CMPUT 609 (RLII): Tentative Schedule

class num	date	Topics	Reading/preparation
1	Tue, Jan 8, 2019	Goals for course; Qualifying exam	RLAI Part 1
2	Thu, Jan 10, 2019	The bitter lesson of AI; Why approximation is so important	Bitter.pdf, RLAI Chapter 9-9.4
3	Tue, Jan 15, 2019	How should we approximate values?	RLAI Rest of Chapter 9, Exercise 9.5
4	Thu, Jan 17, 2019	Why is control so different with function approximation?	RLAI Chapter 10, Exs. 10.7, 10.6, 10.8, in that order
5	Tue, Jan 22, 2019	Off-policy prediction; The deadly triad	RLAI Chapter 11-11.5
6	Thu, Jan 24, 2019	Modern off-policy algorithms	RLAI Rest of Chapter 11, Exercise 11.4
7	Tue, Jan 29, 2019	Eligibility traces; Equivalences of forward and backward views	RLAI Chapter 12-12.7
8	Thu, Jan 31, 2019	Revisiting off-policy after corrections: Control variates	RLAI Sections 5.8, 5.9, 7.4, 12.8, 12.9
9	Tue, Feb 5, 2019	Tree-backup & Q(σ) with eligibility traces	RLAI Sections 7.5, 7.6, 12.10-12.13, Exercises 12.8, 12.9, 12.12
10	Thu, Feb 7, 2019	Policy gradient methods	RLAI Chapter 13
11	Tue, Feb 12, 2019	Guest speaker: Adam White	Adam1.pdf, Adam2.pdf, Adam3.pdf
12	Thu, Feb 14, 2019	Guest speaker, Martha White	same as above
	Tue, Feb 19, 2019	**WINTER**	
	Thu, Feb 21, 2019	**BREAK**	
13	Tue, Feb 26, 2019	Feedback on proposed projects	Bring your proposed project
14	Thu, Feb 28, 2019	RL and psychology	RLAI Chapter 14
15	Tue, Mar 5, 2019	GVFs & options	RLAI Sections 17.1, 17.2, options.pdf Sections 1, 2, 9, 10, and others as desired
16	Thu, Mar 7, 2019	Partial observability, state update	RLAI 17.3, MBRL2.pdf intro & Section 1, background: PSRs.pdf, POMDPs on wikipedia
17	Tue, Mar 12, 2019	Step-size adaptation, representation learning	IDBD.pdf, Mahmood.pdf Chapters 11 & 12
18	Thu, Mar 14, 2019	Model-based RL with approximation	Review RLAI Chapter 8, LinearDyna.pdf
19	Tue, Mar 19, 2019	Discovery in model-based RL	Rest of MBRL2.pdf, Parretal.pdf Sections 1-3
20	Thu, Mar 21, 2019	Deep RL for game playing	RLAI Chapter 16-16.3, 16.5, 16.6
21	Tue, Mar 26, 2019	Creative applications of RL	RLAI Chapter 16.4, 16.7, 16.8
22	Thu, Mar 28, 2019	Guest speaker: Zhan Xu (Huawei) RL Agents Inside Edge Devices	Review Edge.pdf (slides)
23	Tue, Apr 2, 2019	Best practices for empirical RL research and its presentation	Work on your initial project writeup
24	Thu, Apr 4, 2019	Feedback on project presentations	Bring 5 printouts of your initial project writeup
25	Tue, Apr 9, 2019	RL & the future of AI	RLAI Section 17.6
	Tue, Apr 16, 2019		final project due
	Thu, Apr 25, 2019	Final exam, B-2	