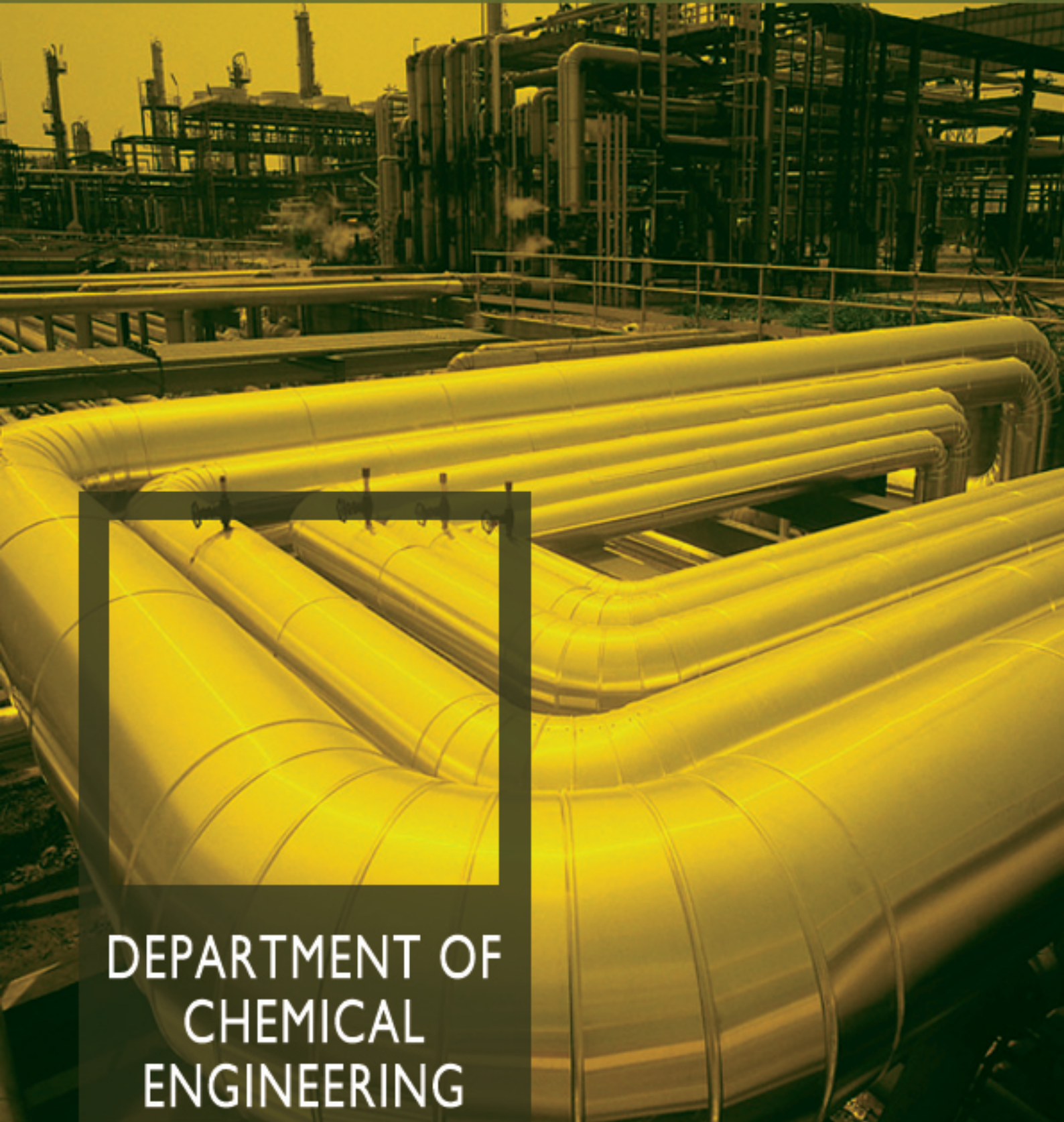




Birla Institute of Technology & Science, Pilani
Hyderabad Campus



**DEPARTMENT OF
CHEMICAL
ENGINEERING**

ABOUT THE DEPARTMENT

Looking into the rapid change in the living environment, Department of Chemical Engineering at BITS Pilani, Hyderabad campus is determined to nurture new talents and create leaders and entrepreneurs who can develop world class clean and green technologies for long term sustainable environment which would also bring high level value addition for the chemical industry. Our mission is to drive excellence in Chemical Engineering Education and Training thereby leading the creation of a common platform for connecting minds of people from academia and industry in the exchange of knowledge for mutual benefit and to strive continuously for developing new technologies to design cost effective processes and products which serves the need of society effectively.

Chemical Engineering Department comprises of highly experienced and qualified faculties generally Postdocs from world's renowned universities, equipped with highly specialized skills with national and international recognitions.

The Department offers a compact and efficient undergraduate program BE (Honours) in Chemical Engineering which gives students an excellent exposure to fundamentals and to industrial application of concepts.

Our leading edge areas of research are- Bioprocess Engineering, Fermentation Technology, Computational Fluid Dynamics, Experimental Fluid Dynamics, Renewable Energy Utilization, Biofibres, Batteries and Fuel Cells, and Polymer Science & Technology along with conventional areas like Environmental Technology, Reactor Design and Scale-up, Down Stream Processing, Heterogenous Catalysis etc..

“ It is a great pleasure to welcome you to the Department of Chemical Engineering at BITS Pilani Hyderabad Campus through this brochure. We regard ourselves as one of the premier Department of Chemical Engineering present in a deemed university at national level. And, this is a reflection of the strength of our faculty and students. Our 1st B.E. (Honours) batch at Hyderabad, is ready for on campus placement. I am confident that the students of our department will live-up to your expectations.

-Prof.Aradhana Srivastava, Group Leader
Department of Chemical Engineering



ACADEMIC PROGRAMS

B.E.(Hons.) Chemical Engineering

Their core courses are:

- Thermodynamics
- Structure and Properties of materials
- Chemical Process Calculation
- Fluid Flow Operations
- Chemical Engineering Thermodynamics
- Kinetics and Reactor Design
- Heat Transfer Operations
- Mass Transfer Operations
- Selected Chemical Engineering Operations
- Process Control

- Process Design Decision
- Chemical Process Technology

Departmental elective courses-

- Process Equipment Design
- Process Plant Safety
- Corrosion Engineering
- Transport Phenomena

NOTABLE LABS AND FACILITIES

Our labs are equipped with state-of-the-art special purpose equipments for liquid processing, solid-liquid handling, absorption, adsorption, environmental research, cooling tower, heat exchangers, distillation setup, process control equipments, mixing units, sedimentation unit, environmental pollution analytical instruments, reactors- batch, CSTR, and PFR, a wide range of modern analytical measurement equipments, and computers with Chemical Engineering software (ASPEN, MATLAB, and LABVIEW etc.).

Our students do a wide variety of research projects opting them as SOP/LOP and BE thesis. They also do projects in "Practice School (PS)" stationing at industries; and gain a balanced experience from industry and Academia.

- Measurement Techniques II lab,
- Transport Phenomena lab,
- Selected Chemical Engineering Operations lab,
- Reaction Engineering lab,
- Process Control Lab,
- Separations lab,
- Environmental Engineering lab



COLLABORATIONS AND RESEARCH FUNDING

In PS, students get trained in real life industry environment throughout summer after second year, and a semester during their final year BE program. Some of the Chemical industry collaborators of BITS Pilani are given below-

- Diamler Chrysler Research and Technology India Pvt. Ltd.,
- Reliance Energy,
- Tata Chemicals,
- NFCL,
- Dabur,
- Novartis,
- Hetro drugs,
- BARC etc.

PAPERS AND PUBLICATIONS

The Department of Chemical Engineering has faculties publishing papers and citations in the journals of high impact factor upto 6.95 with citation index varying from 2 to 66.

No. of publications

- 112 publications in national and international journals

No. of patents

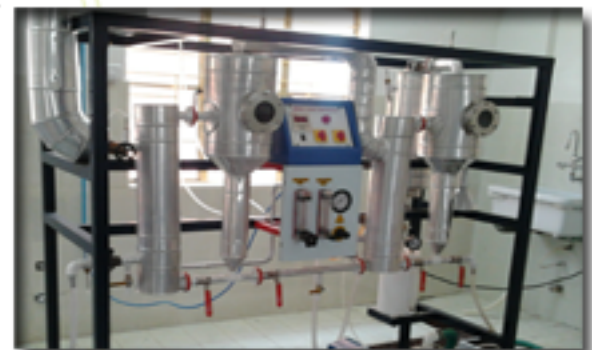
- 11 patents and 8 of them are international patents



PROJECTS

Students and faculty members are actively involved in research projects. Following research projects were completed by 2008 batch students in the department-

- Optimization of ethanol production in *S. cerevisiae* using metabolic Engineering
- Utilization of Renewable energy source biomass for the production of organic acids namely lactic acid, citric acid and oxalic acid
- Micro Reactor Technology: Hydrogen Production
- Metabolic Engineering: Basics and Applications in Anti-Apoptosis Engineering Gasification
- Computational Fluid Dynamics
- Micro Reactor Technology: Hydrogen Production
- Optimization of Bio-ethanol Production using Sweet Sorghum(*Sorghum bicolor*) using an appropriate microorganism
- Packed Bed Reactor
- Natural fibre reinforced polypropylene composites
- Reaction Engineering aspects in solid acid catalysis aromatic nitration
- PHB production from biomass
- Use of polymeric membranes for waste removal
- Minimization of coke formation in the vapor phase pyridine synthesis



CONTACT INFORMATION

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