

CMPUT 609 (RLII): Provisional Schedule

class num	date	Topics	Reading/preparation
1	Tue, Jan 7, 2020	Goals for course; Qualifying exam	Thru 194 (all these refer to pages in the textbook)
2	Thu, Jan 9, 2020	New notation. Defining intelligence. lab: Reading Diaries.	DefiningIntelligence.pdf, Thru 214
3	Tue, Jan 14, 2020	The bitter lesson of AI; Why approximation is so important	Bitter.pdf, Thru 236
4	Thu, Jan 16, 2020	Supervised Learning Lab; Bring your laptops	https://colab.sandbox.google.com/drive/1AQOu9Ly8nwK5PprlmU89IVNuUniy7ZAe , Thru 248
5	Tue, Jan 21, 2020	Tile Coding lab; Bring your laptops	tiles3.py, http://www.incompleteideas.net/tiles/tiles3.html , Exercise 9.5,
6	Thu, Jan 23, 2020	Why is control so different with function approximation? Average reward	Thru 256, 10.7, 10.6, 10.8, in that order
7	Tue, Jan 28, 2020	Off-policy prediction; The deadly triad	Thru 265
8	Thu, Jan 30, 2020	Linear function approximation theory	Thru 277
9	Tue, Feb 4, 2020	Modern off-policy algorithms	Thru 286
10	Thu, Feb 6, 2020	Eligibility traces;	Thru 297
11	Tue, Feb 11, 2020	Course project ideas; True online TD(λ) and other equivalences	Thru 309
12	Thu, Feb 13, 2020	Tree-backup & Q(σ) with eligibility traces. Best practices for empirical RL research	RLAI Sections 5.8, 5.9, 7.4, 7.5, 7.6, then thru 320. Exercises 12.8, 12.9, 12.12
	Tue, Feb 18, 2020	WINTER	
	Thu, Feb 20, 2020	BREAK	
13	Tue, Feb 25, 2020	Policy gradient methods	RLAI Chapter 13
14	Thu, Feb 27, 2020	RL and psychology	RLAI Chapter 14
15	Tue, Mar 3, 2020	RL and Neuroscience	RLAI Chapter 15
16	Thu, Mar 5, 2020	Deep RL for game playing (really project prep)	RLAI Chapter 16-16.3, 16.5, 16.6; Course project due
17	Tue, Mar 10, 2020	Model-based RL with approximation	Review RLAI Chapter 8, LinearDyna.pdf
18	Thu, Mar 12, 2020	Partial observability, state update	RLAI 17.3, MBRL2.pdf intro & Section 1, background: PSRs.pdf, POMDPs on wikipedia
19	Tue, Mar 17, 2020	agent state and GVF's	RLAI Sections 17.1
20	Thu, Mar 19, 2020	options	RLAI Sections 17.2, options.pdf Sections 1, 2, 9, 10, and others as desired
21	Tue, Mar 24, 2020	Step-size adaptation, representation learning	IDBD.pdf, Mahmood.pdf Chapters 11 & 12
22	Thu, Mar 26, 2020	Discovery in model-based RL	Rest of MBRL2.pdf, Parretal.pdf Sections 1-3
23	Tue, Mar 31, 2020	Play	
24	Thu, Apr 2, 2020	Creative applications of RL	RLAI Chapter 16.4, 16.7, 16.8
25	Tue, Apr 7, 2020	RL & the future of AI	RLAI Section 17.6, 2nd course project deadline
	Wed, Apr 15, 2020	Final exam, TBD	