

LeftEAD Dept. of Chemical Engineering Chaitanya Bharathi Institute of Technology Gandipet, Hyderabad-75.

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Name of the Laboratory: Instrumentation and Process Control Laboratory Location in the department building: K-104 (K-Block, First floor) Geo - tagged photo of lab (submitted to NAAC): **PROCESS DYNAMICS & CONTROL** Gandipet, Telangana, India Unnamed Road, Kokapet, Gandipet, Telangana 5 Lat 17.391125° Long 78.319778° 24/02/22 02:11 PM Name of faculty lab incharge, designation, email, mobile no.: Dr P. V. Naga Prapurna, Associate Professor, Department of Chemical Engineering, nagaprapurna chem@cbit.ac.in; Mobile: 9885256057 Name of lab Technician, designation, email, mobile no.: Sri. V. Sanjeev Reddy, Technician Grade-III, Department of Chemical Engineering, vsanjeevareddy\_ntchem@cbit.ac.in; Mobile No.: 98493 74375 Importance of the lab for chemical engineering course: 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.

### 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/ 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 of required lab manuals.

#### List of major Equipment:

- 1. Flow Control Trainer
- 2. Level Control Trainer
- 3. Temperature Control Trainer
- 4. Pressure Control Trainer
- 5. Two Tank Non-Interacting System
- 6. Second Order System U tube manometer

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Dept. of Chemical Engineering Chaltanya Bharathi Institute of Technology Gandipet, Hyderabad-75.

Name of the Laboratory: Mass T	<b>Fransfer Operations Lab</b>
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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.: Dr. M.Mallaiah, Associate Professor, Department of Chemical Engineering,

mallaiah chem@cbit.ac.in; Mobile: 9948107272

Name of lab Technician, designation, email, mobile no.:

Sri M. Laxmana Chary, Technician Grade-I, Department of Chemical Engineering,

laxmanachary\_ntchem@cbit.ac.in, Mobile No.: 9885095179

### Importance of the lab for chemical engineering course:

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:

- 1. Major equipment selection to conduct the lab as per curriculum.
- Preparation of the laboratory manual along with sample calculations 2.
- Display of 'list of equipment', Syllabus, 'list of experiments', 'safety precautions'. 3.
- 4. Check the working conditions of all the equipment before the start of the lab.
- Monitor the cleanliness and ambience of the lab through the assigned technician. 5.
- 6. Follow-up on the required servicing of the lab equipment.
- 7. Maintain the batch wise student sample records for accreditation inspections.
- Upgrade existing equipment as per revised curriculum. 8.
- 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.

#### List of major Equipment:

- 1. Packed bed distillation(HETP)
- 2. Diffusivity apparatus
- 3. Simple distillation
- 4. Steam distillation
- 5. Vapor Liquid Equilibria
- 6. Batch drying
- 7. Wetted wall column
- Liquid-Liquid Extraction 8.
- Solid Liquid Extraction 9.
- 10. Adsorption
- 11. Batch crystallization

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7. Cyclone separator

Name of the Laboratory: Heat Transfer laoratory

Location in the department building:K-003

Geo - tagged photo of lab (submitted to NAAC):



Name of faculty lab incharge, designation, email, mobile no.:

Dr K Prasad Babu, Assistant Professor, kprasadbabu\_chem@cbit.ac.in, 6304598984

Name of lab Technician, designation, email, mobile no.:

Mr. M. Laxmana Chary, 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:

Stefan Boltzmann Apparatus
Emissivity Measurement Apparatus
Composite Wall
Lagged Pipe Apparatus
Pin-Fin Apparatus
Double Pipe Heat Exchanger
Critical Heat Flux Apparatus
Thermal Conductivity of Insulating Powder

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Name of the Laboratory: Computer Lab

Location in the department building:K-002

Geo – tagged photo of lab (submitted to NAAC):



Name of faculty lab incharge, designation, email, mobile no.: Dr. B.V.S.Praveen, Assistant Professor, <u>bvspraveen\_chem@cbit.ac.in</u>, 9791074572

Name of lab Technician, designation, email, mobile no.: Mr. M. Laxmanachary, Technician-I, laxmanachary\_ntchem@cbit.ac.in, 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:

- 1. Verifying all the computers are in working condition
- 2. Check that all the softwares are working
- 3. See that all the accessories (Keyboard, Mouse) are available for all the systems.
- 4. Maintain ambience of the lab

List of major Equipment:

- 1. Desktop computers 30 nos
- 2. Laptop -01 no
- 3. LCD projector 01
- 4. Internet Hub details -02 nos
- 5. Softwares Available -
  - MATLAB version R2022B Institute licensed
  - ASPENOne (university version v10.1 and v14.1 validity Feb 2024

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