

ORGANIC CHEMISTRY (BS-ADP 7th Semester)

Module Code:	Chem-415
Module title:	Reaction Mechanism-II
Name of Scheme:	BS-ADP 7th Semester
Department:	School of Chemistry
Faculty:	Science
Module Type:	Compulsory
Module Rating:	2 credits

OBJECTIVES:

To get ideas about the development of mechanisms and basic principles working behind different types of molecular rearrangement based reactions of organic compounds.

SYLLABUS OUTLINES:

1. Molecular Rearrangements

Classification of molecular rearrangements: mechanism of intramolecular 1,2-shifts involving migration of a group from carbon to carbon, carbon to nitrogen, and carbon to oxygen, mechanism and synthetic applications of Wagner-Meerwein, Pinacol-pinacolone, benzylic acid, Favorski, Wolff, Beckmann, Hoffmann, Curtius, Lossen and Schmidt; Baeyer-Villiger, Dakin and Fries rearrangements.

2. Determination of Reaction Mechanism

Determination of reaction mechanism, kinetics, stereochemical, intermediate formation, spectroscopic and isotopic labeling methods.

RECOMMENDED BOOKS:

1. Organic Chemistry, Vol. I (6th Ed.) and II (5th Ed.) by I.L. Finar, Pearson Education (Singapore) Pvt. Ltd. 2008.
2. March's Advance Organic Chemistry: Reactions, Mechanisms and Structures. (6th Ed.) by M.B. Smith and J. March, Wiley, 2007.
3. A Text-Book of Organic Chemistry by M. Younas, ILMI, Pakistan.
4. Organic Chemistry, (5th Ed.) by S.H. Pine, McGraw Hill, New York, USA, 1987.
5. Organic Chemistry, (6th Ed.) by Francis A. Carey, McGraw Hill, USA, 2005.
6. Organic Chemistry, (6th Ed.) by R.T. Morrison, R.N. Boyd and r.K. Boyd, Benjamin Cummings, 1992.
7. Modern Synthetic Reactions, (2nd Ed.) by H.O. House, W.A. Benjamin Inc., Menlo Park, CA.
8. Principals in Organic Synthesis, by R.O.C. Norman and M.J. Coxon, Chapman and Hall, 1993.
9. Organic Chemistry, by Jonathan Clayden, Nick Greeves and Stuart Warren, Oxford University Press, 2000.