



**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE (PILANI)**  
(Pilani, Goa, Hyderabad, Dubai)



An overview of **Ph.D.** in various disciplines  
of **Engineering, Science** and **Humanities**



## HIGHLIGHTS OF THE Ph.D. PROGRAMME

- Ph.D. offered in various disciplines across 4 campuses
- Internationally acclaimed training towards Ph.D. degree
- Highly qualified faculty in all disciplines
- State-of-the-art laboratory / research facilities
- Extremely vibrant research atmosphere with opportunities to interact with eminent scientists world-wide
- Opportunities to present the research in international and national conferences, within and outside the country
- Opportunities to publish in high impact journals
- Provision of financial support through fellowships and discounted fee
- Opportunities to participate in teaching activities at BITS
- Close linkage with the industry

## Ph.D. PROGRAMME DETAILS

### On Campus full-time Ph.D. Programme

Candidate enrolls in full-time Ph.D.

### On Campus part-time Ph.D. Programme

Professionals working in organizations in close vicinity of campuses

### Off Campus Ph.D. Programme (Aspirant Scheme)

For professionals working in an organization collaborating with BITS

## DEPARTMENTS OFFERING Ph.D.

### Engineering

Chemical Engineering, Computer Science and Information Systems, Electrical and Electronics Engineering, Mechanical Engineering, Civil Engineering

### Science

Biological Sciences, Chemistry, Physics, Mathematics, Pharmacy

### Humanities

Humanities and Social Sciences, Economics and Finance

## ELIGIBILITY

- Admission twice a year (August and January)
- Any higher degree holder such as M.E / MBA / MPharm / MPhil or its equivalent with a minimum of 60% aggregate
- Candidates with M.Sc / B.E. / B. Pharm or equivalent with 60% aggregate may also be considered subject to suitability and competence (not applicable for Aspirant candidates)
- Admission through written exam and interview for On-Campus programmes

## APPLICATION AND ADMISSION

- Admission twice a year (August and January)
- Advertisement for Ph.D. admissions in April and October every year at <http://www.bitsadmission.com> and National Dailies
- Online application through <http://www.bitsadmission.com>
- Candidates have to apply along with details required in the application form
- Applications are shortlisted by individual departments
- Shortlisted candidates are called for written exam and/or interview during last week of July (1st semester admission) or first week of January (2nd semester admissions)

## IMPORTANT DATES FOR NEXT SEMESTER ADMISSIONS

**Application forms available from: 21<sup>st</sup> April 2016**

**Last date of receipt of application: 18<sup>th</sup> May 2016**

**Admission test and selection: 20<sup>th</sup> July 2016**

## IMPORTANT CONTACTS

**Dean, Academic Research: Prof. S.K. Verma** ([skverma@pilani.bits-pilani.ac.in](mailto:skverma@pilani.bits-pilani.ac.in)), Ph: +91-1596-515204

**Dean, Admissions: Prof. S. Gurunarayana** ([sguru@pilani.bits-pilani.ac.in](mailto:sguru@pilani.bits-pilani.ac.in)), Ph: +91-1596-515294

For further details, visit our website: <http://www.bits-pilani.ac.in/index.aspx>



## Hyderabad Campus

# DEPARTMENT OF CHEMICAL ENGINEERING

### Faculty and Research Areas

**Prof. I. Sreedhar** - Kinetics & Catalysis, Process Development & Intensification, Fluid Rheology, Carbon Capture.

**Prof. Srikanta Dinda** - Kinetics & Catalysis, Process & Product Development, CO<sub>2</sub> Capture, Petroleum Refining.

**Dr. D. Purnima** - Polymer membranes, Composites & Rheology.

**Dr. Balaji Krishnamurthy** - Electrochemical Engineering, Fuel Cells, Polymers, Water Treatment.

**Dr. Ramesh Adusumali** - Characterization of Polymers, Fibres and Composites, Pulp & Paper, Solid Waste Management

**Dr. Karthik Chetan V.** - 3-D printing, Material Development & Characterization, Biomaterial.

**Dr. Asma Ahmed** - Biofuels, Microbial Treatment of Industrial and Agricultural Wastes and Wastewater

**Dr. Vikranth Surasani** - Pore Network & Reactive Transport Modeling, Simulation of CLC, Wet Granulation, Municipal Solid Waste

### Infrastructure and Laboratories

- The Department of Chemical Engineering has five undergraduate labs, namely Selected Chemical Engineering Operations including boiler house, Transport Phenomena, Chemical Reaction Engineering and Process Control labs.
- The department also houses a Petroleum Engineering lab, Multiphase Systems lab, Environmental Engineering lab, Advanced Separation processes lab including RO water plant, Materials Science and Engineering lab for the Master's program.
- The department houses common apparatus such as Supermass collider (Ultrafine friction grinding machine), Micro Gaschromatography (Agilent G3581A-490, used to detect C1-C5 gases, CO<sub>2</sub>, N<sub>2</sub>, H<sub>2</sub>, O<sub>2</sub> using TCD and FID detectors), Vacuum Oven, Moisture Analyzer, Karl Fisher Titrator, Electrospinning Machine, Fluidized bed Granulator, BET Surface area analyser (0.1-1500 m<sup>2</sup>/g), Gas Liquid Chromatography (FID detector), Muffle furnace (1000 °C), Fixed bed reactor (up to 1200 °C), Brookfield Rheometer, Potentiostat & Galvanostat, Temperature controller bath, High Pressure Autoclave (PARR reactor, 350 °C, 140 Kg/cm<sup>2</sup>), Reid Vapor Pressure Bath, Rotary Microtome (Leica, sections of 500 nm using tungsten carbide and diamond knife, automated), Humidity Chamber (40 to 80% RH, 10 °C - 60 °C), Tray Fermenter, Stirred tank bioreactors, Rotary

Pulp Digester (160 °C, 10 Kg/cm<sup>2</sup>), UV-Visible double beam Spectrophotometer (190-1100nm), Optical Microscope, Injection moulding (200°C), Compression moulding (250 °C), Ultrasonic processor (VCX 130 Sonic Vibra cell.), Autoclave (Ambient to 140 °C), Thermax Boiler (REVOMAX, 200 Kg/hr), Bubble cap distillation column and Filtration equipments.

- Software tools such as ANSYS-CFD, COMSOL, MATLAB, MATHCAD, ASPEN, etc are also available for computational work in the Central Computer Aided Design laboratory.

### Current Ph.D. / Research statistics

No. of Ph.D. students presently enrolled	10 (Full time - 8, Part time - 2)
No. of Ph.D. students graduated	NIL
No. of publications in the last 5 years	70 (Journals, Books and Patents)
No. of sponsored projects completed	1
No. of sponsored projects on-going	8
No. of Project fellows	3 (not registered for Ph.D.)

### Highlights of the Department

- ✓ Faculty with broad spectrum of research and teaching experience.
- ✓ Dealing with ~ 2.2 Crores of ongoing funded projects (DST, CSIR, DRDO, BIRAC).
- ✓ Good no. of publications in Scopus indexed journals.
- ✓ Collaboration with various organizations such as ASL (DRDO) and Ardee Hi-tech Pvt Ltd, Vizag.
- ✓ High-end research facilities.
- ✓ Filed 10 patents by faculty members.
- ✓ B.E Chemical Engg.; M.E Chemical Engg.; Ph.D.; Minor in Materials Science and Engg.





### *Present Ph.D. students testimonials*

BITS Pilani, Hyderabad campus offers excellent infrastructure and facilities for Ph.D. program.

*- Chandrakala K.*



I feel myself privileged to be trained by professors who showed us how to achieve rigor and relevance in research during Ph.D.

*- Appala Naidu U.*



I am happy to be associated with BITS Pilani Hyderabad campus for my Ph.D research work as the facilities, infrastructure and experienced faculty available at BITS create ideal environment for scholars to pursue Ph.D.

*- Madhavi B.*



### *Department specific contact*

#### **Dr. Ramesh Babu Adusumalli**

*HoD, Department of Chemical Engineering*

**E-mail:** ramesh.babu@hyderabad.bits-pilani.ac.in

**Tel:** +91-40-66303554 (Mobile: +91-9848723783)

**Weblink:** <http://www.bits-pilani.ac.in/hyderabad/chemicalengineering/chemicalengineering>



#### **Birla Institute of Technology and Science, Pilani**

Hyderabad Campus,  
Jawahar Nagar, Shameerpet Mandal,  
Hyderabad - 500 078  
Telangana, India

Phone : +91-40-66303999

Fax : +91-40-66303998

<http://www.bits-pilani.ac.in/Hyderabad/index.aspx>