

Medical Physics / BME 710, Advances in Magnetic Resonance Imaging
Tentative Class Schedule for Fall 2018

Tentative Date	Day	Lecture	Week	Topic	Journal Club Presenter
6-Sep	Thu	1	1	Course Overview + MR Hardware	
11-Sep	Tue	2	2	MR Hardware	
13-Sep	Thu	3		MR Signal, Relaxation, Bloch Equations	
18-Sep	Tue	4	3	RF Coils (including RF lab demo)	
20-Sep	Thu	5		Echoes, Signal localization	
25-Sep	Tue	6	4	Pulse Sequences	
27-Sep	Thu	7		k-space	Aitor
2-Oct	Tue	8	5	Quantitative MRI	Yavuz
4-Oct	Thu	9		Scanner Demo - Animal Scanner	
9-Oct	Tue	10	5	Parallel MRI	
11-Oct	Thu	11		Non-Cartesian Trajectories: Data Acquisition and Reconstruction I	Robert
16-Oct	Tue	12	7	Non-Cartesian Trajectories: Data Acquisition and Reconstruction II	
18-Oct	Thu	13		Constrained Reconstruction / Compressed Sensing	Zach
23-Oct	Tue	14	8	SNR: Considerations and Measurements	Ruiqi
25-Oct	Thu	15		BOLD signal and functional MRI	
30-Oct	Tue	16	9	Phase in MRI 1: Fat/water imaging	Ruiyang
1-Nov	Thu	17		Phase in MRI 2: Phase Contrast (Velocity) & MR Elastography	Grant
6-Nov	Tue	18	10	MR Angiography: Contrast-enhanced & Time-of-flight	
8-Nov	Thu	19		Cardiac MRI: cardiac and respiratory gating, segmented k-space, sequences	
13-Nov	Tue	20	11	Perfusion MRI - Contrast-enhanced and arterial spin labeling (ASL)	Mu-Lan
15-Nov	Thu	21		Diffusion MRI	Christa
20-Nov	Tue	22	12	Pet / MRI	Maribel
22-Nov	Thu			Thanksgiving recess - no class	
27-Nov	Tue	23	13	Hyperpolarization	Lawrence
29-Nov	Thu	24		MR Spectroscopy	Jason
4-Dec	Tue	25	14	Trip to GE Healthcare	
6-Dec	Thu	26		Project Presentations 1	
11-Dec	Tue	27	15	Project Presentations 2 - last class	
16-Dec	Sun			Report is due	
18-Dec	Tue			Critique of project report due	

as of 10/23/2018