## Course Outline

This outline provides an overview of the course and assignments by week. **Please remember to check the calendar for specific due dates.**

Each course module runs for a period of seven (7) days, i.e., one week. Due dates for readings and other assignments are referred to by the day of the module week in which they are due. For example, if a reading assignment is to be completed by Day 3 and the module started on Monday, then the reading assignment should be completed by Wednesday or the 3rd day of the module.

| Module | Dates | Topics | Assignments |
|---|---|---|---|
| Module 1 | 1/28-2/3 | State Space Search | Russell, S. & Norvig, Chapter 3<br>• Self-Check 1<br>• Programming Assignment 1<br>• Assessment 1 |
| Module 2 | 2/4-2/10 | Adversarial Search | Russell, S. & Norvig, Chapters 5 & 17.5<br>• Self-Check 2<br>• Programming Assignment 2<br>• Assessment 2<br>• Group Discussion 1 |
| Module 3 | 2/11-2/17 | Constraint Satisfaction Problems | Russell, S. & Norvig, Chapter 6<br>• Self-Check 3<br>• Programming Assignment 3<br>• Assessment 3<br>• Group Discussion 1 (con't) |
| Module 4 | 2/18-2/24 | Reinforcement Learning | Russell & Norvig, Chapters 17 & 21<br>Barto & Sutton, Sections 4.4, 6.4, & 6.5<br>• Self-Check 4<br>• Programming Assignment 4<br>• Assessment 4<br>• Group Discussion 2 |
| Module 5 | 2/25-3/3 | Local Search | Russell, S. & Norvig, Chapter 4<br>• Self-Check 5<br>• Programming Assignment 5<br>• Assessment 5<br>• Group Discussion 2 (con't) |
| Module 6 | 3/4-3/10 | Logic and Reasoning | Russell, S. & Norvig. Chapters 7-9.<br>• Self-Check 6<br>• Programming Assignment 6<br>• Assessment 6<br>• Group Discussion 3 |

| Module | Dates | Topics | Assignments |
|---|---|---|---|
| Module 7 | 3/11-3/17 | Planning | Russell, S. & Norvig, Chapter 10<br>• Self-Check 7<br>• Programming Assignment 7<br>• Assessment 7<br>• Group Discussion 3 (con't) |
| | 3/18-3/24 | Spring Break | |
| Module 8 | 3/25-3/31 | Regression and SVMs | Russell, S. & Norvig, Chapter 18.1-18.6 (skip .3)<br>• Self-Check 8<br>• Programming Assignment 8<br>• Assessment 8<br>• Group Discussion 4 |
| Module 9 | 4/1-4/7 | Model Evaluation | • Self-Check 9<br>• Programming Assignment 9<br>• Assessment 9<br>• Group Discussion 4 (con't) |
| Module 10 | 4/8-4/14 | Artificial Neural Networks | Russell, S. & Norvig, Chapter 18.7<br>ScienceDaily Article, 'Brain' In A Dish Acts As Autopilot, Living Computer<br>• Self-Check 10<br>• Programming Assignment 10<br>• Assessment 10<br>• Group Discussion 5 |
| Module 11 | 4/15-4/21 | Rules | Russell, S. & Norvig, Chapters 18.3, 18.10<br>• Self-Check 11<br>• Programming Assignment 11<br>• Assessment 11<br>• Group Discussion 5 (con't) |
| Module 12 | 4/22-4/28 | Bayesian Networks | Russell, S. & Norvig, Chapters 18.3, 18.10<br>NY Times Book Review, "The Mathematics of Changing Your Mind"<br>• Self-Check 12<br>• Programming Assignment 12<br>• Assessment 12<br>• Group Discussion 6 |
| Module 13 | 4/29-5/5 | Example Based Learning | Russell, S. & Norvig, Chapters 18.8.1<br>• Self-Check 13<br>• Programming Assignment 13<br>• Assessment 13<br>• Group Discussion 6 (con't) |
| Module 14 | 5/6-5/12 | Review | Russell, S. & Norvig, Chapters 26, 27<br>• Assessment Review<br>• Programming Assignment 14 |