COURSE TITLE	**MAJOR PROJECT**
COURSE CODE	**01CH2804**
COURSE CREDITS	**12**

Objective:

1 This course aims at providing opportunity to chemical engineering students for conducting their project work via industrial training/intership or universtiy based experimental/mathmatical problems,

Course Outcomes: After completion of this course, student will be able to:

1 Apply the project methodology in a through manner

2 Analyze the available technical solutions for a particular chemical engineering problem

3 Formulate the methodology and experimental investigations for effective execution of their chosen project

4 Document and publish their research finding for wide publicity and acceptance to scientific communities

Pre-requisite of course: Basic knowledge of project planning, methodology design, and documentation of project information.

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
0	0	45	0	0	0	200	200

Contents : Unit	Topics	Contact Hours
Total Hours		

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Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	**MAJOR PROJECT** Any one of five of the following 1. Research Work : Student-led investigation under faculty supervision on recent chemical engineering challenges or innovations. 2. Industry Defined Problems (IDP) : Problem statement provided by industry partners. Students propose and validate feasible solutions. 3. User Defined Problems (UDP) : Problems selected by students from areas of interest including labs, society, or academics. 4. Industrial training Based Projects : Students can undergo training industries or organizations for 14 to 16 weeks. 5. Social Impact Problems : Projects that apply chemical engineering principles to improve society, environment, or public health.	600
Total Hours		**600**

Textbook :

1 How to Do Your Research Project: A Guide for Students., Gary Thomas, SAGE Publications Ltd,, 2017

References:

1 Doing your research project: a guide for first-time researchers., Doing your research project: a guide for first-time researchers., Bell, J., & Waters, S., McGraw-hill education., 2018

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery					
Remember / Knowledge	**Understand**	**Apply**	**Analyze**	**Evaluate**	**Higher order Thinking / Creative**
10.00	20.00	25.00	25.00	10.00	10.00

Instructional Method:

1 The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board, may also use any of tools such as demonstration, role play, Quiz, brainstorming, MOOCs etc

2 The internal evaluation will be done on the basis of continuous evaluation of students in the laboratory and class-room

3 Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory

4 Students will use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory

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Supplementary Resources:

1 http://www.coursera.org/learn/introduction-experimental-design-basics

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