

Chemical Engineering Practices

- 1.1 Course Number: CH111
- 1.2 Contact Hours: 1-0-2 Credits: 5
- 1.3 Semester-offered: 1st Year-even
- 1.4 Prerequisite:
- 1.5 Syllabus Committee Members: Dr. Gunjan Kumar Agrahari, Dr. Shweta, Dr. Vivek Kumar

2. Objective:

The objective of this course is to give an overview of chemical industry to chemical engineering students in their BTech program and motivate. The course is designed to have lectures based on introduction to basic practices in chemical engineering profession.

3. Course Content:

Unit-wise distribution of content and number of lectures

Unit	Topic	Lectures	Practical
1	Quantitative determination of compound using UV-VIS spectrophotometer	1	2
2	Study of Non-Newtonian fluids and visualization of flow phenomena in single phase flow	1	2
3	Determination of the viscosity of liquids using Ostwald viscometer	1	2
4	Estimation of thermal conductivity of a material using Fourier's law	1	2
5	Measurement of Reid Vapor Pressure of fuels	1	2
6	Application of combustion theory in fuel characterization	1	2
7	Determination of Flash Point and Fire Point of Liquid Fuels	1	2
8	Cloud point detection for a model fuel (benzene-xylene mixture)	1	2

4. Readings

4.1 Reference Books:

1. Unit Operations of Chemical Engineering by Warren McCabe, Julian Smith, Peter Harriott, 7th Edition, McGraw-Hill
2. Unit operations by G.G. Brown, CBS Publisher

5. Outcome of the Course: