Rashtrasant Tukadoji Maharaj Nagpur University

Faculty of Science & Technology

Syllabus for

Eighth Semester B.Tech. Chemical Engineering

Subject: CE-PCC-801P (BCE)

Practical : 6 Hours

University : 100 Marks

Industry Internship / Project

No. of Credits : 9

College Assessment : 100 Marks

Course Objectives:

- To integrate the knowledge of engineering programme.
- To develop the skills to identify the problem and define the problem statement.
- To inculcate scientific attitude for stepwise solutions to the problems.
- To develop attitude to work in team with ethics and suitable awareness and act as leader for project execution.

Course Outcomes:

After completion of the course, students will be able to:

CO1: Identify a suitable topic/problem of relevance and perform the literature survey.

CO2: Analyze the selected topic/problem and apply the core engineering knowledge to solve the problem.

CO3: Apply ethical principles and social responsibility in execution of the work (individually/team).

CO4: Prepare a formatted report and present a work using ICT tools.

(A) INTERNSHIP: -

Students shall undergo training in R&D institutions / Academics / Industries for the period of entire semester. At the end of internship students must submit Three copies of report for internal evaluation to Head of the Department.

OR

(B) PROJECT WORK: -

The project work shall consist of dissertation/ experimentation, simulation, fabrication, testing of equipment; process designing in depth; review of certain research work; compilation and analysis of

certain engineering/management activities, phenomenon, designing, drawing and prototype modelling of certain equipment, instrument and testing thereof, etc. on any topic of relevance. **The project work shall be carried out individually by a student or by a team comprising of maximum two students.** The student is required to choose any one of the following:

1. Project involving experimentation/modelling/simulation/Design/optimization in chemical engineering related to research/industry/society

At the end of the semester, the student is required to present (i) Literature survey, (ii) Problem formulation, (iii) Methodology, (iv) Results and Discussion, (v) Conclusions (vi) Future work (vii) References

2. Project involving manufacture of any chemical product on industrial scale

At the end of the semester, the student is required to present (i) market survey, (ii) Properties and Applications (iii) different processes for production, (iv) selection of process, (v) detained process description (vi) material and Energy balance, (vii) design of equipment, (viii) cost and profitability analysis, (ix) plant layout and location, (x) environmental considerations and safety and (xi) References

OR

(C) INTERNSHIP-cum-PROJECT WORK: -

Students can undertake the industry defined problem through industrial/consultancy project work, in consultation with faculty and/or head of department, in department/industries/Research labs etc.

Each student is required to submit three copies of report to Head of the Department on the project assigned to student. The report shall comprise chapters like aims and objective, introduction, materials and methods, experimental work, results and discussion, conclusion, references and should be based on the information available in the literature or data obtained in the laboratory/industry. Students will also be required to make an oral presentation using ICT tools.

Written report shall adhere to the prescribed format provided by department.

Reading

1. Handbooks,

2. Journals and magazines

3. Martyn S. Ray and Martin G. Sneesby, Chemical Engineering Design Project: A Case Study Approach, Gordon and Breach Science Publishers, Second Edition, 1989.

06/06/23