

INORGANIC CHEMISTRY (BS-ADP 8th Semester)

Module Code:	Chem-450
Module title:	Radioactivity
Name of Scheme:	BS-ADP 8th Semester
Department:	School of Chemistry
Faculty:	Science
Module Type:	Compulsory
Module Rating:	2 credits

OBJECTIVES

The aim of this course is to provide the concepts for better understanding of nuclear chemistry, radioactivity and its application in daily life and industry.

SYLLABUS OUTLINE:

1. Radioactivity:

Natural radioactivity, Artificial radioactivity, types of radioactive rays, Saddy-Fajans and Russel group displacement law, Half life period of a radioactive substance, Disintegration constant K, Average life period, Radioactive equilibrium, Law of successive disintegration, Activity of a radioactive substance, Transmutation of elements, Artificial transmutation reactions induced by different bombarding projectiles, Applications of artificial transmutation reactions, Natural and artificial radioactive series.

RECOMMENDED BOOKS:

1. Katz, Joseph J., Glenn T. Seaborg, and Lester R. Morss. The chemistry of the actinide elements. Volume 1. New York, USA: Chapman and Hall, 1986.
2. R.D.Madan, Satya Prakash's Modern Inorganic Chemistry, S. Chand Company and Ltd, 2002.
3. OpenStax . (2016) Chapter 21 – Nuclear Chemistry. Chemistry by Rice University is licensed under a Creative Commons Attribution 4.0 International Accessed, Dec 1st, 2018 from: <https://opentextbc.ca/chemistry/chapter/introduction-2/>
4. J.D.Lee, Concise Inorganic Chemistry, 5th Edition.