DELHI SKILL AND ENTREPRENEURSHIP UNIVERSITY

Diploma in Chemical Engineering

Syllabus Document

EFFECTIVE FROM ACADEMIC YEAR 2021-22

Program Vision

The Diploma Program in Chemical Engineering at the DSEU will mould the students into technically sound and skilled professionals with leadership qualities for serving the society with international touch and entrepreneurial abilities.

Program Outcome

a) Technical Knowledge/Skills

- Able to appreciate the role and responsibilities of a diploma holder in the chemical and process industries.
- Should hold the knowledge of basic chemical engineering equipment, plant layouts, utilities, functioning, and safety of chemical engineering.
- Thorough knowledge of basic thermodynamics, fluid mechanics and unit operations.
- Exposure to computers as a medium to solve engineering problems and challenges.
- Ability and skills to use chemical engineering software
- Basic exposure to process control and instrumentation
- To be able to operate and use general equipment and machinery involved in the process industry.
- Understanding of inherent safety measures to be followed in the industry.
- Exposure to the gamut of expertise in a broad spectrum of domains within the purview of the process industries.
- To be able to build upon the knowledge acquired in the diploma towards development of a holistic perspective and approach to the profession.

b) Software Skill and Project Skills

- MS Visio for designing basic PFDs and understanding P&IDs
- ASPEN Plus/HYSYS for very fundamental understanding of process simulations
- Auto CAD for designing equipment as and when required
- MS Excel as a tool to solve basic engineering problems
- Exposure to other general software (such as DWSIM, COMSOL, etc.) which are of prominent use in advanced engineering
- Exposure to team work, importance of taking up projects on large scale, and development of the ability to collectively execute engineering tasks and solve problems

c) Personality Traits and Ethics

- Analytical thinking and problem-solving skills.
- Presentation skills and report writing.
- Conflict management and interpersonal skills
- Work ethics
- Leadership and Strategic planning
- Punctuality and Flexibility
- Team playing, ethics and loyalty
- Adaptability and Self-awareness

d) Soft Skills

- Problem solving skills
- Communication skills
- Good listening Writing skills
- Presentation skills

Credit Scheme

SI No.	Subject Code	Course Titles	Lecture	Tutorial	Online	Practical	Total Credits
Semester I							
1	CHE-FC101	Applied Mathematics – I	3	1	0	0	4
2	CHE-FC102	Basic Sciences*	4	0	0	2	5
3	CHE-FC103	Basic Engineering Graphics	0	0	0	6	3
4	CHE-FC104	Basic Engineering Workshop Technology	1	0	0	4	3
5	CHE-HS101	Face the World Skills - I	-	-	-	-	3
6	CHE-HS102	English Communication - I	2	0	0	0	2
7	CHE-HS103	Sports and Yoga	0	0	0	2	1
8	CHE-PC101	Introduction to Chemical Engineering	1	0	0	2	2
TOTAL			11	1	0	16	23

*Basic Sciences includes 2.5 credits each of Applied Physics and Applied Chemistry each

The syllabus of English I, Face the World Skills, EVS and Sports & Yoga are common across all the diploma programs and are given separately.

The syllabus for Applied Mathematics I and II, Basic Sciences (Applied Physics and Applied Chemistry), BEWT and Basic Engineering Graphics are given separately.

Semester II							
SI No.	Course Code	Course Titles	Hours/week				Credits
			Lecture	Tutorial	Online	Practical	
1	CHE-HS201	Face the World Skills – II	-	-	-	-	1
2	CHE-HS202	English Communication - II	0	0	0	2	1
3	CHE-FC201	Applied Mathematics – II	3	1	0	0	4
4	CHE-FC202	Physics for Chemical Engineers	3	0	0	2	4
5	CHE-FC203	Principles of Physical Chemistry	3	0	0	2	4
6	CHE-FC204	Experiments & Analysis	1	0	0	2	2
7	CHE-PC201	Chemical Process Calculations	2	0	0	2	3
8	CHE-PC202	Process Diagrams using Software	0	0	0	2	1
9	CHE-PC203	Introduction to Polymer Technology	1	0	0	2	2
		TOTAL	13	1	0	14	22

Note: The syllabus for Applied Mathematics II, English Communication II, FTW is provided separately