1	Unit name:	Introduction to Radiation and Radioactivity
2	Code:	NE -1011
3	Classification:	Major subject
4	Credit value:	2.5
5	Semester/ Year Offered:	1/1
6	Pre-requisite:	Consent of Instructor
7	Mode of delivery:	Lecture, Presentation, Discussion
8	Assessment system and breakdown of marks:	Tutorial, and Exam
	Tutorial	20 %
	Exam	80 %
9	Academic staff teaching unit:	Department of Nuclear Technology
10	Course outcome of unit: After completion of this course, students will be able to 1. To identify the structure of atom, the various types of radiation and their properties 2. To explain the biological effects of radiation, the external radiation hazard and the internal radiation hazard 3. To identify the various types of radioactive wastes	
11	Synopsis of unit: The course cover the structure of matter, difference between radiation and radioactivity, various types of radiation, radiation units, biological effects of radiation, natural and man-made radiations. The course introduces students to the various types of radiation and radiation hazard and the various types of radioactive wastes.	
12	Topic: 1. The Structure of Matter 2. Radioactivity and Radiation 3. Radiation Units 4. Biological Effects of Radiation 5. Natural and Man-Made Radiation 6. The External Radiation Hazard	

	7. The Internal Radiation Hazard 8. Radioactive Waste
13	Main references: Introduction to Radiation Protection, 4th Edition, Alan Martin and Samuel A. Harbison
14	Additional references: Tuner, J.E.: Atoms, Radiation and Radiation Protection, 2nd Edition, Wiley and Sons, 1995

1. To identify the structure of atom,
2. Identify the various types of radiation and their properties
3. Distinguish the term of radiation and radioactivity
4. Organize the mechanism of radioactive decay
5. Utilize the various types of radiation units
6. Discuss the biological effects of radiation
7. Compare the natural and man-made radiation
8. Illustrate the principle to protect the external radiation hazard
9. Express about the internal radiation hazard

Relate the various types of radioactive wastes