# DEPARTMENT OF MATHEMATICAL AND COMPUTATIONAL SCIENCES UNIVERSITY OF TORONTO MISSISSAUGA

# CSC373H5F LEC0102 Algorithm Design and Analysis Course Outline - Fall 2019

**Class Location & Time** Tue, 11:00 AM - 01:00 PM MN 2190

Instructor Vincent Maccio

Office Location DH 2015
Office Hours TBD

E-mail Address vincent.maccio@utoronto.ca

Course Web Site vincentmaccio.com

**Teaching Assistant** Kaylan Arnoldt-Smith

**Teaching Assistant** Graham Buceta

Teaching Assistant Julian Sequeira

## **Course Description**

Standard algorithm design techniques: divide-and-conquer, greedy strategies, dynamic programming, linear programming, randomization, network flows, approximation algorithms and others (if time permits). Students will be expected to show good design principles and adequate skills at reasoning about the correctness and complexity of algorithms. [24L, 12T]

Prerequisite: CSC263H5, CSC290H5

Exclusion: CSC373H1, CSC375H1, CSCC73H3 (SCI)

Distribution Requirement: SCI

Students who lack a pre/co-requisite can be removed at any time unless they have received an explicit waiver from the department. The waiver form can be downloaded from <a href="here">here</a>.

#### **Textbooks and Other Materials**

There is no required text for this course. However, the following two texts are well established and will help those who wish to study further material.

Kleinberg and Tardos, Algorithm Design, 2006.

Cormen et al., Introduction to Algorithms 3/e, 2009.

# **Assessment and Deadlines**

Type	Description	<b>Due Date</b>	Weight
Assignment	Assignment 1	2019-10-01	5%
Assignment	Assignment 2	2019-10-15	5%
Assignment	Assignment 3	2019-10-29	5%
Assignment	Assignment 4	2019-11-12	5%
Term Test	Midterm	2019-10-29	20%
Final Exam	Final Exam	TBA	50%
Other	Floating	On-going	10%
		Tota	al 100%

### More Details for Assessment and Deadlines

You may work in groups to discuss the problems, but all answers and work should be your own.

Assignments will be posted online at: vincentmaccio.com/teaching.html

The "floating" marks will be given to the better of your two grades: midterm or exam. For example, if you score higher on the midterm, then your grade will be calculated with your midterm worth 30% and the exam worth 50%.

#### **Penalties for Lateness**

No late submissions are accepted.

#### **Procedures and Rules**

#### **Missed Term Work**

To request special consideration, bring supporting documentation to the instructor in person during office hours at least one week in advance.

In case of illness, bring a U of T medical certificate to the instructor within one week of the missed work. The certificate must specify the exact period during which you were unable to carry out your academic work.

#### **Missed Final Exam**

Students who cannot write a final examination due to illness or other serious causes must file an<u>online petition</u> within 72 hours of the missed examination. Original supporting documentation must also be submitted to the Office of the Registrar within 72 hours of the missed exam. Late petitions will NOT be considered. If illness is cited as the reason for a deferred exam request, a U of T Verification of Student Illness or Injury Form must show that you were examined and diagnosed at the time of illness and on the date of the exam, or by the day after at the latest. Students must also record their absence on ACORN on the day of the missed exam or by the day after at the latest. Upon approval of a deferred exam request, a non-refundable fee of \$70 is required for each examination approved.

### **Academic Integrity**

Honesty and fairness are fundamental to the University of Toronto's mission. Plagiarism is a form of academic fraud and is treated very seriously. The work that you submit must be your own and cannot contain anyone elses work or ideas without proper attribution. You are expected to read the handout How not to plagiarize (<a href="http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize">http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize</a>) and to be familiar with the Code of behaviour on academic matters, which is linked from the UTM calendar under the link Codes and policies.

#### Final Exam Information

Duration: 3 hours Aids Permitted: None

#### **Additional Information**

Please join the Piazza class found at: piazza.com/utm.utoronto.ca/fall2019/csc373

The password is: csc373

I will make annoucments regarding the course, on Piazza.

FYI: On Piazza your posts are annoymous to the class (if you choose it to be), but are never annoymous to me or the TAs.

For emails, I will do my very best to get back to you within 24 hours. Please put 373 somewhere in the subject line.

Last Date to drop course from Academic Record and GPA is November 7, 2019.