

**RADIATION BIOLOGY**  
**Spring Semester 2011**  
 Thursdays 1600-1850 Hours  
 Room 0110-A, Dowling Hall  
 (Radiation Oncology Conference Room)

Faculty: John J. Feldmeier, D.O., FACRO  
 E. Ishmael Parsai, Ph.D.  
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 Diana Shvydka, Ph.D.

Textbook: Radiobiology for the Radiologist, Sixth Edition; Eric J. Hall., Amato Giaccia  
 Lippincott, Williams & Wilkins Company, Philadelphia, Pennsylvania

Date	Prof.	Topic(s)	Chapters
12 Jan	JJF	DNA Strand Breaks; Chromosome Aberrations; Cell Survival Curves	2, 3
19 Jan	EIP	Physics & Chemistry of Radiation Absorption	1
26 Jan	JJF	Radiosensitivity During the Mitotic Cycle. Radiation Damage Repair; Dose-Rate Effects	4, 5
2 Feb	JJF	Oxygen Effects; Re-oxygenation; Linear Energy Transfer; Relative Biological Effectiveness	6, 7
9 Feb	JJF	Effects of Total Body Irradiation; Radiation Cataractogenesis; Radiation Carcinogenesis	8, 10, 13
16 Feb	JJF	Time, Dose and Fractionation in Clinical Radiotherapy; Newer & Less Common Radiation Modalities	22, 24
23 Feb	DS	Dose-Response Relationships, Normal Tissue Responses	18, 19
Mar- TBD		MID-TERM EXAMINATION	1-8, 10, 13, 22,24, 18,19
Week of March 7		SPRING BREAK	
16 Mar	DS	Cancer Biology; Molecular Radiobiology Techniques, Gene Therapy	16, 17, 26
23 Mar	DS	Model Tumor Systems: Tumor Kinetics	20, 21
30 Mar	JJF	Radioprotectors, Radiosensitizers, Bioreductive Drugs, Chemotherapy Agents	9, 25, 27
6 Apr	MJD	Effects of Radiation on the Embryo & Fetus. Hereditary Effects of Radiation	11, 12
13 Apr	JJF	Hyperthermia; Predictive Assays	23, 28
20 Apr	JJF	Hyperbaric Oxygen	
27 Apr	EIP	Radiation Protection; Radiation Risk vs. Benefit	14, 15
May- TBD	JJF	FINAL EXAMINATION	1 Thru 28