Multiply Your Career Opportunities – Join BITS Pilani, where “BRILLIANCE MEETS EXCELLENCE”

Department Research Areas for Part-time PhD

ENVIRONMENT
- Water & Wastewater Treatment
- Oil Spill Treatment for Soil and Water
- Membranes for Water Treatment

ENERGY
- Bioreactor Analysis & Design
- Inherent Safety of Industrial Reactors
- Waste to Energy/value added chemicals

GENERAL
- Soft/Hard sensors, Artificial Intelligence
- Fault Detection and Diagnosis in Process Industries

Research Facilities @ Department
- AAS, GC, DSC, FTIR, TGA, DT-TGA, HPLC
- BET Surface area analyser, UV-VIS spectrophotometer
- High Speed Imaging, Dynamic Foam Analyser
- Planetary Ball Mill
- Bomb Calorimeter
- Fixed Bed Catalytic Reactor
- Fluidized Bed Pyrolysis Unit
- High Pressure Reactor
- Syringe-needle assembly for polymer extrusion
- Gas Chromatography (GC)
- Membrane Gas Permeation System

Research Setsupts and Analytical facilities

<table>
<thead>
<tr>
<th>Bio-filter Column</th>
<th>Saybolt &amp; Engler Viscometer</th>
<th>High temperature horizontal tubular furnace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass Gasifier</td>
<td>Penetrometer Apparatus</td>
<td>Dead end filtration cell</td>
</tr>
<tr>
<td>Pyrolysis Unit</td>
<td>Melting Point &amp; Smoke Point Apparatus</td>
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<td>Reactive Distillation</td>
<td>Oxidation Stability Tester</td>
<td>Fluoride and lead ion selective electrode</td>
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<tr>
<td>Adsorption Air-lift Bioreactor</td>
<td>Hydroimeters and Pycnometers</td>
<td>Buchner standard filtration cell</td>
</tr>
<tr>
<td>Fixed Bed Catalytic Reactor</td>
<td>Conradson Carbon Residue</td>
<td>CFD software ANSYS FLUENT 19</td>
</tr>
<tr>
<td>Fluidized Bed Pyrolysis Unit</td>
<td>Planetary Ball Mill</td>
<td>CFD software COMSOL Multiphysics S.A.</td>
</tr>
<tr>
<td>High Pressure Reactor</td>
<td>Multistage Fluidized Bed</td>
<td>High Performance computing cluster, GRAMACS, LAMMPS and Gaussian Software</td>
</tr>
<tr>
<td>Syringe-needle assembly for polymer extrusion</td>
<td>Reversed Jet Loop Reactor</td>
<td>MATLAB and ASPEN</td>
</tr>
<tr>
<td>Gas Chromatography (GC)</td>
<td>Membrane Gas Permeation System</td>
<td>CFD software ANSYS FLUENT 19</td>
</tr>
</tbody>
</table>

ELIGIBILITY CRITERIA
- BE/ B.Tech/ ME / M.Tech—minimum of 60% aggregate in Chemical Engg, Material Science & Engg, Mechanical Engg, Civil Engg, Electrical Engg, Electronics Engg & Communications, etc.
- MSc—minimum of 60% aggregate in life sciences, Physics, Nanotechnology, Polymer Technology, Plastic technology, Materials Science, Chemistry, Mathematics etc.

HOW TO APPLY
- Prescribed application forms available at [https://www.bitsadmission.com/phdmain.aspx](https://www.bitsadmission.com/phdmain.aspx)
- Department webpage [https://www.bits-pilani.ac.in/pilani/chemicalEngineering/ChemicalEngineering](https://www.bits-pilani.ac.in/pilani/chemicalEngineering/ChemicalEngineering)

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