

## WELCOME TO CIS 74010

## Logical Foundations of Computer Science

TH 9.30 - 11.30am C415A

Professor Simon Parsons

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Class web page:

<http://www.sci.brooklyn.cuny.edu/~parsons/courses/740-fall-2011/>

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- Contrary to the title, this course will be a course on artificial intelligence.
- The mismatch is because of the way that the syllabus for the program is updating.
- The course assumes that you have already taken a class in AI.
- We will cover topics beyond those typically covered in a one semester course.

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- What is artificial intelligence?



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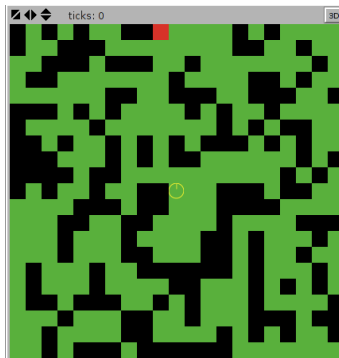
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## Course objectives

- To introduce you to some of the more advanced theory and practical techniques in artificial intelligence.
- In particular, this course will teach you about:
  - Logical reasoning
  - Planning
  - Probabilistic reasoning
  - Decision making
  - Reinforcement learning
  - Multiagent systems
  - Classification
- We may also talk a bit about robotics.

- To give you experience of applying both the theory and practical techniques.
- In other words there are:
  - Homeworks; and
  - Projects.
- Homeworks will give you the chance to use the theory.
- Projects will give you the chance to use the practical techniques

- Projects will involve writing programs.
- These will typically be simulations, using Netlogo:



## Resources

- Lectures
- Textbook
  - Russell and Norvig, Artificial Intelligence, A modern approach (more later)
- Lecture notes
- Web page
  - <http://www.sci.brooklyn.cuny.edu/~parsons/courses/740-fall-2011>

### Office Hours

- I will be running virtual office hours, online (on AIM) under the screen name:

profSimonParsons

I'll be online Monday and Wednesday night, between 9 and 10 if you want to ask questions, or just come say "hi". Outside of that time, drop me an email and I'll get back to you as quick as I can.

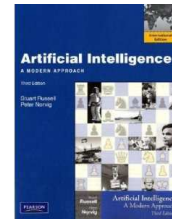
### Textbook

*Artificial intelligence: A modern approach (3rd Edition)*

by Stuart Russell and Peter Norvig

Prentice Hall 2003

ISBN 0-13-790395-2 (hardbound).



### Assessment

- The course grade will be based on homeworks, projects and exams.

### A word about lectures

- Brief lecture notes will be placed on the web page after every lecture.
- These will be linked to the syllabus page.
- But they are NOT A SUBSTITUTE FOR COMING TO CLASS.
- If you must miss a class, YOU are responsible for getting notes from someone who did come to class

## Topics

- We will assume you have covered the first two parts of Russell and Norvig in a previous class and also have some familiarity with logic.

## Topics we will cover

- Logical reasoning (briefly) (Chapters 7, 8 and 9)
- Planning (Chapters 10 and 11)
- Probabilistic reasoning (Chapters 13, 14, 15)
- Decision making (Chapters 16, 17)
- Learning (Chapters 18, 20, 21)

For full details see the class syllabus page.