

**Syllabus: Physics of Radiation Therapy for Residents 2010-2011****Time of Meeting: Thursdays from 7:30 – 8:30 AM****Room: Smilow Classroom LL 412****Text: *Physics of Radiation Therapy*, 3<sup>rd</sup> ed., Faiz M. Khan. Lippincott Williams & Wilkins, Philadelphia, 2003.**

Date	Chapter	Instructor
08-Jul-10	The Atom	Guo
15-Jul-10	Radioactivity and decay	Guo
22-Jul-10	Treatment Planning	Kim
29-Jul-10	Basic Physics of X-ray Beam Production	Guo
05-Aug-10	Generation of Beams	Guo
12-Aug-10	Linacs	Carlson
19-Aug-10	Linac Collimation Systems and Other Teletherapy	Carlson
26-Aug-10	Interactions of X-and Gamma-rays with Matter	Carlson
02-Sep-10	Attenuation of Photon Beams	Carlson
09-Sep-10	Interactions of Particulate Radiation	Carlson
16-Sep-10	Monoenergetic / Polyenergetic Bremsstrahlung Beams	Ahmad
23-Sep-10	Dose Quantities and Units	Ahmad
30-Sep-10	Calculation of Dose	Ahmad
07-Oct-10	Dose Output Calibration	Ahmad
14-Oct-10	Clinical Dosimetry	Ahmad
21-Oct-10	External Beam Dosimetry Concepts (Part I)	Fan
28-Oct-10	External Beam Dosimetry Concepts (Part II)	Fan
04-Nov-10	ASTRO	
11-Nov-10	System of Dose Calculations	Fan
18-Nov-10	Translation of Computerized Planning	Fan
25-Nov-09	Thanksgiving	
02-Dec-10	Computerized Treatment Planning (TP) Strategies	Fan
09-Dec-10	Surface Corrections and Heterogeneity Calculations	Fan
16-Dec-10	Adjoining Fields and Special Dosimetry Problems	Fan
23-Dec-10	Christmas	
06-Jan-11	Basic Characteristics	Deng
13-Jan-11	Treatment Planning with Electrons	Deng
20-Jan-11	Overview of QA in Radiation Therapy	Deng
27-Jan-11	Linac and Imaging QA	Deng
03-Feb-11	Informatics	Deng
10-Feb-11	3D-CRT Concepts, Volumetric (3D-CRT) vs. Nonvolumetric	Chen

