## Lecture Schedule (subject to change. Last updated February 26, 2021)

<u>Classes run</u> from January 11 – April 16

| Week  | Dates               | Readings   |  |
|---|---------------------|--|--|
| Introduction  |                     | 1.00001150   |  |
| 1   | January 11, 13, 15  | Introduction (Ch. 1). Omit 1.3.  |  |
| 2   | January 18, 20, 22  | Intelligent Agents (Ch.2). Single-Agent Rational<br>Choice (Ch.16.1, 16.5). Overheads.   |  |
| One-Shot De   | cision-Making       |  |  |
| 3   | January 25, 27, 29  | Multiple Agents; Game Theory (3 <sup>rd</sup> ed: Ch. 17.5.1, 4 <sup>th</sup> ed: 18.2.1-2).   |  |
| 4   | February 1, 3, 5    | Multiple Agents ctd. (Nondeterministic Agents.)  |  |
| 5   | February 8, 10, 12  | Single Agent: Local Search. (Ch.4). Both editions: 4.1.1, 4.2  |  |
| 5   | February 12         | Assignment 1 due. On Ch.1, 2, Game Theory.   |  |
| Sequential Decision-Making                          |                     |  |  |
| -   | February 15, 17, 19 | Reading Week   |  |
| 6   | February 22, 24, 26 | Single Agent: Search-and-solve. (Ch.3).<br>3 <sup>rd</sup> ed: Omit: 3.4.2, 3.4.6, 3.5.3, 3.5.4., 3.6.3.<br>4 <sup>th</sup> ed: Omit: 3.4.2, 3.4.5, 3.5.5. 3.5.6, 3.5.4., 3.6.3.                         |  |
| 7   | March 1, 3, 5       | Multiple Agents, Adversarial Search, Game Playing.  3 <sup>rd</sup> ed: Ch.17.5.2, Ch.5. <u>Omit</u> 5.4.3, 5.6.  4 <sup>th</sup> ed: Ch. 18.2.3. <u>Omit</u> 5.3.3, 5.4, 5.5, 5.6                       |  |
| 8   | March 8             | Assignment 2 due   |  |
| Learning  |                     |  |  |
| 8   | March 8, 10, 12     | Decision Trees.  3 <sup>rd</sup> ed: 18.3.1-18.3.5.  4 <sup>th</sup> ed: 19.1, 19.2.1, 19.3, 19.3.4  |  |
| 9   | March 15, 17, 19    | Artificial Neural networks.  3 <sup>rd</sup> ed: 18.7  4 <sup>th</sup> ed: 21.1  |  |
| Knowledge Representation and Reasoning: Probability |                     |  |  |
| 10  | March 22, 24, 26    | Features for Natural Language Processing.  3 <sup>rd</sup> ed.: Ch. 22.1-2. 4 <sup>th</sup> ed: 23.1.1-4  Uncertainty.  3 <sup>rd</sup> ed.: Ch.13. Omit 13.6. 4 <sup>th</sup> ed.: 12.1-12.4            |  |
| 10  | March 29            | Assignment 3 due. On learning, NLP   |  |
| 11  | March 29, 31        | Probabilistic Reasoning and Bayesian Networks 3 <sup>rd</sup> ed: (Ch.14). Omit 14.3, 14.4, 14.5, 14.7. Section 14.6 is optional. 4 <sup>th</sup> ed: 13.1, 13.2 (Omit "compactness and node ordering"). |  |

| Learning To Act |                     |  |
|-----------------|---------------------|--|
| 12              | April 7, 9          | Markov Decision Processes. Ch. 17                        |
|                 |                     | 3 <sup>rd</sup> ed: 17.1-17.3                            |
|                 |                     | 4 <sup>th</sup> ed: 17.1, (omit 17.1.3), 17.2.1, 17.2.2. |
| 13              | April 12, 14, 16    | Reinforcement Learning.                                  |
|                 |                     | Final Exam Review.                                       |
| 13              | April 16            | Assignment 4 due   |
| Summer term     | May 10              | Review session (exams, assignments)                      |
|                 | 1:30pm -2:30 pm PST |  |

Final Exam: W April 28 8:30AM - 11:30AM