CSCI-561 Foundations of Artificial Intelligence – USC – Fall 2018 Syllabus and Schedule
Profs. Sheila Tejada, Wei-min Shen & Ning Wang

M - W Dates	Tues. Dates	Topic	Reading
Week 1 Aug 20	Aug 21	1. Welcome – Introduction	AIMA 1, 2 (ALFE 1)
Aug 22		2. Problem solving & search	AIMA 3 (ALFE 2, 6)
Week 2 Aug 27	Aug 28	3. Uninformed search	AIMA 3
Aug 29		4. Continue uninformed search	AIMA 3 HW1 out (8/31)
Week 3 Sep 3	Sep 4	Labor day - **no class**	AIMA 3, 4
Sep 5		5. Informed search	(ALFE 6)
Week 4 Sep 10	Sep 11	6. Continue Informed search.	AIMA 3, 4 (ALFE 6)
Sep 12		7. Game playing	AIMA 5
Week 5 Sep 17	Sep 18	8. Constraint satisfaction	AIMA 6 HW1 due by midnight (9/17)
Sep 19		9. Agents that reason logically	AIMA 7 (ALFE 3)
Week 6 Sep 24	Sep 25	**Exam 1** (Monday Quiz section 8-9:50pm) 10. Continue agents that reason logically	AIMA 7
Sep 26		11. First-order logic	AIMA 8 HW2 out (9/28)
Week 7 Oct 1	Oct 2	12. Continue first-order logic	AIMA 8
Oct 3		13. Inference in first-order logic	AIMA 9
Week 8 Oct 8	Oct 9	14. Continue Inference in first-order logic	AIMA 9
Oct 10		15. Logical reasoning systems	AIMA 9
Week 9 Oct 15	Oct 16	16. Knowledge bases	AIMA 12 HW2 due by midnight 10/15

Oct 17		17. Planning	AIMA 10 (ALFE 6)
Week 10 Oct 22	Oct 23	18. Reasoning under uncertainty	AIMA 13, 14
Oct 24		19. Continue reasoning under uncertainty	AIMA 14, 15 (ALFE 5)
Week 11 Oct 29	Oct 30	**Exam 2** (Monday Quiz section 8-9:50pm) 20. Learning from examples	AIMA 18 (ALFE 4)
Oct 31		21. Learning with neural networks	AIMA 18 HW3 out (11/2)
Week 12 Nov 5	Nov 6	22. Probabilistic decision making	AIMA 16, 17 (ALFE 5)
Nov 7		23. Probability-based learning	AIMA 20-21 (ALFE 5.10, 6.1)
Week 13 Nov 12	Nov 13	24. Natural language processing	AIMA 22, 23
Nov 14		25. Towards intelligent machines	AIMA 24, 26, 27 (ALFE 13)
Week 14 Nov 19	Nov 20	26. Future of AI & Exam 3 Review	HW3 due by midnight (11/19)
Nov 21		Thanksgiving – **no class**	
Week 15 Nov 26		**Exam 3** (Monday Quiz section 8-9:50pm)	

Lectures:

Mondays & Wednesdays 5:00pm – 6:20pm in SGM-124: Prof. Sheila Tejada
Tuesdays 6:40pm–9:20pm in SGM-123: Profs. Wei-Min Shen & Sheila Tejada

Discussion sections: Profs. Sheila Tejada & Ning Wang

Exam 1: Monday, September 24, 2018, 8:00pm – 9:50pm, Room TBA
Exam 2: Monday, October 29, 2018, 8:00pm – 9:50pm, Room TBA
Exam 3: Monday, November 26, 2018 8:00pm – 9:50pm, Room TBA

Textbook: Artificial Intelligence: A Modern Approach, 3rd Ed. (AIMA)
Optional Reading: Autonomous Learning from the Environment (ALFE)

Grades: 25% for each exam, 5% for homework 1 and 10% each for homework 2 & 3. Some of the exam questions will be on topics covered in the discussions sessions only and not in the main lectures.

Homework: There are 3 programming assignments. You will program A.I. agents from scratch. Good programming knowledge is necessary. We will use vocareum.com where you can edit, compile, and test your code in the cloud. Supported language is Python.

Grading is absolute and according to the following scale: 85 or more: A; 80 or more: A-; 75 or more: B+; 70 or more: B; 65 or more: B-; 60 or more: C+; 55 or more: C; 50 or more: C-; less than 35: F.