

**Parala Maharaja Engineering
College, Berhampur
Sitalapali, Odisha, 761003**



Summer Internship (2026-27)

on

**Industrial Insight of Chemical
Engineering with Hands-on
Training**

Organized By

**Department Of Chemical
Engineering**

Duration: 08/06/2026 to 07/07/2026

Faculty Co-ordinator

Dr. Himadri Sahu, Asst. Prof.

Mr. Sarat Chandra Patra

Asst. Prof.

About PMEC

Parala Maharaja Engineering College (P.M.E.C), Berhampur came into existence in the year 2009 on 26th April, as a constituent Government Engineering College of Biju Patnaik University of Technology (BPUT), Odisha, India with an area of nearly 80 acres. Now, this college acts as a Government Autonomous college affiliated to BPUT, Odisha from the year 2021. It has 8 B-Tech Programmes and 5 M-Tech Programmes with 10 departments. It is also acting as Nodal Centre of Research under BPUT to conduct Ph.D. Programmes.

About Chemical Engineering

Department of Chemical Engineering at PMEC is established in the year 2014 with 60 numbers of students. The campus is one of the premier departments in the country that provides a unique educational and research environment. We have a major emphasis on interdisciplinary and industrial collaborations. Our primary missions are to educate graduate students and to discover and disseminate knowledge through research. The Department is committed to achieving excellence in these activities and evaluates the success and leadership of its programs using the highest standards of quality, innovation, & visibility, while at the same time providing a friendly and supportive atmosphere.

About the Internship

This **Internship Program** is designed to bridge the gap between theoretical learning and real industrial practice in chemical and process industries. It provides exposure to plant operations, process equipment and practical engineering applications used in industries such as petrochemicals, fertilizers, pharmaceuticals and energy production. The program typically focuses on:

- Fundamentals of chemical process industries
- Operation of reactors, heat exchangers, distillation columns, pumps and compressors
- Mass and energy balance applications , Quality Control

The hands-on training component helps interns understand equipment handling, data analysis and operational decision-making in industrial environments.

Eligibility Criteria

- Students Pursuing/Completed Degree /Diploma in Chemical Engineering are eligible to participate.

Registration & Selection Process

- The interested & eligible participants must register through the link provided.

<https://forms.gle/TQoiLomyk4MaKEui8>

- Certificate of Internship will be provided based on satisfactory attendance and performance.

Important Dates

- Deadline for Online Registration: **02-06-2026**
- Internship Start Date: **08-06-2026**
- Internship End Date: **07-07-2026**
- Mode: **Offline**
- Timing: **09:00 AM – 01:30 PM**

Registration Fee

- Internship Registration Fee **Rs. 2500/-** (for all participants).
- Accommodation + Fooding will be Available (**On paid basis as per the institution norms**).

Course Plan

Week 1:

1. Industrial Fluid Flow Systems Engineering

Week 2:

2. Industrial Mass Transfer Operations

Week 3:

3. Process Heat Transfer in Industry

Week 4:

**4. Industrial Reactors and Engineering
5. Applied Fuel Technology**

For any Queries, Contact:

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DEPARTMENT OF CHEMICAL ENGINEERING, PMEC

Summer Internship Program Schedule (08/06/2026 to 07/07/2026)

Training Name: Industrial Insight of Chemical Engineering with Hands-on Training (2026-27)

Date	Theory (9.00AM to 11.00AAM)	Hands on (11.15AM to 1.15PM)	Assigned Faculty In-charge
08-06-2026	Topic: <u>Industrial Fluid Flow Systems Engineering</u> Industrial Fluid Flow Systems	Research & Development Lab Visit (Chemical Engineering Lab)	Dr. Himadri Sahu & Mr. Sarat Chandra Patra
09-06-2026	Essential Engineering Equations for Fluid Flow	Bernoulli's Apparatus-Verifying the Bernoulli's Theorem	
10-06-2026	Industrial Flow Monitoring Equipment (Part1)	Venturi Meter –Flow rate Calculation of fluid flowing inside a pipe	
11-06-2026	Industrial Flow Monitoring Equipment (Part2)	Pitot tube – Finding out the point velocity of fluid	
12-06-2026	Industrial Fluid Transport Systems	Centrifugal Pump & Reciprocating Pump– Find out the efficiency	
13-06-2026	Fluid Transport Numerical Analysis	Test Session (Related to Fluid Flow)	
14-06-2026	Sunday		
15-06-2026	Holiday (Raja Sankranti)		
16-06-2026	Topic: <u>Industrial Mass Transfer Operations</u> Basic Concepts of Mass Transfer, Diffusion Operation, Absorption & Adsorption	Introduction to Origin & Curve Fitting	Dr. Himadri Sahu & Mr. Sarat Chandra Patra
17-06-2026	Design of Absorption Column	CASE STUDY-1	
18-06-2026	Industrial Distillation Operations	CASE STUDY-2	
19-06-2026	Distillation Column Design and Analysis	CASE STUDY-3	
20-06-2026	Interactive learning Session	Test Session (Related to Mass Transfer)	
21-06-2026	Sunday		

22-06-2026	Topic: <u>Process Heat Transfer in Industry</u> Heat Transfer principles and their Industrial Applications	Stefan Boltzman's Apparatus- Study of Radiation heat transfer by black body	Dr. Himadri Sahu & Mr. Sarat Chandra Patra
23-06-2026	Steady-State One-Dimensional Heat Transfer Through Different Geometries	Composite Wall Apparatus- Find the thermal conductivity	
24-06-2026	Study of Heat Exchanger Design and Analysis	Parallel and Counter flow Heat Exchanger- Find heat transfer coefficient	
25-06-2026	Industrial Importance of Heat Transfer Calculations	Test Session (Related to Heat Transfer)	
26-06-2026	Holiday (Muharram)		
27-06-2026	Project Report / Research Paper Writing Skills		Dr. Himadri Sahu & Mr. Sarat Chandra Patra
28-06-2026	Sunday		
29-06-2026	Topic: <u>Industrial Reactors and Engineering</u> Understanding of the industrial reactor operations	Isothermal Plug-flow Reactor- Determine the reaction rate constant	Dr. Himadri Sahu & Mr. Sarat Chandra Patra
30-06-2026	Designing Concept of Multi-Phase Reactors	Continuous Stirred tank Reactor- Determine the reaction rate constant	
01-07-2026	Topic: <u>Applied Fuel Technology</u> Industrial fuel Systems (Part1)	Proximate Analysis of Coal Sample	
02-07-2026	Industrial fuel Systems (Part2)	Calculation of known sample Concentration using Colorimeter	
03-07-2026	Fuel & Combustion Calculation	Mixing or dispersing nanoparticles using Ultrasonic Cleaners	
04-07-2026	Test Session (Related to Fuel Technology)	Moisture Removal Systems	
05-07-2026	Sunday		
06-07-2026	Introduce the Research Facilities Available in Department of Chemical at PMEC	Quiz Competitions	Dr. Himadri Sahu & Mr. Sarat Chandra Patra
07-07-2026	Feedback and Valedictory	Certificate Distribution	