

# CMPUT 366: Schedule of Classes and Assignments

class num	date	lecture topic	Reading assignment (in advance if possible)	Assignment due
1	Tue, Sep 5, 2017	The Magic of Artificial Intelligence; reasons for taking the course	Read section 1 of the Wikipedia entry for “the technological singularity”; see also Vinge2010 ( <a href="http://www-rohan.sdsu.edu/faculty/vinge/misc/iaai10/">http://www-rohan.sdsu.edu/faculty/vinge/misc/iaai10/</a> ) and Moravec1998 ( <a href="http://www.transhumanist.com/volume1/moravec.htm">http://www.transhumanist.com/volume1/moravec.htm</a> )	
2	Thu, Sep 7, 2017	Bandit problems	Sutton & Barto Chapters 1 and 2 (Section 2.7 optional)	
	<b>Mon, Sep 11, 2017</b>	Probability, Python review/setup, textbook purchase	probabilities-expectations.pdf (in the dropbox)	
3	Tue, Sep 12, 2017	Bandit problems plus RL examples	Sutton & Barto Chapter 2 (Section 2.7 optional)	T1
4	Thu, Sep 14, 2017	Defining “Intelligent Systems”	Read the definition given for artificial intelligence in Wikipedia and in the Nilsson book on p13; google for and read “John McCarthy basic questions”,	
	Mon, Sep 18, 2017	A1 lab		
5	Tue, Sep 19, 2017	Markov decision problems	Sutton & Barto Chapter 3 thru 3.5	A1
6	Thu, Sep 21, 2017	Returns, value functions	Rest of Sutton & Barto Chapter 3	T2
	Mon, Sep 25, 2017	A2 lab		
7	Tue, Sep 26, 2017	Bellman Equations	Sutton & Barto Summary of Notation, Sutton & Barto Section 4.1	
8	Thu, Sep 28, 2017	Dynamic programming (planning)	Sutton & Barto Rest of Chapter 4	A2, T3
	Mon, Oct 2, 2017	Tutoring lab		
9	Tue, Oct 3, 2017	Monte Carlo Learning	Sutton & Barto Chapter 5 thru 5.4	
10	Thu, Oct 5, 2017	Off-policy Monte Carlo Learning	Sutton & Barto rest of Chapter 5 (except Sections 5.8, 5.9)	T4
	Fri, Oct 6, 2017	Special Lab A3		
	Mon, Oct 9, 2017	No lab (holiday)		
11	Tue, Oct 10, 2017	Temporal-difference learning	Sutton & Barto Chapter 6 thru Section 6.3	A3
12	Thu, Oct 12, 2017	Temporal-difference learning	Sutton & Barto rest of Chapter 6	T5
	Mon, Oct 16, 2017	A4 lab		
13	Tue, Oct 17, 2017	Multi-step bootstrapping	Sutton & Barto Chapter 7 except Sections 7.4-6	T6
14	Thu, Oct 19, 2017	Review	Sutton & Barto Chapters 2-7	A4
	Mon, Oct 23, 2017	Tutoring lab		
15	Tue, Oct 24, 2017	Midterm Exam	No new reading	
16	Thu, Oct 26, 2017	Models and planning	Sutton & Barto Chapter 8 thru Section 8.3	
	Mon, Oct 30, 2017	A5 lab		
17	Tue, Oct 31, 2017	Models and planning	Sutton & Barto rest of Chapter 8 except 8.6 & 8.7	T7
18	Thu, Nov 2, 2017	Function Approximation; Online linear supervised learning	Nilsson Sec. 2.2.1 and Nilsson Ch. 4; Sutton & Barto Chapter 9 thru 9.4	A5
	Mon, Nov 6, 2017	A6 lab		
19	Tue, Nov 7, 2017	Prediction with linear approximation, Tile coding	Sutton & Barto rest of Chapter 9 except 9.5.1,9.5.2, 9.7-9.10	T8
20	Thu, Nov 9, 2017	Control with approximation; a little off-policy and policy gradient	Sutton & Barto Chapter 10, also 11.3 and 13.1 (not in printed book)	T9
	<b>Nov 13-17</b>	<b>Fall Break</b>		
	Mon, Nov 20, 2017	A6 lab		
21	Tue, Nov 21, 2017	Temporal Abstraction	Options.pdf (in the dropbox) Sections 1-4 and 8	A6
22	Thu, Nov 23, 2017	Eligibility traces	Sutton & Barto Chapter 12 thru 12.3, and 12.7, 12.8, 12.12, and 12.13	T10
	Mon, Nov 27, 2017	A7 lab		
23	Tue, Nov 28, 2017	Biological reinforcement learning	Sutton & Barto Chapters 14 and 15	T11
24	Thu, Nov 30, 2017	Deterministic Tree-based Planning	Wikipedia on Iterative deepening depth-first search, and alpha-beta pruning	
	Mon, Dec 4, 2017	A7 & search exercises		
25	Tue, Dec 5, 2017	Heuristic Search (Holte)	Wikipedia on the A* search algorithm	
26	Thu, Dec 7, 2017	Monte Carlo Tree Search (Guest lecture from Prof Martin Mueller)	MCTS-survey.pdf in dropbox, read sections 1-3, 8, 9	A7, T12
	Thu, Dec 14, 2017	Final exam 2-5pm		