

CSCI-4150 — Artificial Intelligence Course Syllabus

1 Instructor Information

Instructor:	Thomas Trappenberg	Office:	313
E-mail:	tt@cs.dal.ca	Office Hours:	write email for appointment
Class Meeting Time:	Tues/Thurs 2:35-3:55	Room No:	MCCAIN ARTS&SS 2132
Tutorials:	Weds 1:35-2:25	Room No:	Computer Science Lab 2
Course Homepage:	www.cs.dal.ca/~tt/CSCI415009b	Course TAs:	None
Additional resources:	Coast-to-Coast Seminar, every second Tuesday, 3:30; see below.		

2 Course Description

This course is an introduction to AI with emphasis on machine learning. The course starts with a discussion of search algorithms before switching to learning machines. The machine learning part includes regression methods, support vector machines, and some learning theory. We will then discuss unsupervised and reinforcement learning. Finally, we discuss some probabilistic reasoning and Bayes networks. The course includes a tutorial on Matlab, which will be used for some programming examples.

3 Prerequisites

See calendar. Some background in probability theory is necessary. A refresher tutorial will be given.

4 Required Texts

There is no required text for the course. There is a set of prepared course notes on the course website. Additional recommended readings are
Russell & Norvig, Artificial Intelligence: A modern approach, Prentice Hall
Lecture notes by Andrew Ng: <http://www.stanford.edu/class/cs229/materials.html>
and <http://www.stanford.edu/class/cs221/handouts.html>

5 Evaluation

- 60% Assignments, 40% Project
- Grades will be assigned using the letter grade scale as defined in section 17.1 of Dalhousie Academic Calendar.
- There is no midterm or final examination.

6 Coast-to-Coast Seminar

I want to encourage all students to attend this falls Coast-to-Coast seminar series on Artificial Intelligence. We will finish class early on these days and make up on tutorial times if necessary. The Coast to Coast

Seminar Series takes place every second Tuesday at 3:30pm in the videoconferencing facilities in the Chase Building. Audiences and presenters are located simultaneously in this space at Dalhousie and at other universities across Canada. The sites are linked by Access Grid audio visual technology and by VNC and other computing tools.

The Coast To Coast Seminar Series Presents

Artificial Intelligence: A series of seminars by leading Canadian computing scientists in the field.

- October 6 - Dr. Jonathan Schaeffer, University of Alberta,
- October 20 - Dr. Geoffrey Hinton, University of Toronto,
- November 3 - Dr. Simon Haykin, McMaster University,
- November 17 - Dr. Richard Vaughan, Simon Fraser University,
- December 1 - Dr. Thomas Trappenberg, Dalhousie University.

All talks will start at 3:30pm Atlantic Time at the Chase Building (Math/Stats) 305/306

7 Academic Integrity¹

At Dalhousie University, we respect the values of academic integrity: honesty, trust, fairness, responsibility and respect. As a student, adherence to the values of academic integrity and related policies is a requirement of being part of the academic community at Dalhousie University.

What does academic integrity mean?

Academic integrity means being honest in the fulfillment of your academic responsibilities thus establishing mutual trust. Fairness is essential to the interactions of the academic community and is achieved through respect for the opinions and ideas of others. Violations of intellectual honesty are offensive to the entire academic community, not just to the individual faculty member and students in whose class an offence occurs. (see Intellectual Honesty section of University Calendar)

How can you achieve academic integrity?

- Make sure you understand Dalhousies policies on academic integrity.
- Give appropriate credit to the sources used in your assignment such as written or oral work, computer codes/programs, artistic or architectural works, scientific projects, performances, web page designs, graphical representations, diagrams, videos, and images. Use RefWorks to keep track of your research and edit and format bibliographies in the citation style required by the instructor (<http://www.library.dal.ca/How/RefWorks>)
- Do not download the work of another from the Internet and submit it as your own.
- Do not submit work that has been completed through collaboration or previously submitted for another assignment without permission from your instructor.
- Do not write an examination or test for someone else.
- Do not falsify data or lab results.

These examples should be considered only as a guide and not an exhaustive list.

¹Based on the sample statement provided at <http://academicintegrity.dal.ca>. Written by Dr. Alex Brodsky.

What will happen if an allegation of an academic offence is made against you?

I am required to report a suspected offence. The full process is outlined in the Discipline flow chart, which can be found at: <http://academicintegrity.dal.ca/Files/AcademicDisciplineProcess.pdf> and includes the following:

1. Each Faculty has an Academic Integrity Officer (AIO) who receives allegations from instructors.
2. The AIO decides whether to proceed with the allegation and you will be notified of the process.
3. If the case proceeds, you will receive an INC (incomplete) grade until the matter is resolved.
4. If you are found guilty of an academic offence, a penalty will be assigned ranging from a warning to a suspension or expulsion from the University and can include a notation on your transcript, failure of the assignment or failure of the course. All penalties are academic in nature.

Where can you turn for help?

- If you are ever unsure about ANYTHING, contact myself.
- The Academic Integrity website (<http://academicintegrity.dal.ca>) has links to policies, definitions, online tutorials, tips on citing and paraphrasing.
- The Writing Center provides assistance with proofreading, writing styles, citations.
- Dalhousie Libraries have workshops, online tutorials, citation guides, Assignment Calculator, Ref-Works, etc.
- The Dalhousie Student Advocacy Service assists students with academic appeals and student discipline procedures.
- The Senate Office provides links to a list of Academic Integrity Officers, discipline flow chart, and Senate Discipline Committee.

From: Dalhousie Notice <Notice@dal.ca>
Subject: **Pandemic H1N1 Influenza Advisory in relation to Academic Continuity**
Date: September 3, 2009 11:52:30 AM ADT
To: URGENT-DAL-NOTICE@LISTS.DAL.CA

MEMORANDUM

TO: The Dalhousie University Community

FROM: Alan Shaver, Vice-President Academic and Provost

DATE: September 3, 2009

RE: **Pandemic H1N1 Influenza Advisory in relation to Academic Continuity**

In the event of an escalation of the pandemic H1N1 influenza virus, the University may need to authorize Academic Units to change elements of class schedules and/or evaluation plans as outlined in course syllabi. Any change is intended to support the primary goal of reducing the risk of spreading a pandemic influenza among students, faculty and staff.

Although it is difficult to predict the severity of the pandemic, the University is committed to minimizing the impact on student's academic progress. Therefore, every effort will be made to provide students with options for continued learning and for continued fair evaluations.

Changes may include but are not limited to:

- . Adjustments to course assignments;
- . Changes to the dates of exams;
- . Arrangements for alternative evaluations for students affected by H1N1 influenza virus;
- . Adjustments to work terms;
- . Modification of marks awarded for participation;
- . Adjustments to attendance policies.

Any alternative plan made in individual courses may be superseded by University-wide or Government measures to reduce the spread of the pandemic H1N1 influenza virus.

We will continue to keep the University Community informed as we proceed into the 2009 - 2010 academic term.