

Brooklyn College
Department of Computer and Information Science

CISC 7412 [716.5] Artificial Intelligence II

37½ hours plus conference and independent work; 3 credits

A second-level course in artificial intelligence. Topics discussed will be taken from the areas of knowledge representation, logic and logic programming, pattern-directed inference, reasoning with uncertain or unreliable knowledge, natural language processing, computer vision, machine architecture, and programming languages for artificial intelligence.

Objective

To introduce the students to some of the more advanced theory and practical techniques in artificial intelligence. Exact topics vary from offering to offering, but a typical offering covers:

- Intelligent agents
- Communication and cooperation
- Interaction between intelligent systems
- Resource allocation and bargaining

Syllabus

1. Introduction
2. Intelligent agents
 - a. Agents and environments
 - b. Reactive agents
 - c. Deductive agents
 - d. Practical Reasoning agents
3. Communication and cooperation
 - a. Communication
 - b. Working Together
 - c. Methodologies
4. Multiagent decision making
 - a. Interactions
 - b. Group decisions
 - c. Coalitions
5. Resource allocation
 - a. Auctions

- b. Negotiation and bargaining
- c. Argumentation

Textbook

M. Wooldridge, An Introduction to Multiagent Systems, 2nd Edition, Wiley