Course code: Course Title	Course Structure			Pre-Requisite
	L	T	P	
CH106: Unit Processes in Organic Synthesis-II	1	0	2	NIL

Course Objective: The objective of the course is to inculcate skills in students related to the unit processes in organic synthesis.

S. No	Course Outcomes (CO)
CO1	Describe different types of unit processes.
CO2	Illustrate application of unit processes for the manufacturing of chemicals.
CO3	Design chemical processes to synthesize industrially important products.

S. No	Contents
UNIT 1	Alkylation: alkylating agents, alkylation of alkanes and alkenes, aromatic ring, The industrial manufacturing process for at least one product.

UNIT 2	Oxidation: Types of oxidative reactions, oxidizing agents, oxidation of alcohols, aldehydes, and aniline, naphthalene.
UNIT 3	Reduction Methods of reduction: Iron and acid reduction of nitrobenzene – the chemical mechanism and chemical and physical factors.
UNIT 4	Reforming definition, process, and various reactions involved during reforming like cyclization, aromatization, dehydrogenation, Isomerization, alkylation for reforming, application of reforming in petroleum industry, production of hydrogen.
UNIT 5	Organometallic compounds, definition, difference from metallo-organic compounds, their role as reagent and as catalyst, applications in synthesis of industrially important products, organocatalysts.

REFERENCES

S.No.	Name of Books/Authors/Publishers	Year of Publication / Reprint
1	Unit processes in Organic Synthesis; P. H. Groggins, McGraw Hill Education.	2001
2	Chemical Technology; A. F. Henglein, Pergamon Press.	1968
3	Organic Chemistry; Vol. 1, Finar, Pearson Education India.	2002

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