

# ECE 1762

## Algorithms and Data Structures

Fall 2007

### Staff

**Professor:** Andreas Veneris, veneris@eecg.toronto.edu, SF-2001, office hours: Thursday 1pm-3pm.

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### Lecture Schedule

Class meets every Tuesday, 3-5pm at GB-221 and every Friday, 3-6pm at BA-4164. Some classes will be announced as tutorial time. Tutorial will concentrate on problem solving and homeworks. Sample problem sets will be released well before each tutorial and they will be solved during the tutorial. Some tutorials will be used for lecture time by the instructor (notice will be given in advance).

### Textbook

T. Cormen, C. Leiserson, R. Rivest, C. Stein, *“Introduction to Algorithms,”* McGraw Hill 1990 (2nd edition, 2001). If you already have the 1st edition there’s no need to get the new one. We will refer to this textbook as *CLR*. CLR is a well-written comprehensive textbook used by all major universities. No other text is required and no lecture notes will be distributed.

### Prerequisites

You are assumed to have taken undergraduate level courses in discrete mathematics (ECE-203) and introductory algorithms & data structures (ECE-242). Additional background such as CSC-364 or CSC-378 may help and it is not mandatory. Introductory material will be reviewed in the class.

### Course Contents

Algorithms and data structures are important in every aspect of the daily life (computer engineering, biology, physics, finance, etc). We expect to cover the following material (2001 ed.): Background (Appendix VIII, Chapters 1-5), Sorting (Chapters 6-9), data structures (Chapters 10-12), advanced algorithms (Chapters 15-17), graph algorithms (Chapters 22-24 and 26) and NP-Completeness (Chapters 34-35).

## WWW and Newsgroup

The WWW page for the class is [www.eecg.toronto.edu/~ece1762](http://www.eecg.toronto.edu/~ece1762). In the WWW page you can find all homeworks, course outline, sample exams and practice problems. We will distribute all material electronically.

## Course Requirements and Grading

There are three components to this class:

- One midterm 100min long, 30% of total grade, date:TBA
- One final, 150min long, 40% of total grade, date:TBA
- 5 homeworks, 30% of total grade.

All exams are open book. Homeworks are done in groups of one or two students. Extensions to the homework is sometimes given to all students and it is granted in class. **Absolutely no late homework will be accepted.**

## Cheating Policy

Although it is expected that you discuss issues related to the class and homeworks, *cheating is against “fair-play” and will not be tolerated under any circumstances.* If you are caught cheating you’ll automatically receive a fail grade for the class. If you think that there is an issue that influences your performance in the class then talk to the instructor.

## How to get the most out of this class

Read the textbook, it is a “classic” textbook in the field of combinatorics with many worked-out examples and well outlined theory. Read the WWW! The theory in this class translates to major applications in real-life and it has a long history and many WWW resources. Attend lectures and tutorials, do the practice problems and make sure that you do all homework problems; this is mathematics and you need practice what you read.