

No	Information of Radioactive waste management	
1	Unit name:	Radioactive waste management
2	Code:	NE-51014
3	Classification:	Major Subject
4	Credit value:	3.5
5	Semester/ Year Offered:	2/5
6	Pre-requisite:	NE 1011 Introduction to radiation and radioactivity NE 4013 Radiation Protection and radiation shielding
7	Mode of delivery:	Presentation, discussion, class work
8	Assessment system and breakdown of marks:	Written exam, Tutorial, Assignment
	Written Exam	70%
	Tutorial	20%
	Assignment	10%
9	Academic staff teaching unit:	Department of Nuclear Technology
10	<p>Course outcome of unit:</p> <p>After completion of this course, students will be able to</p> <ol style="list-style-type: none"> 1. discuss different radiation exposure pathways radioactive waste 2. classify different types of radioactive waste 3. identify general approaches to the management of radioactive wastes 4. apply radioactive waste management system in practical applications 5. identify to all activities involving radioactive waste, including spent and disused sealed sources, associated with the use of radioactive material in medicine, industry, research, agriculture and education. 6. identify some recommendations on developing and implementing management systems for the pretreatment, treatment, conditioning and storage of radioactive waste. 	
11	<p>Synopsis of unit: The purpose of this lecture is to provide an overview of radioactive waste arising and classification, waste characteristics and management options. It introduces the overall management system for a programme of activities for waste management, incorporating the individual management systems of a series of operators that carry out successive steps in the</p>	

	processing, handling, storage and disposal of waste.
12	<p>Topic: Radioactive waste management</p> <p>Introduction</p> <p>The Radioactive Waste Classification Scheme</p> <p>The Management System</p> <p>Management Responsibility</p> <p>Resource Management</p> <p>Process Implementation</p> <p>Measurement, Assessment And Improvement</p> <p>Protection Of Human Health And The Environment</p> <p>Roles And Responsibilities</p> <p>General Safety Considerations</p> <p>Predisposal Management Of Radioactive Waste</p> <p>Acceptance Of Radioactive Waste Into Disposal Facilities</p> <p>Record Keeping And Reporting</p>
13	<p>Main references:</p> <ol style="list-style-type: none"> 1. Introduction to Radiation Protection, 4th Edition, Alan Martin and Samuel A. Harbison 2. Classification of Radioactive Waste, General Safety Guide, IAEA, General Safety Guide, IAEA, No. GSG-1 3. The management system for processing, handling and storage of radioactive waste, Safety Guide, IAEA, No.GS-G-3.3 4. Management of waste from the use of radioactive material in medicine, industry, agriculture, research and education. IAEA, Safety Standard Series No. WS-G-2.7
14	<p>Additional references:</p> <ol style="list-style-type: none"> 1. Basic principles of radioactive waste management, Joint guidance from the Office of Nuclear Regulation, the Environment Agency, the Scottish Environment Protection Agency and Natural Resources Wales to nuclear licensees, February 2015 2. The Management System for the Disposal of Radioactive Waste, Safety Guide, No. GS-G-3.4 3. The Management System for Technical Services in Radiation Safety, Safety Guide, No. GS-G-3.2