COURSE TITLE	**CHEMICAL ENGINEERS & SOCIETY-II**
COURSE CODE	**01CH1609**
COURSE CREDITS	**1**

Objective:

1 The course aims to validate the learnings from the Understanding Design Thinking course by translating the concepts into exercises. In this module, the student will continue their work from the 5th semester on a Community-based project and complete the Design Thinking cycle with emphasis on product development, detail design, prototyping, and validation of the solutions in a real environment.

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

1 Analyze the broad scope of roles played by Chemical engineers in the society.

2 Recognize the main drivers for conducting projects in chemical engineering

3 Evaluate how human variation impacts on chemical engineers and society

4 apply some basic concepts and methods from chemical engineering to explore creative solutions to clearly defined real world problems

Pre-requisite of course:NA

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
0	0	2	0	0	0	25	25

Contents : Unit	Topics	Contact Hours
Total Hours		

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	**System-level Design** Plan of Action in 6th semester - Based on revalidation, and feedback from last semester (5th semester) plan for future aspects	4
2	**Detailed Design and Analysis** Detailed Design and analysis (including all aspects of products, materials, processes, resources, standards, etc.)	8
3	**Building the solutions** Prototyping (sequential prototyping for iterations), Customer Revalidation	6

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Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
4	**Project Fair and Final report** Open project showcase/fair for showing the projects to Students, faculty members, local people, and industrialists, Final report Submission	4
Total Hours		**22**

Textbook :

1 Effective Technical Communication, M. Ashraf Rizvi , Tata McGraw Hill, 2005

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, case studies etc

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

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

4 Students will use supplementary resources such as online videos

Supplementary Resources:

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

2 https://epgp.inflibnet.ac.in/

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