

COMP30030: Introduction to Artificial Intelligence

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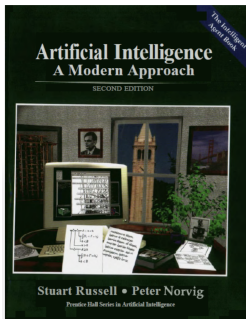
Assessment

- **Continuous Assessment: Weekly Laboratory Sessions 25%**
 - Labs are graded (A, B, C, D, E, NG)
 - Some labs may be simply pass/fail (P/F)
 - Labs will consist of coding questions and/or worksheets.
 - Worksheets normally to be handed up at end of lab.
 - Coding questions normally given 1 week to complete.
- **Mid-term test by MCQ 15%.**

Date of MCQ (during laboratory session): **Fri, Nov. 16, 09:00**
- **Final Written Exam 60%**
 - End of semester exam.

Books I

- Do not follow any set textbook but some material will come from this book:



Books II

Other textbooks:

- P.H. Winston (1993). Artificial Intelligence. Addison-Wesley, Reading, Massachusetts, third edition, ISBN 0201533774.
- M. Negnevitsky (2011). Artificial Intelligence: A Guide to Intelligent Systems. Addison Wesley; third edition, ISBN-10 1408225743.
- N.J. Nilsson (1998). Artificial Intelligence: A New Synthesis. Morgan Kauffman Publishers, second edition, ISBN 1558604677.
- G.F. Luger (2004). Artificial Intelligence: Structures and Strategies for Complex Problem Solving. Addison-Wesley, fifth edition, ISBN 0321263189.

Credits

- Much of the material we will follow was developed by **Assoc. Prof. Lorraine McGinty**, who has delivered the module in the last number of years.
- Other material is based on a different Artificial Intelligence module developed by **Assoc. Prof. Gianluca Pollastri** and me.
- The Recommender Systems topic will be delivered by **Dr. Michael O Mahony**.

Please note....

In order to take this module you need to have:

- Programming, data structure/algorithm skills
- Some lab assignments may be in languages that you are unfamiliar with.
- The exact requirements will be explained carefully during the labs) – you will not need to be an expert in the language
- Expect the following languages to appear
 - ♦ ~~C~~, Matlab, Javascript, Java

CS Support Centre (CSSC)

- ◆ This is a FREE SERVICE, offered to UCD students taking computer science modules.
- ◆ The centre operates as a drop-in service, so if you have any computer science related difficulty, feel free to drop in.
 - **CSSC Location:** B1.03, 1st Floor CSI main building
 - **CSSC Coordinator:** Caroline Fenlon
 - **Contact E-mail:** cssc@ucd.ie
 - **For more information:** <http://www.cs.ucd.ie/cssc/>

Communication and Resources

♦ Lecture Notes and Announcements

- Register online from <http://csmoodle.ucd.ie/moodle>.
- Enter registration key: “AI2018”
- CMS Administration Contact: paul.martin@ucd.ie

**Students must demonstrate their abilities in
both the written exam and practical
components or otherwise risk failing the
unit**

♦ Other Queries

- Contact me: neil.hurley@ucd.ie
- Last two weeks of module taught by: michael.omahony@ucd.ie

Plagiarism and Computer Science

Plagiarism is a serious academic offence!

- ♦[Student Code, section 6.2] or [UCD Registry Plagiarism Policy] or [CS Plagiarism policy and procedures]
- ♦Our staff and demonstrators are **proactive** in looking for possible plagiarism in all submitted work
- ♦Suspected plagiarism is reported to the CS Plagiarism subcommittee for investigation
- ♦Usually includes an interview with student(s) involved
 - **1st offence: usually 0 or NG in the affected components**
 - **2nd offence: referred to the University disciplinary committee**
- ♦Student who enables plagiarism is equally responsible

Relevant References:

http://www.ucd.ie/registry/academicsecretariat/docs/plagiarism_po.pdf

http://www.ucd.ie/registry/academicsecretariat/docs/student_code.pdf

<http://libguides.ucd.ie/academicintegrity>

Module Agenda

(Subject to change)

Agenda for Module

- 1 Problem Solving using Search
 - Uninformed Search
 - Informed Search
 - Adversarial Search
- 2 Optimisation
 - Combinatorial Optimisation Problems
 - Simulated Annealing
 - Genetic Algorithms
- 3 Symbolic AI – Applications in Planning
- 4 Data analytics and Machine Learning
- 5 Recommender Systems