Week	Date	Lecture Topic	Lab	Due
1	1/16/2018	Introduction and Course Overview	Orientation and Safety	
	1/18/2018	Review of radiation interactions and basic detection concepts		
2	1/23/2018	Basic signal generation and shaping	Lab I: Digital signal processing	Reading Assignment 1
	1/25/2018	Introduction to digital signal processing		Lab 0
3	1/30/2018	Analog-to-digital conversion & basic digital signals operations	Lab I: Digital signal processing	
	2/1/2018	Signal deconvolution and FIR filters		
4	2/6/2018	Signal generation in semiconductors - Shockley Ramo	Lab I: Digital signal processing	
	2/8/2018	Charge carrier transport - mobility and lifetime		
5	2/13/2018	Experimental determination of charge transport characteristics	Lab II: Multichannel Detectors	
	2/15/2018	Energy resolution - electronic noise and fano factor		
6	2/20/2018	Signal generation in scintillation detectors	Lab II: Multichannel Detectors	
	2/22/2018	Non-proportionality in scintillators		
7	2/27/2018	Neutron detection and pulse-shape discrimination	Lab II: Multichannel Detectors	
	3/1/2018	Neutron scatter kinematics and imaging		
8	3/6/2018	Introduction to gamma-ray imaging	Lab III (variable)	
	3/8/2018	Collimated gamma-ray imaging modalities		
9	3/13/2018	Non-collimated gamma-ray imaging modalities	Lab III (variable)	
	3/15/2018	Advanced imaging techniques		
10	3/20/2018	Principles of mobile detector operation - SLAM	Lab III (variable)	
	3/22/2018	Advanced concepts in data fusion		
11	3/27/2018	No lecture (spring break)	Open session (final project)	
	3/29/2018	No lecture (spring break)		
12	4/3/2018	TBD	Open session (final project)	
	4/5/2018	TBD		
13	4/10/2018	TBD	Open session (final project)	
	4/12/2018	TBD		
14	4/17/2018	Student Presentations	Open session (final project)	
	4/19/2018	Student Presentations		
15	4/24/2018	Student Presentations	Open session (final project)	
	4/26/2018	Student Presentations		