

Medical Physics 8149

Advanced Topics in Radiation Therapy
 Fall Schedule: September 8-December 23, 2020
 Mondays and Wednesday: 3:00 - 3:50 PM
 PWB 1-200A

Date	Day	Chapter		
9/7	M			Labor Day
9/9	W	19, 20	DM	Treatment Planning Algorithms
9/14	M		DM	Treatment Planning Algorithms
9/16	W		DM	3D Conformal Radiation Therapy
9/21	M		DM	Intensity-Modulated Radiation Therapy
9/23	W		DM	Complication and Cure Probability (NTCP, TCP, EUD)
9/28	M	Notes	DM	Image Fusion, Registration, and Deformation
9/30	W		DM	Inter/Intra Fraction Motion Management
10/5	M			Review
10/7	W			Exam I
10/12	M	21	TR	Stereotactic Radiotherapy and Radiosurgery
10/14	W		TR	Stereotactic Radiotherapy and Radiosurgery (Cyber Knife)
10/19	M		YW	Stereotactic Radiotherapy and Radiosurgery (Gamma Knife)
10/21	W	22	YW	Stereotactic Body Radiation Therapy
10/26	M	27, Notes	YW	Particle Therapy
10/28	W		YW	Particle Therapy
11/2	M		YW	FMEA and AAPM TG-100
11/4	W			Review
11/9	M			Exam II
11/11	W		YW	Molecular Imaging
11/16	M		YW	Molecular Imaging
11/18	W	26, Notes	PA	Image-Guided Radiation Therapy
11/23	M		PA	Image-Guided Radiation Therapy
11/25	W		PA	Image-Guided Radiation Therapy
11/26	Th			Thanksgiving
11/30	M	26, Notes	PA	Image-Guided Radiation Therapy
12/2	W		PA	Image-Guided Radiation Therapy
12/7	M			Machine Learning (?)
12/9	W			Machine Learning (?)
12/14	M			
12/16	W			Review
12/21	M			Exam III

Lecturers: Parham Alaei, Ph.D. (PA)*, Yoichi Watanabe, Ph.D. (YW), Eric Ehler, Ph.D. (EE),
 Damien Mathew, PhD. (DM), Tatsiana Reynolds, Ph.D. (TR)

Text: Khan's The Physics of Radiation Therapy by Faiz M. Khan and John P. Gibbons, Wolters Kluwer, 5th Edition, 2014

*Course Director