

**CSE 537
COURSE SYLLABUS**

| | CONTENT | CHAPTER ON TEXT BOOK |
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| 1 | Introduction & Intelligent Agents | Chapter 1, 2 |
| 2 | Problem Solving as Search Problem Spaces Uninformed Search Iterative Deepening Search | Chapter 3 (3.1 ~ 3.5) |
| 3 | Heuristic Search Best-first Search A* Search | Chapter 3 (3.6) |
| 4 | Constraint Satisfaction Game Playing Alpha-beta Pruning | Chapter 5 (5.1 ~ 5.3) Chapter 6 (6.1 ~ 6.3) |
| 5 | Knowledge Representation Propositional Logic First-Order Logic | Chapter 7 Chapter 8 |
| 6 | Logical Reasoning Deductive Inference Unification Forward and Backward chaining Resolution | Chapter 9 |
| 7 | Reasoning under Uncertainty | Chapter 13 |
| 8 | Bayesian Networks | Chapter 14 |
| 9 | <i>Machine Learning</i> – Inductive Inference Decision Trees | Chapter 18 (18.1 ~ 18.3) |
| 10 | <i>Statistical Learning</i> - Neural Networks Perceptrons Back Propagation Support Vector Machines | Chapter 18(18.7, 18.9) |
| 11 | Temporal Reasoning & application to Speech Recognition | Chapter 15 (15.1) |
| 12 | Planning | Chapter 11 |

GRADING

There will be midterm, final and 4 projects. Final will include all topics.

The final grade will be based on the following weights:

Midterm: 35%

Final: 45%

Projects: 20%