

Winter 2012

## COSC 4P79 - Expert Systems

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**Objectives** This course introduces concepts in expert systems technology. There will be an emphasis on the implementation of expert systems using the Prolog language.

### Texts

- *Building Expert Systems in Prolog*. D. Merritt, Springer-Verlag 1989. (free download!)
- A good reference book on Prolog is recommended, for example:
  - *Programming in Prolog* (5e) by Clocksin & Mellish, Springer-Verlag, 2003.
  - *PROLOG Programming for Artificial Intelligence* (4e), Ivan Bratko, Addison-Wesley, 2001.

See the course web site and reserve reading list in the library for additional reading material.

**Course web site:** <http://www.cosc.brocku.ca/Offerings/4P79/>

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| <b>Evaluation:</b> | Assignments (3): | 30% |
|                    | Project:         | 30% |
|                    | Term test:       | 20% |
|                    | Seminar:         | 15% |
|                    | Participation:   | 5%  |

### Comments

- In order for an assignment to be marked, a completed and signed cover page must be attached to the assignment.
- The department views plagiarism as a serious issue. Students are directed to the discussion on plagiarism on the department's WWW page.
- A 25% penalty for assignments handed in 3 days after due date. Thereafter, 100% penalty.
- Please see the COSC department home page for the policy on medical notes.
- The participation component requires attendance and participation in the seminars.

**System:** The supported system is Sicstus Prolog for Linux or Windows. Sicstus documentation is online (see course home page). You may also use any other Prolog you have access to. SWI Prolog is a free system that has been popular in past years.

**Project:** The course project involves implementing a small-scale expert system in Prolog. It will be due at the end of term. There is much scope for creativity, both in the implementation techniques used, as well as the expert system domain implemented. You may work alone or in pairs for this project. Please refer to the project handout for more information.

**Seminar:** You will present a seminar to the class. The seminar topic will be a presentation of commercial expert system software, or a real expert system application. You'll need to do some research and reading of literature on the topic you choose. You should prepare some overhead slides for your presentation, and make them available to the rest of the class.

**Withdrawal deadline:** Last date for withdrawal without academic penalty is Friday, March 9, 2012.