## CHEM 443 Syllabus

Course Code	Course Name	Credits	Prerequisite(S)	Classification
CHEM 443	Nuclear and Radiochemistry	2	CHEM 241	Elective Course
Course Description	Introduction to nuclear nuclear reactions, rates matter, measurements, and radiochemistry.	chemistry, type of radioactive o and detection o	s of radioactive decay, r lecays, interaction of rac of nuclear radiation, app	nuclear models, diation with nlications of nuclear
Class Scheduling	Classes are held 2 times	/week each for	50 minutes.	
Textbook	Introduction Radiochem Liljenzin, Gregory Chopp Radiochemistry and Nuc 1993.	iistry and Nucle bin, 3rd ed., 200 clear methods c	ar Chemistry, Jan Rydbe 11. of analysis, W. Ehmann 8	rg, Jan-Olov kamp; D. Vance,
Course Coordinator	Dr. Zoya Zaheer Dr. Mohamad Jabal			

Relationship	1	2	3	4	5	6	
to SOs							
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CLOs	By the end of this course student will be able to:
	CLO1. Have a Basic principles in the nuclear and radiochemistry. (SO1)
	CLO2. Identify the interaction of radiation with matter. (SO1)
	CLO3. Solve problems of rates of radioactive decay (SO3)
	CLO4. Understand the different types of nuclear reaction (SO1)
	CLO5. Apply the concepts of nuclear and radiochemistry in health. (SO5)

Contents	List of Topics	No. of Weeks
	Introduction to nuclear chemistry	1
	Types of radioactive decays	2
	Nuclear models	2
	Nuclear reactions	2
	Rates of radioactive decay	2
	Interaction of radiation with matter	2
	Measurements and detection of nuclear radiation	2
	Applications of nuclear and radiochemistry.	2