CITS4211
Artificial Intelligence

Dr Cara MacNish
Room 1.09, cara@csse.uwa.edu.au

A course about the future...?

Course Structure

- Artificial Intelligence
  - Introduction, History, Intelligent Agents
- Problem Solving
  - Problem Solving and Search, Uninformed and Informed Search Algorithms, Game Playing Algorithms
- Knowledge Representation and Reasoning
  - Introduction to KR & R, Logic, Inference
- Planning
  - Partial Order Planning, Planning and Acting
- Learning
  - Agents that Learn, Sequential Decision Problems, Reinforcement Learning

Teaching Staff

Lecturer/Co-ordinator: Dr Cara MacNish (cara@csse.uwa.edu.au)

Timetable

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<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
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<td>Lecture</td>
<td>Lab</td>
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<td>Lecture</td>
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<td>4pm</td>
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<td>Consult</td>
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Teaching Sessions

Lectures
- 2 x 45 mins (approx) with 5 minute break

Laboratories
- 3 hours reserved, first two hours supervised
- Sign up for 1hr supervised session on OLCR
- You may attend all sessions provided there is room
- You may bring your own laptop (see later)
- You are expected to complete lab work outside of scheduled sessions!

Laptops
- You are welcome to use your own laptop in the lab
- Wireless and wired access are provided through the SNAP network
- Software is Open Source - primarily Java
  - we will use Xcode development environment in the labs, but this is simply a front-end for Ant, which is open source (more on this in the first labs)

Noticeboard, Help Forum and Discussion Server (help4211)
- allows students and staff to share questions and solutions
- if you encounter a problem one of the first steps should be to check the forum to see if it has been encountered before
- can also post details of problems or (not for credit) solutions
- Note: The forum is not a substitute for face-to-face teaching and does not have a guaranteed “response time”. If you have an urgent problem you should attend one of the above sessions.

Consultation time
- meet with lecturer individually to discuss private issues or any other problems that remain unresolved

Assessment

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<th>Type</th>
<th>% of final mark</th>
<th>Dates (subject to confirmation)</th>
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<tbody>
<tr>
<td>Lab Project (Agent building)</td>
<td>25%</td>
<td>Weeks 2-10</td>
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<tr>
<td>Mid-semester Test</td>
<td>15%</td>
<td>Week 7</td>
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<tr>
<td>Exam</td>
<td>60%</td>
<td>June examinations</td>
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The project builds on lab work. It is essential that you keep up with the lab work!
Getting Started In CSSE

During the first week of semester, you should:
1. Obtain your CSSE computer account name and password (you will need your student number and Pheme password).
2. Obtain your timetable from OLCR.
3. Activate your UWA email account. CSSE email will automatically be redirected to this email account.

Use the URL: https://secure.csse.uwa.edu.au/run/csentry?pw1=yes

New students should also read the “Getting Started Guide” available from: http://web.csse.uwa.edu.au/current, and familiarise themselves with the Schools web-site: http://web.csse.uwa.edu.au

Labs 2.03 and 2.05 of the CSSE building will be open from 12pm Monday 23rd of February. White instruction sheets will be placed throughout the lab.

On-line Resources

“AI Central”
• Unit information
• Unit outline (important that you read this)
• Lecture materials
• Exercise sheets and projects
• Programs or code segments needed for exercise sheets
• Links to resources such as the help forum, timetable, Java API, etc

http://undergraduate.csse.uwa.edu.au/units/CITS4211/

What you should do this week

1. Get set up to use the School’s computer systems.
2. Begin to familiarise yourself with the Unit’s web site.
3. Brush up on your Java?
4. Work through Lab Sheet 0 on familiarising yourself with the Mac OSX environment

“Official” labs start in Week 2.

References

Artificial Intelligence: A Modern Approach, 2nd Ed, S. Russell and P. Norvig (aka "The Intelligent Agent Book")

Notes (copies of overheads) - first part available from the bookshop
Learning and Teaching Agreement

Lectures
- Me...
  - Explain material in lectures — interactive.
  - Try to provide at least one break to stretch muscles and/or vocal chords.
- You...
  - Please have the courtesy to be quiet in lectures.
  - Check noticeboard (help4211) regularly for additional information.
  - Let me know of any difficulties - foster don’t fester!

Practical Work
- Me...
  - Provide exercise sheets.
  - Provide associated sample programs and code segments.
- You...
  - Need to do the lab exercises!!!
What is AI?

- How would you define artificial intelligence?
- What does it mean to you?
- Why is it significant?