

Indian Institute of Technology Patna



Placement Brochure 2017-18

CHEMICAL SCIENCE AND TECHNOLOGY

TRAINING AND PLACEMENT CELL

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Message from TPC Team

Innovation and/or optimisation of synthesis and process development techniques are must in any chemical industries. We, Department of Chemical and Biochemical Engineering at IIT Patna, offer courses and training to chemical science and technology (CST) students to impressively perform in any given challenges of chemical industries. The courses are structured to strengthen their fundamental knowledge through extensive experiments and lectures in basic chemical engineering subjects such as Chemical Process Calculations, Heat and Mass Transfer, Petroleum and Petrochemicals, Chemical Reaction Engineering and etc. .During the course curriculum, these CST students are exposed to real world problems through their industrial trainings and chosen Bachelor Of Technology Projects (BTP). Hence, our students can prove to be an asset for any chemical industries due to their skills in not only synthesising chemicals but also scaling them up.

Our department has young and dynamic faculties who are committed in developing highly-qualified graduates who are self-motivated, independent and clear thinking individuals capable of undertaking an independent work in industry and research and development programs and government and public sectors undertakings. Currently, the department is involved in executing world class research in the field of energy and environment, biotechnology, materials processing, modelling and simulation of chemical processes, and catalysis engineering. And we ensure our undergraduate students get adequate understanding of different analytical facilities which could be required for performing such research work. Besides their training in chemical engineering courses, we also make certain that our students should be amicable and easy to work in a team.

I heartily welcome both the recruiters and our graduating students to come to a common platform and get the best out of each other. I look forward to placement season 2017-18 and wish the students all the best.

Dr. Sushant Kumar
Asst. Professor
Department of Chemical and Biochemical Engineering,
Training and Placement Cell Team



Message From Head of Department

The Department of Chemistry at IIT Patna has been engaged in imparting the highest level and quality of chemistry education to engineering and science students of the institute since the inception of the institute in 2008. The department has several state-of-the-art instruments to support cutting-edge research activities. Moreover, students and researchers in the department have access to sophisticated research facilities in other departments and centres across the Institute.

Since its inception, the department has attracted world class faculty members, who are involved in all major areas of chemistry research. Several chemistry dept. faculty members are also engaged in inter-disciplinary research spanning fields such as biology, physics and materials science.

The B.Tech. program in Chemical Science and Technology is very flexible and allows students to opt for courses according to their requirement. There is a compulsory component of the program that includes basic courses in chemistry, mathematics, physics, life-sciences, humanities and social sciences. Other courses include multiple electives offered by the department of chemistry, chemical engineering, material science & engineering, and several open electives offered by other engineering departments as well as departments of physics and mathematics. A research project of one year, in discipline of either Chemistry or Chemical Engineering is compulsory as a requisite for the partial fulfilment towards the award of B.Tech degree.

I highly value our partnership with recruiters and friends of IIT Patna and remain committed to making your recruiting experience productive and positive. I invite the recruiting organisations and graduating students to find the best match between their needs and capabilities.

Dr. Neeladri Das
Associate Professor
Head of Department, Chemistry
Indian Institute of Technology, Patna

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ORIGIN

Chemical Science and Technology was introduced as a discipline with a vision to create human resources to be competent in both Industry and Academia, for this discipline is an amalgamation of two different streams - Chemical Engineering and Chemistry. The two departments work together and students are imparted a plethora of knowledge and a variety of skills, to create human resources of unmatched quality.

Chemical Engineering

The Department provides a rigorous academic curriculum and a vibrant learning environment to prepare quality students at the Bachelors, Masters and Doctoral level for the challenges of the industry and academia. With the cutting edge research undertaken by the faculty in areas of core Chemical Engineering and various inter-disciplinary areas, in tandem with R&D processing industries in India and abroad, the Department continues its legacy as a premier seat of professional education.

Chemistry

A vibrant multidisciplinary research program in the Department of Chemistry at IIT Patna is supported by energetic faculty members. With a strong foundation in the conventional areas and quest for emerging areas of Chemistry, faculty and students are engaged in a range of dynamic research programs that include Supramolecular Chemistry, Target and Diversity oriented Organic synthesis, Nanochemistry, Catalysis, high resolution and Bio-Spectroscopy, Polymer and Biochemistry.

COURSES OFFERED

Chemical Engineering

- CHEMICAL PROCESS CALCULATIONS
- FLUID MECHANICS
- THERMODYNAMICS
- HEAT AND MASS TRANSFER
- PROCESS CONTROL AND INSTRUMENTATION
- CHEMICAL REACTION ENGINEERING
- PLANT DESIGN AND ECONOMICS

Chemistry

- CHEMICAL KINETICS
- ELECTROCHEMISTRY
- PETROLEUM AND PETROCHEMICALS
- POLYMER CHEMISTRY
- BIOCHEMISTRY AND BIO-TECHNOLOGY
- INDUSTRIAL CHEMISTRY
- CATALYSIS
- ORGANIC AND INORGANIC CHEMISTRY
- DYES, PAINTS AND PIGMENTS

Interdisciplinary and Electives

- OBJECT ORIENTED PROGRAMMING IN JAVA
- PROGRAMMING IN C
- ENTREPRENEURSHIP
- PROCESS INTEGRATION
- NUMERICAL METHODS
- MOLECULAR MODELLING AND SIMULATION
- OPTICS AND LASERS
- ECONOMICS
- NANO-MATERIALS

STUDENT EXPOSURE

RESEARCH INTERNSHIPS

- University of Paris-Sud, France
- Nanyang Technological university, Singapore
- National Tsing Hua University, Taiwan
- Northern Federal University, Russia
- Oregon Health and Science University, USA
- University of Tokyo, Japan
- Indian Institute of Science, Bangalore
- Chittaranjan national cancer Institute, Kolkata
- Indian Institute of Technology Kanpur

INDUSTRIAL INTERNSHIPS

- Reliance Industries Ltd.
- Indian Oil Corporation Ltd.
- Tata Steel
- Marico
- Gujarat Heavy Chemicals Ltd.
- Hindustan Petroleum Corporation Ltd.
- National Fertilisers Ltd.
- Aditya Birla Nuvo
- Chembiotech
- Aurobindo Pharma Ltd.
- Nuclear Power Corporation of India
- Telangana Power Generation Corporation

WORKSHOPS AND INDUSTRIAL VISITS

Visit to United Breweries Ltd.

Students actively participate in industrial visits to supplement and enhance theoretical knowledge and to get first hand experience on industrial challenges and latest technology coming up in the industries. Past industrial visits include United Breweries Ltd, And visit to Concrete Batching Plant.

GIAN (Global Initiative of Academic Networks) course

A GIAN course on Modelling approaches of Nanoscale filtration processes of solutions and Suspensions was conducted in July 2016. The course covered important problems connected with transport phenomena through different porous media .

Workshop on Modelling, Analysis and Computation

A four day workshop on Fluid Mechanics: Modelling, Analysis and Computation was organised in July 2016. Internationally renowned experts working on the frontier areas under the theme of the event stimulated and provided new directions to the young researchers.

Workshop on COMSOL Multiphysics®

An intensive advanced training course on COMSOL Multiphysics® was organised from Mar 6 - Mar 10, 2017. It emphasised on application of advanced CAD, meshing, and solver techniques, impressive visualisation, extending functionality, equation-based modelling & variable mapping and more.

JOB PROFILE

Contrary to the contemporary engineering disciplines, the academic curriculum takes a step ahead with emphasis being laid on employment in industry. The curriculum is designed keeping in mind the latest technological developments and the requirements of modern chemical industries. The graduates are well equipped to foray into various challenging opportunities and perform divergent roles in various sectors such as :

- Quality Control and Production Units
- Research and Development Process Control
- Supply Chain Management
- Marketing and Human Resource Development
- Industrial Consultancy
- Programming and Simulation

The inclusion of a vast variety of courses in the academic curriculum enables the students to be employed in different industries such as :

- Oil and Petrochemicals
- Pharmaceuticals
- Instrumentation Industry
- Fast Moving Consumer Goods
- Agro and Food Processing
- 3rd Party R&D
- Chemical Consultancies
- Pesticides and Agricultural Chemicals Industry
- Life Sciences
- Paint and Polymers
- IT Software/IT Consultancies
- Paper, Pulp and Textile
- Fine Chemicals

PLACEMENT TEAM 2017-18

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