




CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A), HYDERABAD-75  
DEPARTMENT OF CHEMICAL ENGINEERING  
Undergraduate chemical engineering

Name of the Laboratory: <b>Chemical Reaction Engineering Lab</b>
Location in the department building: K-105 (K-Block, First floor)
Geo – tagged photo of lab (submitted to NAAC): 
Name of faculty lab incharge, designation, email, mobile no.: <b>I Bala Krishna</b> , Assistant Professor ( Sr), <a href="mailto:ibalakrishna_chem@cbit.ac.in">ibalakrishna_chem@cbit.ac.in</a> Mobile no: 9440450622
Name of lab Technician, designation, email, mobile no.: <b>Sri. V. Sanjeev Reddy</b> , Technician Grade-III, Department of Chemical Engineering, <a href="mailto:vsanjeevareddy_ntchem@cbit.ac.in">vsanjeevareddy_ntchem@cbit.ac.in</a> ; Mobile No.: 98493 74375
Importance of the lab for chemical engineering course: The purpose of this lab is to make students understand practically, the types of reactors, nature of the reactions whether they are homogeneous or heterogeneous and to find the kinetics of the reactions viz., rate equation, rate constants, temperature effects etc.
Responsibilities as lab incharge: <ol style="list-style-type: none"><li>1. To ensure the maintenance and upkeep of the lab and to see that they are available in working condition to the students.</li><li>2. To maintain the lab manuals</li><li>3. Display 'list of equipment', Syllabus, 'list of experiments', 'safety precautions'</li><li>4. To upgrade the equipment whenever the need arises.</li><li>5. To follow up for the accreditation processes.</li><li>6. To make proposals for the lab requirements like chemicals and glassware.</li></ol>
List of major Equipment: <ol style="list-style-type: none"><li>1. Batch Reactor</li><li>2. Tubular Reactor in series with Mixed flow reactor</li><li>3. Mixed flow reactors in series</li><li>4. Adiabatic Batch Reactor</li><li>5. Non ideal Tubular Reactor</li><li>6. Packed Bed Reactor</li></ol>


  
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Chaitanya Bharathi Institute of Technology  
Gandipet, Hyderabad-75

<b>Name of the Laboratory: Instrumentation and Process Control Laboratory</b>
<b>Location in the department building: K-104 (K-Block, First floor)</b>
<b>Geo – tagged photo of lab (submitted to NAAC):</b>

<b>Name of faculty lab incharge, designation, email, mobile no.:</b>
<b>Dr P. V. Naga Prapurna</b> , Associate Professor, Department of Chemical Engineering, <a href="mailto:nagaprapurna_chem@cbit.ac.in">nagaprapurna_chem@cbit.ac.in</a> ; Mobile: 9885256057
<b>Name of lab Technician, designation, email, mobile no.:</b>
<b>Sri. V. Sanjeev Reddy</b> , Technician Grade-III, Department of Chemical Engineering, <a href="mailto:vsanjeevareddy_ntchem@cbit.ac.in">vsanjeevareddy_ntchem@cbit.ac.in</a> ; Mobile No.: 98493 74375
<b>Importance of the lab for chemical engineering course:</b> The primary objective of the lab is to learn about automatic control of chemical processes, instruments required for measuring the process operating conditions, closed loop response of processes and tuning of control elements.
<b>Responsibilities as lab incharge:</b>
<ol style="list-style-type: none"> <li>1. Major equipment required for conducting the lab as per curriculum.</li> <li>2. Laboratory manual with sample calculations</li> <li>3. Display ‘list of equipment’, Syllabus, ‘list of experiments’, ‘safety precautions’.</li> <li>4. Check all the equipment working conditions before the start of semester lab schedule.</li> <li>5. Monitor the cleanliness and ambience of the lab through the assigned technician.</li> <li>6. Follow-up on the required servicing of the lab equipment.</li> <li>7. Maintain the batch wise student sample records for accreditation inspections.</li> <li>8. Upgrade existing equipment/ software as per revised curriculum.</li> <li>9. Add new equipment to the lab as per curriculum revisions through budget proposals, call for quotations, comparison statements, follow-up on purchase, installation, training and update of required lab manuals.</li> </ol>
<b>List of major Equipment:</b>
<ol style="list-style-type: none"> <li>1. Flow Control Trainer</li> <li>2. Level Control Trainer</li> <li>3. Temperature Control Trainer</li> <li>4. Pressure Control Trainer</li> <li>5. Multi capacity Interacting and non-Interacting two tank system</li> <li>6. Second Order System – U tube manometer</li> <li>7. Control Valve Characteristics</li> <li>8. Differential pressure Transmitter</li> </ol>

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Name of the Laboratory: <b>Mass Transfer Operations Lab</b>
Location in the department building: K-103 (K-Block, First floor)
Geo – tagged photo of lab (submitted to NAAC): 
Name of faculty lab incharge, designation, email, mobile no.: <b>Dr. M.Mallaiah</b> , Associate Professor, Department of Chemical Engineering, <a href="mailto:mallaiah_chem@cbit.ac.in">mallaiah_chem@cbit.ac.in</a> ; Mobile: 9948107272
Name of lab Technician, designation, email, mobile no.: <b>Sri M. Laxmana Chary</b> , Technician Grade-I, Department of Chemical Engineering, <a href="mailto:laxmanachary_ntchem@cbit.ac.in">laxmanachary_ntchem@cbit.ac.in</a> , Mobile No.: 9885095179
<b>Importance of the lab for chemical engineering course:</b> The present MTO Lab purpose to UG students is to understand the most important separation process industry and provide hands-on training of the unit operations. It helps to understand not only theoretical knowledge but also helps to visualize the real world applications in the chemical and allied industries.
Responsibilities as lab incharge: <ol style="list-style-type: none"> <li>1. Major equipment selection to conduct the lab as per curriculum.</li> <li>2. Preparation of the laboratory manual along with sample calculations</li> <li>3. Display of ‘list of equipment’, Syllabus, ‘list of experiments’, ‘safety precautions’.</li> <li>4. Check the working conditions of all the equipment before the start of the lab .</li> <li>5. Monitor the cleanliness and ambience of the lab through the assigned technician.</li> <li>6. Follow-up on the required servicing of the lab equipment.</li> <li>7. Maintain the batch wise student sample records for accreditation inspections.</li> <li>8. Upgrade existing equipment as per revised curriculum.</li> <li>9. Add new equipment to the lab as per curriculum revisions through budget proposals, call for quotations, comparison statements, follow-up on purchase, installation, training and update manuals.</li> </ol>
List of major Equipment: <ol style="list-style-type: none"> <li>1. Packed bed distillation(HETP)</li> <li>2. Diffusivity apparatus</li> <li>3. Simple distillation</li> <li>4. Steam distillation</li> <li>5. Vapor Liquid Equilibria</li> <li>6. Batch drying</li> <li>7. Wetted wall column</li> <li>8. Liquid-Liquid Extraction</li> <li>9. Solid Liquid Extraction</li> <li>10. Adsorption</li> <li>11. Batch crystallization</li> </ol>

  
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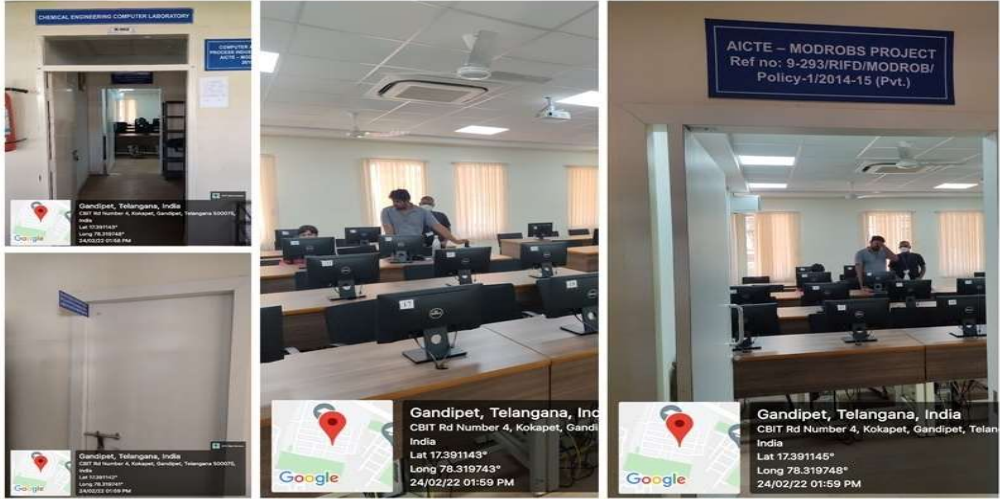
Name of the Laboratory: <b>Mechanical Unit Operations</b>
Location in the department building: K-004 (K-Block, Ground floor)
Geo – tagged photo of lab (submitted to NAAC): 
Name of faculty lab in charge, designation, email, mobile no.: <b>Dr B. Ganesh</b> , Assistant Professor, Department of Chemical Engineering, bganesh_chem@cbit.ac.in ; Mobile: 9182506330
Name of lab Technician, designation, email, mobile no.: <b>Sri M. Laxmana Chary</b> , Technician Grade-I, Department of Chemical Engineering, laxmanachary_ntchem@cbit.ac.in, Mobile No.: 9885095179
Importance of the lab for chemical engineering course: To understand the importance of various mechanical unit operations used in the process industry. To apply basic principles of sciences and chemical engineering for designing various size reduction, size separation and conveying equipment.
<b>Responsibilities as lab incharge:</b> 1. Selection and procurement of major equipment required for conducting lab as per curriculum. 2. Preparation and Maintenance of the laboratory manual with sample calculations 3. Display 'list of equipment', Syllabus, 'list of experiments', 'safety precautions'. Boards in the lab. 4. Check all the equipment working conditions before the start of semester lab schedule. 5. Monitor the cleanliness and ambience of the lab through the assigned technician. 6. Follow-up on the required servicing of the lab equipment. 7. Maintain the batch wise student sample records for accreditation inspections. 8. Upgrade existing equipment/ software as per revised curriculum. 9. Add new equipment to the lab as per curriculum revisions through budget proposals, call for quotations, comparison statements, follow-up on purchase, installation, training and update manuals.
<b>List of major Equipment:</b> 1. Vibrating screen 2. Pulverizer 3. Jaw Crusher 4. Roll Crusher 5. Plate and frame filter press 6. Ball mill 7. Cyclone separator 8. Batch sedimentation unit 9. Flotation cell




Name of the Laboratory: <b>Heat Transfer laboratory</b>
Location in the department building:K-003
Geo – tagged photo of lab (submitted to NAAC): 
Name of faculty lab incharge, designation, email, mobile no.: <b>Dr K Prasad Babu</b> ,Assistant Professor,kprasadbabu_chem@cbit.ac.in,6304598984
Name of lab Technician, designation, email, mobile no.: <b>Mr. M. Laxmana Chary</b> ,Technician Grade - I laxmanachary_ntchem@cbit.ac.in,9885095179
Importance of the lab for chemical engineering course: Heat Transfer laboratory provides fundamental and industrial knowledge about modes of heat transfer, like conduction, convection and radiation, and their applications.
Responsibilities as lab incharge: 1. Major equipment required for conducting the lab as per curriculum. 2.Laboratory manual with sample calculations 3. Display ‘list of equipment’, Syllabus, ‘list of experiments’, ‘safety precautions’. 4. Check all the equipment working conditions before the start of semester lab schedule. 5. Monitor the cleanliness and ambience of the lab through the assigned technician. 6. Follow-up on the required servicing of the lab equipment. 7. Maintain the batch wise student sample records for accreditation inspections. 8. Upgrade existing equipment as per revised curriculum. 9. Add new equipment to the lab as per curriculum revisions through budget proposals, call for quotations, comparison statements, follow-up on purchase, installation, training and update of required lab manuals.
List of major Equipment: 1. Stefan Boltzmann Apparatus 2. Emissivity Measurement Apparatus 3. Composite Wall 4. Lagged Pipe Apparatus 5. Pin-Fin Apparatus 6. Double Pipe Heat Exchanger 7. Critical Heat Flux Apparatus 8. Thermal Conductivity of Insulating Powder


  
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Name of the Laboratory: <b>Process modeling and simulation Laboratory</b>
Location in the department building: <b>K-002</b>
Geo – tagged photo of lab (submitted to NAAC): 
Name of faculty lab incharge, designation, email, mobile no.: <b>Dr. B.V.S.Praveen</b> , Assistant Professor, <a href="mailto:bvspraveen_chem@cbit.ac.in">bvspraveen_chem@cbit.ac.in</a> , 9791074572
Name of lab Technician, designation, email, mobile no.: <b>Mr. M. Laxmanachary</b> , Technician-I, <a href="mailto:laxmanachary_ntchem@cbit.ac.in">laxmanachary_ntchem@cbit.ac.in</a> , 9885095179
The computer lab provides hands- on experience for various real life industrial problems where students have a chance to understand the concept of modeling and apply the same in simulation using softwares such as MATLAB or ASPEN PLUS.
Responsibilities as lab incharge: <ol style="list-style-type: none"><li>1. Verifying all the computers are in working condition</li><li>2. Check that all the softwares are working</li><li>3. See that all the accessories (Keyboard, Mouse) are available for all the systems.</li><li>4. Maintain ambience of the lab</li></ol>
List of major Equipment: <ol style="list-style-type: none"><li>1. Desktop computers - 30 nos</li><li>2. Laptop -01 no</li><li>3. LCD projector - 01</li><li>4. Internet Hub details – 02 nos</li><li>5. Softwares Available -<ul style="list-style-type: none"><li>● MATLAB – version R2022B - Institute licensed</li><li>● ASPENOne (university version - v10.1 and v14.1 – validity Feb 2024)</li></ul></li></ol>

  
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**Undergraduate chemical engineering**

Name of the Laboratory: <b>Instrumentation and Material Characterization Laboratory</b>
Location in the department building: K-103
Geo – tagged photo of lab (submitted to NAAC): 
Name of faculty lab incharge, designation, email, mobile no.: <b>Dr. M. Mukunda Vani</b> , Professor, Department of Chemical Engineering, <a href="mailto:Mukundavanim_chem@cbit.ac.in">Mukundavanim_chem@cbit.ac.in</a> ; Mobile: 9866002491 <b>Dr. M.Mallaiah</b> , Associate Professor, Department of Chemical Engineering, <a href="mailto:mallaiah_chem@cbit.ac.in">mallaiah_chem@cbit.ac.in</a> ; Mobile: 9948107272
Name of lab Technician, designation, email, mobile no.: <b>Sri. V. Sanjeev Reddy</b> , Technician Grade-III, Department of Chemical Engineering, <a href="mailto:vsanjeevareddy_ntchem@cbit.ac.in">vsanjeevareddy_ntchem@cbit.ac.in</a> ; Mobile No.: 98493 74375
The IMC lab provides hands- on experience on various analytical instrument and industrial equipment's where students have a chance to understand the concept of construction, working of various instrument used for material characterization
Responsibilities as lab incharge: <ol style="list-style-type: none"><li>1. Major equipment selection to conduct the lab as per curriculum.</li><li>2. Preparation of the laboratory manual along with sample calculations</li><li>3. Display of 'list of equipment', Syllabus, 'list of experiments', 'safety precautions'.</li><li>4. Check the working conditions of all the equipment before the start of the lab .</li><li>5. Monitor the cleanliness and ambience of the lab through the assigned technician.</li><li>6. Follow-up on the required servicing of the lab equipment.</li><li>7. Maintain the batch wise student sample records for accreditation inspections.</li><li>8. Upgrade existing equipment as per revised curriculum.</li><li>9. Add new equipment to the lab as per curriculum revisions through budget proposals, call for quotations, comparison statements, follow-up on purchase, installation, training and update manuals</li></ol>
<ol style="list-style-type: none"><li>1. Rotameter</li><li>2. Thermometer</li><li>3. Refractometer</li></ol>

  
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