



# UC Berkeley CS188 Intro to AI -- Course Materials

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## Sample Course Schedule (Spring 2014)

Below is a sample schedule, which was the UC Berkeley Spring 2014 course schedule (14 weeks).

The optional readings, unless explicitly specified, come from [Artificial Intelligence: A Modern Approach, 3rd ed.](#) by Stuart Russell (UC Berkeley) and Peter Norvig (Google).

The lecture videos for Spring 2014 can be found under the "Video" column here, and additionally, under the [Lecture Videos tab](#) along with lecture videos from past semesters.

Under the videos column, there are additional Step-By-Step videos which supplement the lecture's materials. See the list of Step-By-Step videos [here](#).

The links to homework assignments only work when you are logged in to [edge.edx.org](#) and are registered for [this course](#). See [here](#) for more detailed instructions.

<u>Day</u>	<u>Topic</u>	<u>Optional Reading</u>	<u>Slides</u>	<u>Videos</u>	<u>Assignment</u>	<u>Due</u>
Tu 1/21	Introduction to AI	Ch. 1	<a href="#">PPT</a>	<a href="#">Lecture</a>	<a href="#">P0: Tutorial</a>	1/24 5pm
Th 1/23	Uninformed Search	Ch. 3.1-4 (2e: Ch. 3)	<a href="#">PPT</a>	<a href="#">Lecture SBS-1</a>		
Tu 1/28	A* Search and Heuristics	Ch. 3.5-6 (2e: Ch. 4.1-2)	<a href="#">PPT</a>	<a href="#">Lecture SBS-2</a>	<a href="#">HW1: Search section 0 (solutions) section 1 (solutions)</a>	2/3
Th 1/30	Constraint Satisfaction Problems I	Ch. 6.1 (2e: Ch. 5.1)	<a href="#">PPT</a>	<a href="#">Lecture</a>	<a href="#">P1: Search</a>	2/7 5pm
Tu 2/4	CSPs II	Ch. 6.2-5 (2e: Ch. 5.2-4)	<a href="#">PPT</a>	<a href="#">Lecture</a>	<a href="#">HW2: CSPs section 2 (solutions)</a>	2/10
Th 2/6	Game Trees: Minimax	Ch. 5.2-5 (2e: Ch. 6.2-5)	<a href="#">PPT</a>	<a href="#">Lecture SBS-3</a>		
Tu 2/11	Game Trees: Expectimax; Utilities	Ch. 5.2-5 (2e: Ch. 6.2-5), 16.1-16.3	<a href="#">PPT</a>	<a href="#">Lecture</a>	<a href="#">HW3: Games section 3 (solutions)</a>	2/18
Th 2/13	Markov Decision Processes	Ch. 17.1-3	<a href="#">PPT</a>	<a href="#">Lecture</a>	<a href="#">P2: Multi-Agent Pacman</a>	2/21 5pm
Tu 2/18	Markov Decision Processes II	Ch. 17.1-3, <a href="#">Sutton and Barto Ch. 3-4</a>	<a href="#">PPT</a>	<a href="#">Lecture</a>	<a href="#">HW4: MDPs section 4 (solutions)</a>	2/24
Th 2/20	Reinforcement Learning	Ch. 21, <a href="#">S&amp;B Ch. 6.1,2,5</a>	<a href="#">PPT</a>	<a href="#">Lecture</a>		
Tu 2/25	Reinforcement Learning II	Ch. 21	<a href="#">PPT</a>	<a href="#">Lecture</a>	<a href="#">HW5: RL section 5 (solutions)</a>	3/3
					<a href="#">P3: Reinforcement Learning</a>	3/7 5pm
Th 2/27	Probability	Ch. 13.1-5 (2e: Ch. 13.1-6)	<a href="#">PPT</a>	<a href="#">Lecture</a>	<a href="#">Practice Midterm (solutions)</a>	3/8
Tu 3/4	Markov Models	Ch. 15.2,5	<a href="#">PPT</a>	<a href="#">Lecture</a>		
Th 3/6	Hidden Markov Models	Ch. 15.2,5	<a href="#">PPT</a>	<a href="#">Lecture</a>		
Mo 3/10	<a href="#">Midterm 1 Exam (solutions)</a>				<a href="#">HW6: Probability, HMMs section 6 (solutions)</a>	3/17
Th 3/13	Applications of HMMs	Ch. 15.2,6	<a href="#">PPT</a>	<a href="#">Lecture</a>	<a href="#">P4: Ghostbusters</a>	3/21 5pm

Day	Topic	Optional Reading	Slides	Videos	Assignment	Due
Tu 3/18	Bayes' Nets: Representation	Ch. 14.1-2,4	<a href="#">PPT</a>	<a href="#">Lecture</a>	<a href="#">HW7: Bayes' Nets: Representation, Independence section 7 (solutions)</a>	4/1
Th 3/20	Bayes' Nets: Independence	Ch. 14.1-2,4	<a href="#">PPT</a>	<a href="#">Lecture SBS-4</a>		
Tu 3/25	Spring Break					
Th 3/27	Spring Break					
Tu 4/1	Bayes' Nets: Inference	Ch. 14.4	<a href="#">PPT</a>	<a href="#">Lecture SBS-5 SBS-6</a>	<a href="#">HW8: Bayes' Nets: Inference, Sampling section 8 (solutions)</a>	4/7
Th 4/3	Bayes' Nets: Sampling	Ch. 14.4-5	<a href="#">PPT</a>	<a href="#">Lecture SBS-7 SBS-8</a>		
Tu 4/8	Decision Diagrams / VPI	Ch. 16.5-6	<a href="#">PPT</a>	<a href="#">Lecture</a>	<a href="#">HW9: Decision Diagrams, VPI, ML: Naive Bayes section 9 (solutions)</a>	4/14
					<a href="#">Practice Midterm 2 (solutions)</a>	4/19
Th 4/10	ML: Naive Bayes	Ch. 20.1-20.2.2	<a href="#">PPT</a>	<a href="#">Lecture SBS-9 SBS-10</a>	<a href="#">Contest: Pacman Capture the Flag</a>	4/27
Tu 4/15	ML: Perceptrons	Ch. 18.6.3	<a href="#">PPT</a>	<a href="#">Lecture SBS-11</a>		
Th 4/17	ML: Kernels and Clustering	Ch. 18.8	<a href="#">PPT</a>	<a href="#">Lecture</a>		
Mo 4/21	<a href="#">Midterm 2 Exam (solutions)</a>				<a href="#">HW10: ML: Perceptrons, Kernels section 10 (solutions) section 11 (solutions)</a>	4/28
Th 4/24	Advanced Applications: NLP, Games and Cars		<a href="#">PPT</a>	<a href="#">Lecture</a>	<a href="#">P5: Classification</a>	5/9 5pm
Tu 4/29	Advanced Applications: (Robotics and Computer Vision)		<a href="#">PPT</a>	<a href="#">Lecture</a>		
Th 5/1	Advanced Topics and Final Contest		<a href="#">PPT</a>		<a href="#">Practice Final (solutions)</a>	5/10
Th 5/15	<a href="#">Final Exam (solutions)</a>					