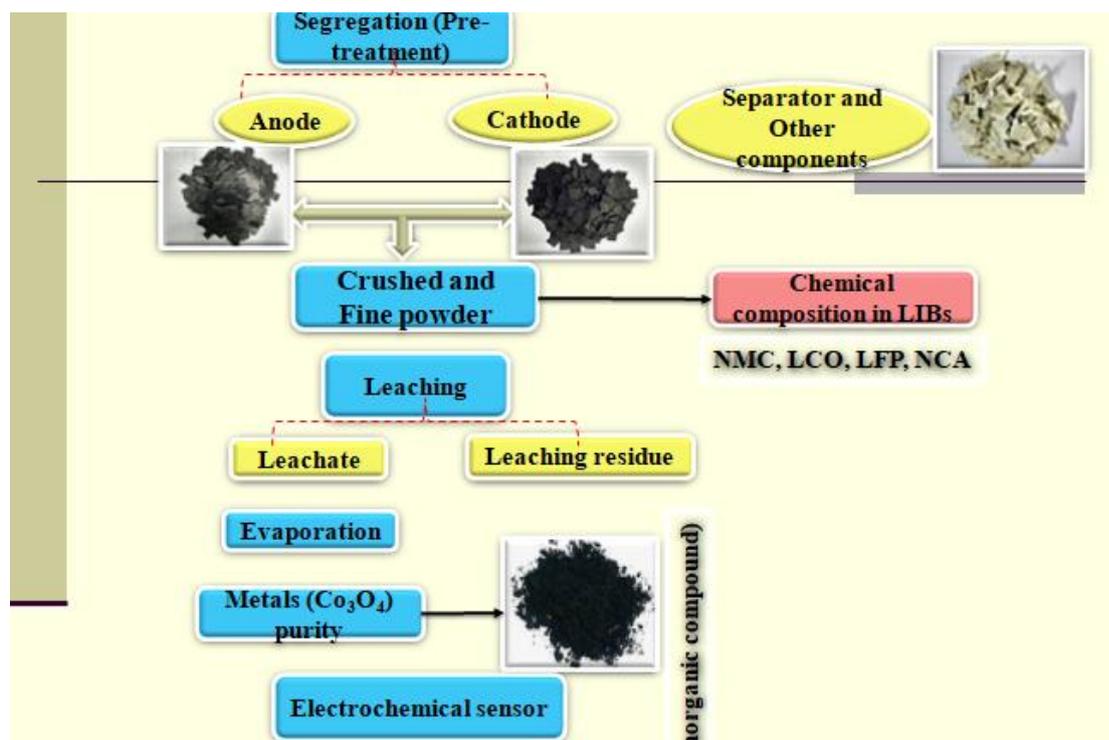


## CHART PRESENTATION

### Introduction

Chart preparation and presentation is an innovative teaching method that uses visual aids such as charts, process flow diagrams, reaction mechanisms, and refinery block diagrams to enhance learning in Petrochemical Engineering. This method helps students understand complex petrochemical processes, refining operations and reaction mechanisms through clear visual representation.



### Procedural Implementation of Chart Presentation

#### 1. Purpose

Chart Presentation is implemented to enhance students' conceptual understanding of petrochemical processes, visual communication skills, and analytical ability by presenting technical topics related to petroleum refining, petrochemical production, and process engineering in a structured graphical format.

It supports Outcome Based Education (OBE) by encouraging self-learning and peer learning.

#### 2. Scope

This procedure is applicable to:

- Undergraduate and Postgraduate programs in **Petrochemical Engineering**

- Theory and laboratory courses such as
  - Petroleum Refining
  - Petrochemical Technology
  - Mass Transfer Operations
  - Reaction Engineering
- Individual and group activities

### **3. Responsibilities**

#### **Head of the Department (HoD)**

- Approval and monitoring of the activity

#### **Course Coordinator**

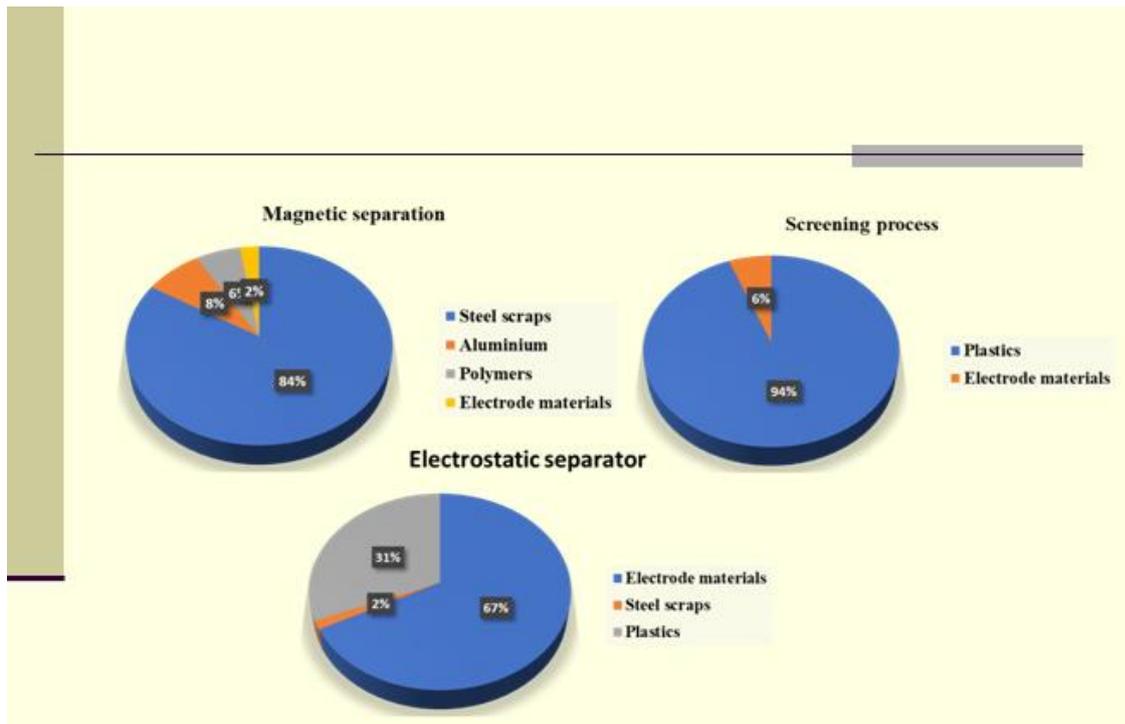
- Planning the chart presentation
- Aligning topics with Course Outcomes (COs)

#### **Faculty Member**

- Topic allotment related to petrochemical processes
- Providing technical guidance
- Evaluation of presentations

#### **Students**

- Preparation of technical charts
- Presentation and explanation of petrochemical concepts



#### 4. Procedural Steps

##### Step 1: Identification of Need

Identify petrochemical topics that require:

- Concept clarity
- Process flow explanation
- Reaction mechanisms
- Comparative analysis of refining techniques

**Examples:**

- Crude Oil Distillation Process
- Fluid Catalytic Cracking (FCC)
- Steam Cracking for Ethylene Production
- Polymerization Processes
- Hydrocracking and Hydrotreating

##### Step 2: Topic Selection and Allotment

Faculty prepares a list of petrochemical engineering topics and allots them to students.

**Guidelines are provided regarding:**

- Chart size
- Process flow diagrams
- Reaction mechanisms
- Key operating conditions

### **Step 3: Planning and Approval**

Approval is obtained from the Course Coordinator regarding:

- Date of presentation
- Duration
- Individual or group presentation
- Evaluation criteria

### **Step 4: Chart Preparation**

Students prepare charts including:

- Title and objective
- Process flow diagrams
- Chemical reactions
- Equipment diagrams
- Industrial applications
- Conclusions

Faculty members provide guidance during preparation.

### **Step 5: Conduct of Chart Presentation**

**Students present and explain their charts including:**

- Process explanation
- Diagram interpretation
- Industrial relevance in petrochemical industries

## **Step 6: Student Participation**

### **Students actively:**

- Present charts
- Answer technical questions
- Participate in peer discussions

## **Step 7: Assessment and Evaluation**

### **Evaluation is based on:**

- Technical accuracy
- Visual clarity
- Presentation skills
- Understanding of petrochemical processes
- Ability to answer questions

### **Assessment tools include:**

- Rubrics
- Viva questions

## **Step 8: CO Attainment Analysis**

Student performance is analyzed to determine the contribution of chart presentations toward Course Outcome (CO) attainment in Petrochemical Engineering courses.