Schedule for BME 6350 (Fall 2024)

	Date		Topic		Due	Reading		
						Author	PMID	Title
1	Tuesday	8/27	Course overview					
2	Thursday	8/29	Neurons	*				
3	Tuesday	9/3	Brain circuits					
4	Thursday	9/5	Classic methods	*				
5	Tuesday	9/10	Neural coding					
6	Thursday	9/12	Tutorial for PS1			Niell	18650330	Highly selective receptive fields in mouse visual cortex
7	Tuesday	9/17	Imaging methods					
8	Thursday	9/19	Readout	*		Jun	29120427	Fully integrated silicon probes for high-density recording of neural activity
9	Tuesday	9/24	Readout			Cardin	33058764	Mesoscopic imaging: shining a wide light on large-scale neural dynamics
10	Thursday	9/26	Readout	*	PS1	Svoboda	16772166	Principles of two-photon excitation microscopy and its applications to neuroscience
11	Tuesday	10/1	Readout			Luan	37289556	Emerging penetrating neural electrodes: in pursuit of large scale and longevity
12	Thursday	10/3	Readout	*		Kleinfeld	31495645	Can one concurrently record electrical spikes from every neuron in a mammalian brain?
13	Tuesday	10/8	Readout			Pereira	33169033	Quantifying behavior to understand the brain
14	Thursday	10/10	Prelim Exam	*				
	Tuesday	10/15	Fall break					
15	Thursday	10/17	Control	*		Krauss	33244188	Technology of deep brain stimulation: current status and future directions
16	Tuesday	10/22	Control			Challis	35440143	Adeno-associated virus toolkit to target diverse brain cells
17	Thursday	10/24	Tutorial for PS2			Schwartz	16889482	Spike-triggered neural characterization
18	Tuesday	10/29	Control			Emiliani	37933248	Optogenetics for light control of biological systems
19	Thursday	10/31	Control	*		Roth	26889809	DREADDs for neuroscientists
20	Tuesday	11/5	Control			Hallett	17640522	Transcranial magnetic stimulation: a primer
21	Thursday	11/7	Control	*	PS2	Rabut	33058769	Ultrasound technologies for imaging and modulating neural activity
22	Tuesday	11/12	Brain-machine interface			Ganguly	19621062	Emergence of a stable cortical map for neuroprosthetic control
23	Thursday	11/14	Brain-machine interface	*		Alagapan	37730990	Cingulate dynamics track depression recovery with deep brain stimulation
24	Tuesday	11/19	Brain-machine interface					
25	Thursday	11/21	Prelim Exam					
26	Tuesday	11/26	Neuroethics	*		Robinson	35671758	Building a culture of responsible neurotech: Neuroethics as socio-technical challenges
	Thursday	11/28	Thanksgiving					
27	Tuesday	12/3	Final presentations	*				
28	Thursday	12/5	Final presentations	*	FR			

* exercise at the end of class