# **Artificial Intelligence**



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## **Course Contents**

- The theoretical and practical issues for all disciplines of Artificial Intelligence (AI) will be considered
  - Al is interdisciplinary!
- Foundational Topics to be Covered
  - Intelligent Agents
  - Search, Advanced Search, Adversarial Search (Game Playing),
    Constraint Satisfaction Problems (CSP)
  - Propositional and Predicate Logic, Inference and Resolution
  - Rules and Expert Systems
  - Probabilistic Reasoning and Bayesian Belief Networks
  - Others (Hidden Markov Models, Graphical Models, Neural Networks, Genetic Algorithms, etc.)

## Textbook and References

#### Textbook:

 S Russell and P. Norvig. Artificial Intelligence: A Modern Approach. Prentice Hall, 2003

http://aima.cs.berkeley.edu/

#### References:

- M. Negenevitsky. Artificial Intelligence: A Guide to Intelligence
  Systems. Addison-Wesley, 2005
- Nils J. Nilsson. Artificial Intelligence: A New Synthesis. Morgan Kaufmann, 1998
- B. Coppin. Artificial Intelligence Illuminated. Jones and Bartlett,
  2004
- E. Alpaydin, *Introduction to Machine Learning*, MIT Press, 2004
- T.M. Mitchell. *Machine Learning*. McGraw-Hill, 1997

## Grading (Tentative)

Midterm or Final: 30%

• Homework: 25%

• Project/Presentation: 30%

• Attendance/Other: 15%