Course Type	Course Code	Name of Course	L	T	P	Credit
DP	NCYC503	Process Chemistry Lab	0	0	3	1.5

Course Objective
• Training for synthesizing new chemotypes, designing and development of small organic molecules with medicinal value.
Learning Outcomes
• Students will be able to learn various organic synthetic methodologies and studying their therapeutic effects.

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1	General laboratory instructions	6	Important safety protocols of lab
2	Separation and purification techniques Thin layer chromatography, Liquid-liquid extracton technique, Column chromatography	9	Learn basic techniques of orgnanic synthesis
3	Common reactions in organic chemistry: nucleophilic substitution, protection of functional groups, amide coupling	9	Learn setting up and monitor basic organic reactions
4	Synthesis of bicyclic moeities: Fischer Indole synthesis, imidazo[1,2-a]pyridine synthesis, quinazoline synthesis	9	Learn the synthesis of important heterocycles
5	Synthesis of biologically active molecules: aspirin, paracetamol, coumarins	9	Learn the synthesis of some biologically important molecules
	Total	**42L**	

Text Books:

1) Vogel's Textbook of Practical Organic Chemistry, B. S. Furniss, A. J. Hannaford, P. W. G.Smith, A. R. Tatchell, Addisson Wesley Longman Limited, UK, 5th Edition (1997).

Reference Books:

1) Systematic Identification of Organic Compounds, A lab. Manual, R. L. Shriner, R. C. Fuson and D.Y. Curtin, Wiley, New York, 6th edition.
2) Experimental Organic Chemistry, L. M. Harwood and C.J.Moody, Blackwell Scientific, London, 1989.
3) Advanced Practical Organic Chemistry, J. Leonard, B. Lygo and G. Procter, Routledge, 3 rd Edition, 2013.