



Technical college\Mosul	30 Weeks	No. of week hours		
Department: Medical Instrumentation Engineering		Th.	App.	Unit
		2	2	6
Fourth Year	Subject: Engineering of Radiation Instruments			

أهداف المادة:- دراسة تركيب الذرة و الإشعاع الذري و النووي و تأثيرهما على الجسم البشري واستخداماتها في الأجهزة الطبية .

Week	Syllabus
1 st , 2 nd	Atomic structure and atomic radiation .
3 rd , 4 th	The nuclear and nuclear radiation .
5 th , 6 th	Interaction of radiation with matter .
7 th , 8 th , 9 th	Radiation detection & engineering of radiation detectors .
10 th , 11 th , 12 th	Engineering of radiation dosimetry and dosimeters .
13 th , 14 th	Radiation protection .
15 th , 16 th	Engineering of body scanners .
17 th , 18 th	Production of X-rays .
19 th , 20 th	Clinical radiation generators .
21 st , 22 nd	Dose distribution and scatter analysis .
23 rd , 24 th	A system of dosimetric calculations .
25 th , 26 th	Treatment planning .
27 th , 28 th	Engineering of electron beam therapy .
29 th , 30 th	Brachy therapy .