

Course Information

General Information

Lecturer: Steven Shapiro **TA:** TBA
Office Hour: Friday 2:30 – 3:30 in BA 4261
Email: steven@cs.toronto.edu
Course Web Page: <http://www.cs.toronto.edu/~steven/kr15/>
Bulletin Board: <https://csc.cdf.toronto.edu/csc486h1s>

ALL ANNOUNCEMENTS WILL BE MADE THROUGH THE COURSE WEB PAGE.
IT IS YOUR RESPONSIBILITY TO VISIT IT FREQUENTLY.

Lectures: Friday 12:00 – 2:00 BA B024
Tutorials: Wednesday 1:00 – 2:00 BA B024

Goal

- Intro to techniques used to represent knowledge & associated methods for automated reasoning
- Foundations for research in KR&R

Textbook

Knowledge Representation and Reasoning by Brachman and Levesque (2004)

- Two copies on hold in the library

Prerequisites

- A course in AI including some Prolog (e.g., CSC384)
- First-order logic (e.g., CSC330, CSC438, or CSC2404)
- Analysis of algorithms and NP-completeness (e.g., CSC373)

Marking

- 3 problem sets (55%)
- 2 in-class tests (45%)

Format

- 2 hour lectures
- 1 hour tutorial (by arrangement – posted weekly on web).

Important Administrative Dates

Add Deadline: January 18
Drop Deadline: March 8
Reading Week: February 16 – 20
Last day of classes: April 2
Final exam period: April 8 – 30

Course Topics (approximate):

- | | |
|------------------------------------|---------------------------------|
| 1. introduction | 9. defaults |
| 2. first-order logic | 10. uncertainty |
| 3. expressing knowledge | 11. actions |
| 4. resolution | 12. planning |
| 5. horn clauses | 13. answer set programming |
| 6. procedural control of reasoning | 14. expressiveness/tractability |
| 7. description logics | 15. diagnosis |
| 8. inheritance | |

Tests

- | | |
|--------------------------|-----|
| 1. Wednesday February 11 | 20% |
| 2. Wednesday April 1 | 25% |

Assignments Due

- | | |
|----------------------|-----|
| 1. Friday January 30 | 15% |
| 2. Friday March 6 | 20% |
| 3. Friday March 20 | 20% |

Plagiarism

Plagiarism -- or simply, cheating -- is taken to be the handing in of work not substantially the student's own. It is usually done without reference, but is unacceptable even in the guise of acknowledged copying. It is reprehensible, and the penalty will be severe.

It is not cheating, however, to discuss ideas and approaches to a problem, nor is it cheating to seek or accept help with a program or with writing a paper. Indeed, a moderate form of collaboration is encouraged as a useful part of any educational process. Nevertheless, good judgement must be used, and students are expected to present the results of their own thinking and writing. Never copy another student's work -- it is plagiarism to do so, even if the other student "explains it to you first." Never give your written work to others. Sharing work with others for the purposes of plagiarism is also a violation. Do not work together to form a collective solution, from which the members of the group copy out the final solution. Rather, walk away and recreate your own solution later.

Late Policy

- Late assignments will be handled based on a system of "grace days", as follows: Each student begins the term with 3 grace days. An assignment handed in from one minute to 24 hours late uses up one grace day. 24:01 to 48 hours late uses up two grace days, etc..
- Once you have exhausted your grace days, the penalty is 20% of the assignment total grade for each day.

Email Policy

If you have a question that isn't confidential, please post it to the course bulletin board instead of sending it by email, so that others can benefit by it. You may expect a response to bulletin board posts and emails by the next business day.

Illness

In the event of an illness or other catastrophe, get proper documentation (e.g., medical certificate), but if you have grace days left, use them. If you need those days back later, give your documentation to me at that time.