ACADEMIC PLANNER & UNITIZATION OF SYLLABUS

Department: Chemistry

SEMESTER-VI

DSE P4 – Polymer Chemistry Lab

Subject Teacher: Dr.Mridula Acharyya

AY:2023-24

SYLLABUS UNITIZATION:

MONTH	WEEK	TOPICS to be TAUGHT
March	2	Polymer Synthesis Free radical solution polymerization of styrene (St) / Methyl Methacrylate (MMA) / Methyl Acrylate (MA) / Acrylic acid (AA).
March	3	Purification of monomer
March	4	Polymerization using benzoyl peroxide (BPO) / 2,2'-azo-bis-isobutylonitrile (AIBN)
April	1	Preparation of nylon 66/6
April	2	Interfacial polymerization, preparation of polyester from isophthaloyl chloride (IPC) and phenolphthalein
April	3	Redox polymerization of acrylamide
April	4	Precipitation polymerization of acrylonitrile
May	1	Preparation of urea-formaldehyde resin
May	2	Preparations of novalac resin/ resold resin.
May	3	Microscale Emulsion Polymerization of Polymethylacrylate.
May	4	Estimation of the amount of HCHO in the given solution by sodium sulphite method
June	1	**CLASS TEST**
June	2	Revision
June	3	Revision
June	4	Revision

Reference Books

► M.P. Stevens, Polymer Chemistry: An Introduction, 3rd Ed., Oxford University Press,

1999.
► H.R. Allcock, F.W. Lampe & J.E. Mark, Contemporary Polymer Chemistry, 3rd ed.
PrenticeHall (2003)
► F.W. Billmeyer, Textbook of Polymer Science, 3rd ed. Wiley-Interscience (1984)
► J.R. Fried, Polymer Science and Technology, 2nd ed. Prentice-Hall (2003)
► P. Munk& T.M. Aminabhavi, Introduction to Macromolecular Science, 2nd ed. John
Wiley & Sons (2002)
► L. H. Sperling, Introduction to Physical Polymer Science, 4th ed. John Wiley & Sons
(2005)
► M.P. Stevens, Polymer Chemistry: An Introduction 3rd ed. Oxford University Press
(2005).
► Seymour/ Carraher's Polymer Chemistry, 9th ed. by Charles E. Carraher, Jr. (2013).