineering
- Hydrogen Energy and Fuel cells
- Catalysis in Air Pollution Control
- Development and Characterization of Catalysis for Vario Reactions
- Biodiesel Production and Biomass Gasification
- Photo-catalyst and Electrocatalysis
- Nanotechnology
- Transfer Processes
- Hydrodynamics , Heat and Mass Transfer in Multiphas system
- Microfluidic Devices and Process Intensification
- Waste Management
- Biofilteration for Air Pollution Control
- Waste Water Treatment
- Aerosol Monitoring, Characterization and its Impact Assessment
- Characterization and Anaerobic Digestion of Waste
- Enzymatic Extraction of Dyes
- Biodegradable Polymers
- Modeling, Simulation and Process Optimization
- Process, Dynamics and Control
- Food Technology

RESEARCH AND DEVELOPMENT

THE DEPARTMENT HAS A STATUS OF CAS BY THE UGC AND A DST-FIST ASSISTED DEPARTMENT

Major Research Equipment

- X-Ray Flourescence Spectrophotometer
- UV-Vis Spectrophotometer with Diffuse Reflectance Attachment
- Gas Chromatograph – Mass Spectrometer with Hydrocarbon Analyser
- Flourescence Spectrophotometer with Solid Sample Holder
- Pulse Chemisorb with TPD & TPR
- Surface Area and Pore size Analyzer
- FTR with furnace and Diffuse Reflectance
- Particle Size and Shape Analyzer
- Super Critical Extractor
- Ion Chromatograph
- Parr High Pressure Reactor
- Total Carbon Analyzer
- HPLC
- X-Ray Photoelectron Spectroscope
- X-Ray Diffractometer
- Thermal Analyzer
- ICP Spectrophotometer
- CHNS Analyzer
- Scanning Electron Microscope with EDAX

M.TECH THESIS COMPLETED IN 2019

- Synthesis of TiO2 doped iron oxide nanoparticles
- Synthesis and Characterization of ceria mano materials for NOx reduction by hydrogen selective catalytic reduction technique
- Synthesis and characterization of hierarchical zeolites for catalytic application
- Removal of Hexavalent Chromium from waste water using aloe vera waste leaves
- Synthesis of a chemosensor for the quantitative detection of mercury ions (Hg2+)
- Self cleaning surface
- Dehydration of Glucose using ionic liquid Encapsulated Zeolites
- Hydrogen storage in Nitrogen-Doped Graphene synthesized by Arc Discharge Method
- Preparation of SnO2 doped ZnO nanoparticles by sol gel method .
- Simultaneous doping of anion(I) and cation (Cu) in TiO2 nanoparticles by sol gel method
- Synthesis of activated carbon and its application in butanol production
- Porosity enhancement of carbon xerogel using surfactants as additives and to measure it's supercapacitance
- Simulation of Entrained Flow Gasifier and thermodynamic analysis of CO methanation reaction for SNG production
- IMC Based PID Control of Multivariable Quadruple Tank Process
- Photocatalytic Degradation of HMX effluent in irradiated TiO2 suspensions

SOCIETY OF CHEMICAL ENGINEERS

OSMOZE

- Industry Defined Problems
- Paper Presentation
- Applications of Chemical Engineering
- Sports Events

PRO-INDUSTRIAL EXPOSURE

- Guest Lectures
- Alumni Student Interaction
- Exposure beyond theoretical knowledge
- Industrial Tours

SKILL DEVELOPMENT

- Personality Development
- ChemeCode
- Smart Technocrats
- Technical Workshops

PAST RECRUITERS

SRF
We always find a better way

PEPSICO

ESSAR

Reckitt Benckiser

Hindustan Unilever Limited

Reliance
Industries Limited

Cipla

FLUOR

TATA

इंडियनऑयल

NAYARA
ENERGY

Bharat Petroleum

PAST RECRUITERS

CONTACT US

Prof. Ravi Jaiswal

Training and Placement In-charge

Training and Placement cell
Indian Institute of Technology (B.H.U.),
Varanasi

Ph. No.: 0542-2307007 ; 2368160
Fax : 0542-2369162 ; 2368428
Email : tpo@iitbhu.ac.in
Website : www.iitbhu.ac.in/tpo/

Training and Placement Representatives

B.Tech Part IV

Avnish Singh
E-mail : avnish.singh.che16@itbhu.ac.in
Contact : 9935110499

Krishna Raj
E-mail : krishna.raj.che16@itbhu.ac.in
Contact : 9599473066

B.Tech Part III

Aniruddha Sharma
E-mail : aniruddha.sharma.che17@itbhu.ac.in
Contact : 9599473066

Sahil Goyal
E-mail : sahil.goyal.che17@itbhu.ac.in
Contact : 9887029289

M.Tech Part II

Prashun Pradeep
E-mail : prashunpradeep.che18@itbhu.ac.in
Contact : 9973460848

Shweta Singh
E-mail : shwetasingh.che18@itbhu.ac.in
Contact : 9754003457

Design Team

B.Tech Part IV : Saurabh Verma

B.Tech Part III : Prakhar Bhatnagar