

**CIS\*6080\*01 W18 – Course Outline**  
**Genetic Algorithms**  
*School of Computer Science*  
*University of Guelph*

**Course Credit:** 0.5

**Date and Time**

Tues., Thurs. 11:30 am to 12:50 pm

**Location**

MacKinnon 310

**Professor**

Name: Mark Wineberg

Office: MCLN 229

E-Mail: [wineberg@socs.uoguelph.ca](mailto:wineberg@socs.uoguelph.ca)

Office Hours: Thur – after class

**Recommended Textbooks**

*Introduction to Evolutionary Computing (Second Edition)*

by A.E. Eiben and J.E. Smith: Springer: Berlin, 2015

available as a SpringerLink online resource from the U of Guelph Library

*Handbook of Natural Computing [Section III: Evolutionary Computation]*

Editors: G. Rozenberg, T. Bäck, J.N. Kok, and N. Joost (Eds.): Springer: Berlin, 2012

available as a SpringerLink online resource from the U of Guelph Library

**Calendar Description**

This course introduces the student to basic genetic algorithms, which are based on the process of natural evolution. It is explored in terms of its mathematical foundation and applications to optimization in various domains.

**Evaluation**

[10%]	Preliminary Assignments	2 x 5%
[15%]	Assignment	1 x 15%
[20%]	Test	2 x 10%
[15%]	Papers Analysis	1 x 15%
[10%]	Project Poster	1 x 10%
[30%]	Project	1 x 30%

**When You Cannot Meet a Course Requirement:**

**Course Specific Policy**

- **Assignments:** There is a 1% per every 2 hours late penalty up to 3 1/3 days (80 hours) after the due date at which point the assignment will be given a grade of 0
- **Posters:** The poster session must be given at date and time you sign up to present; otherwise a grade of 0 will be given for that presentation.

**General Policy**

- When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the instructor in writing. Include your name, id#, and e-mail contact.
- See the graduate calendar on regulations and procedures for Academic Consideration: <http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

**Software**

- **Programming Language**
  - your choice
  - depending on your project there can be a lot of programming; choose one you know well
- **Statistics Package**
  - R is recommended
  - MatLab or other stats packages also can be used if preferred

## Timetable

Week	In Class				Assignments	
	Tues	Tues	Thur	Thur	Fri	(midnight)
1	09-Jan			18-Jan		
2	16-Jan			25-Jan		
3	23-Jan			01-Jan		
4	30-Jan			01-Feb	02-Feb	preA1
5	06-Feb			08-Feb	09-Feb	preA2
6	13-Feb			15-Feb		
RW	20-Feb			22-Feb		
7	27-Feb	Test		01-Mar	02-Mar	Assign
8	06-Mar			08-Mar		
9	13-Mar			15-Mar	16-Mar	Paper Analysis
10	20-Mar			22-Mar		
11	27-Mar		Test	29-Mar		
12	03-Apr	Poster	Poster	05-Apr		
					13-Apr	Project

## Recording of Materials

- Presentations which are made in relation to course work—including lectures—cannot be recorded in any electronic media without the permission of the presenter, whether the instructor, a classmate or guest lecturer.

## Acceptable Use Policy

- The Acceptable Use Policy for Information Technology defines the uses and breaches of acceptable use of IT resources at the University.
- See <http://www.uoguelph.ca/cio/content/aup-acceptable-use-policy>

## Academic Misconduct

- The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.
- University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct.
- Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.
- The Academic Misconduct Policy is detailed in the graduate calendar:  
[http://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/sec\\_d0e1702.shtml](http://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/sec_d0e1702.shtml)