Day	Topic	Slides	Events	Deadlines	
	[Introduction (Chelsea)]				
	What is this class about?				
Mon Apr 6	Overview of course	[one page]	[foundations (zip) (template)] **out**		
(week 1)	Optimization	[text outline]			
		[pdf:1pp,6pp]			
		[code]			
		[supplementary]			
	[Machine learning (Chelsea)]				
	Don't manually code it up, learn it from examples...				
Wed Apr 8	Linear classification	[one page]			
	Loss minimization	[text outline]			
	Stochastic gradient descent	[pdf:1pp,6pp]			
		[code]			
		[supplementary]			
Thu Apr 9	Section: optimization, probability, Python (review)	[slides]			
Mon Apr 13	Features and non-linearity	[one page]	[sentiment (zip) (template)] **out**		
(week 2)	Neural networks, nearest neighbors	[text outline]			
		[pdf:1pp,6pp]			
		[supplementary]			
Tue Apr 14				[foundations (zip) (template)] **due**	
Wed Apr 15	Generalization	[one page]			
	Unsupervised learning, K-means	[text outline]			
		[pdf:1pp,6pp]			
		[code]			
		[supplementary]			
Thu Apr 16	Section: Backpropagation, nearest neighbors and past exam problems	[slides]			
		[annotated slides]			
	[Search (Nima)]				
	Problem solving as finding paths in graphs...				
Mon Apr 20	Tree search	[one page]	[reconstruct (zip) (template)] **out**		
(week 3)	Dynamic programming, uniform cost search	[text outline]	p-proposal (survey) **out**		
		[pdf:1pp,6pp]			
		[code]			
		[supplementary]			
Tue Apr 21				[sentiment (zip) (template)] **due**	
Wed Apr 22	A*, consistent heuristics	[one page]			
	Relaxation	[text outline]			
		[pdf:1pp,6pp]			
		[code]			
		[supplementary]			
Thu Apr 23	Section: UCS, Dynamic Programming, A*	[slides]			
		[annotated slides]			
	[Markov decision processes (Chelsea)]				
	When nature intervenes randomly...				
Fri Apr 24			Drop date		
Mon Apr 27	MDPs, policy evaluation, value iteration	[one page]	[blackjack (zip) (template)] **out**		
(week 4)		[text outline]			
		[pdf:1pp,6pp]			
		[code]			
		[supplementary]			
Tue Apr 28				[reconstruct (zip) (template)] **due**	
Wed Apr 29	Reinforcement learning	[one page]			
	Monte Carlo, SARSA, Q-learning	[text outline]			
	Exploration/exploitation, function approximation	[pdf:1pp,6pp]			

		[supplementary]			
Thu Apr 30	Section: MDPs and Reinforcement Learning	[slides]		p-proposal (survey) **due**	
	[Game playing (Nima)]				
	When an adversary intervenes...				
Mon May 4	Minimax, expectimax	[one page]	[pacman (zip) (template)] **out**		
(week 5)	Evaluation functions	[text outline]			
	Alpha-beta pruning	[pdf:1pp,6pp]			
		[code]			
		[supplementary]			
Tue May 5				[blackjack (zip) (template)] **due**	
Wed May 6	TD learning	[one page]			
	Game theory	[text outline]			
		[pdf:1pp,6pp]			
		[supplementary]			
Thu May 7	Section: Games	[slides]			
	[Constraint satisfaction problems (Nima)]				
	Problem solving as assigning variables (with constraints)...				
Mon May 11	Factor graphs	[one page]	[scheduling (zip) (template)] **out**		
(week 6)	Backtracking search	[text outline]	p-progress out		
	Dynamic ordering, arc consistency	[pdf:1pp,6pp]			
		[demo]			
		[supplementary]			
Tue May 12				[pacman (zip) (template)] **due**	
Wed May 13	Beam search, local search	[one page]			
	Conditional independence, variable elimination	[text outline]			
		[pdf:1pp,6pp]			
		[supplementary]			
Thu May 14	Section: CSPs	[slides]			
		[annotated slides]			
	[Bayesian networks (Nima)]				
	Representing uncertainty with probabilities...				
Mon May 18	Probabilistic inference	[one page]	[car (zip) (template)] **out**		
(week 7)	Hidden Markov models	[text outline]	[logic (zip) (template)] **out**		
		[pdf:1pp,6pp]			
		[supplementary]			
Tue May 19				[scheduling (zip) (template)] **due**	
Wed May 20	Forward-backward	[one page]			
	Particle filtering	[text outline]			
	Gibbs sampling	[pdf:1pp,6pp]			
		[supplementary]			
Thu May 21	Section: Bayesian networks	[slides]		p-progress due	
		[annotated slides]			
Mon May 25	(Memorial Day — no class)				
(week 8)					
Tue May 26				[car (zip) (template)] **due**	
				[logic (zip) (template)] **due**	
Wed May 27	Learning Bayesian networks	[one page]			
	Laplace smoothing	[text outline]			
	Expectation Maximization	[pdf:1pp,6pp]			
		[code]			
		[supplementary]			
Thu May 28	Section: Exam review 1				
	Reflex and State Based Models				
	Skilling Aud 3:30-4:20pm				
Fri May 29	Section: Exam review 2	[slides]			
	Variable Based Models	[annotated slides]			
	Skilling Aud 3:30-4:20pm				
Sat May 30	Extra: Review of Variable Elimination and Treewidth	[slides]			
	[Logic (Nima)]				
	More expressive models...				
Mon Jun 1	Syntax versus semantics	[one page]	p-final out		
(week 9)	Propositional logic	[text outline]			
	Horn clauses	[pdf:1pp,6pp]			

		[supplementary]			
Tue Jun 2			**Exam**		
Wed Jun 3	First-order logic	[one page]			
	Resolution	[text outline]			
		[pdf:1pp,6pp]			
		[supplementary]			
	[Conclusion (Chelsea)]				
	Reflections and prospects...				
Mon Jun 8	Deep learning	[one page]		p-final due	
(week 10)	autoencoders, CNNs, RNNs	[text outline]			
		[pdf:1pp,6pp]			
Wed Jun 10	Summary, future of AI				