

Department of Chemical Engineering

CH2: M.Tech. Chemical Engineering - Specialization in Catalysis Technology

S.No.	Course No.	COURSE TITLE	L	T	E	P	O	C
SEMESTER I								
1.	CA5010	Fundamentals of Adsorption and Catalysis	3	0	0	0	6	9
2.	CA5020	Principles of Solids and Surfaces	3	0	0	0	6	9
3.	CH5010	Chemical Reactor Theory	3	1	0	0	6	10
4.	DPE1	Department Elective 1	3	0	0	0	6	9
5.	DPE2	Department Elective 2	3	0	0	0	6	9
Total Credits								46

†Electives to be taken from Senate approved list only (attached).

SEMESTER II								
1.	CA5030	Experimental Methods in Catalysis	3	0	0	0	6	9
2.	CA5050	Catalyst Preparation and Characterization Lab	1	0	0	6	2	9
3.	CA5060	Seminar	0	0	0	3	0	3
4.	CH5026 (or) CH5050	Heat and Mass Transfer for Catalysis	3	1	0	0	6	10
		Transport Phenomena						
5.	DPE3	Department Elective 3	3	0	0	0	6	9
6.	DPE4	Department Elective 4	3	0	0	0	6	9
Total Credits								49

†Electives to be taken from Senate approved list only (attached).

SUMMER								
1	CA5560	Project I	0	0	0	0	25	25
Total Credits								25
SEMESTER III								
1.	CA5561	Project II	0	0	0	0	35	35
Total Credits								35
SEMESTER IV								
1.	CA5562	Project III	0	0	0	0	40	40
Total Credits								40
OVERALL CREDITS								195

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Electives for Catalysis Technology (DPE1 - DPE4)

Course No.	COURSE TITLE
CA5040	Introduction to Surface Analysis
CA5320	Homogeneous Catalysis
CA5340	Computational Methods in Catalysis
CA5350	Catalysis in Petroleum Technology
CA5360	Catalysis in Production of Chemicals and Fuels
CA5370	Nanomaterials in Catalysis
CA6110	Catalysis in Green Chemistry and Environment
CA6120	Photo-and Electro-Catalysis
CH5020	Statistical Analysis and Design of Experiments
CH5025	Fundamental Concepts and Applications of Adsorption
CH5160	Chemical and Catalytic Reaction Engineering
CH6531	Multiscale Modeling of Heterogeneous Catalytic Systems
CY6112	Surface Chemistry and Catalysis
CY6126	Green Organic Synthesis: Principles and Practice
BT5012	Biocatalysis and Enzyme Mechanism