

Lassonde School of Engineering

Department of Electrical Engineering and Computer Science
York University

Course

EECS 1560 3.0 Introduction to Computing for Math and Statistics

Course Webpage

http://www.eecs.yorku.ca/course_archive/2014-15/W/1560/
<http://moodle.yorku.ca>

Term

Winter 2015

Prerequisites / Co-requisites

Prerequisites: AS/SC/AK/MATH 1300 3.00

Co-requisites: AS/SC/AK/MATH 1310 3.00; AS/SC/AK/MATH 1131 3.00

Course Credit Exclusions: EECS 1541 3.00, EECS 1570 3.00

Note: No credit will be retained if this course is taken after the successful completion of or simultaneously with SC/PHYS 2030 3.00.

Note for EECS majors: This course does not count towards your EECS credits.

Course Instructor

Dr. Steven Castellucci

Office Location: Lassonde Building, room 3048

Office hours: Mondays and Wednesdays, 16:30 - 17:30 (or by appointment)

Email: steven_c@yorku.ca

Time and Location

Lecture

Lassonde Building, Lecture Hall C on Mondays and Wednesdays, 15:30 - 16:30

Lab 1

Ross Building South, S110 (see course website for entrance instructions) on Tuesday, 14:30 - 17:30

Lab 2

Ross Building South, S110 (see course website for entrance instructions) on Thursday, 14:30 - 17:30

Lab 3

Ross Building South, S110 (see course website for entrance instructions) on Friday, 11:30 - 14:30

Expanded Course Description

This course introduces students to computer-based problem solving techniques that can be used to approach problems in Mathematics and Statistics. Through a combination of lectures and laboratory sessions, students become familiar with a scientific computing environment that combines numeric and symbolic computation, high-level programming, scientific libraries, graphics, and a variety of visualization tools.

Course Objectives

- Basic aspects of Maple: programming, variables, constants, expressions and assignments, lists, sets, arrays
- Control structures: looping, repetition, branching
- Procedures: defining, calling, parameters and local variables, library procedures, loading a package, user-defined procedures
- Data structures: expressions and operand, strings, lists, arrays and tables
- Plots and other visualization tools: plotting tabular data, approximating curves and surfaces, the Grid and Mesh objects, animations
- Recursion: recursion relations, reduction formulas from integration, sorting, calculation of numbers with recursive formulas
- Math and statistics applications: algebra, calculus, probability matrix algebra, trigonometry

Course Text / Readings

Additional readings may be assigned or recommended during the course.

Mathematical Computing: An Introduction to Programming Using Maple, by David Betounes, Mylan Redfern, ISBN-10: 1461265487 ISBN-13: 978-146126548

The following [book](#) is recommended: Maple Introductory Programming Guide, by M. Monagan, K. Geddes, K. Heal, G. Labahn, S. Vorkoetter, J. McCarron, P. DeMarco, Maplesoft, a division of Waterloo Maple Inc. 2010.

Evaluation

The final grade of the course will be based on the items below, weighted as indicated. There will **NOT** be any make-up tests nor any additional assignments for "bonus marks" to improve one's grade toward the end of the term.

5 Lab assignments	each 5%
2 Mid-term tests	each 20%
Final exam	35%

Grading and Missed Tests/Assignments

Grading

The final grade for the course is obtained by adding the scores of the assignments, tests, and the final exam and converting this total to a letter grade according to the following table.

F	E	D	D+	C	C+	B	B+	A	A+
<40	≥40	≥50	≥55	≥60	≥65	≥70	≥75	≥80	≥90

Final course grades may be adjusted to conform to Program or Faculty grades distribution profiles.

For a full description of York grading system see the York University Undergraduate Calendar, available at <http://calendars.registrar.yorku.ca/2014-2015/academic/grades/index.htm>

Missed Tests/Assignments

No make-up tests or assignments will be given. If you miss a test or assignment for reasons beyond your control, inform your instructor as soon as possible. If the reason is medical in nature, you must also submit a completed

Attending Physician's Statement (see link below) to your instructor. **An ordinary medical note from a doctor is not sufficient. The form must be completed by you and by your attending physician.** If approved by your instructor, the weight of the missed test or assignment will be transferred to the final exam. If not approved, you will receive a mark of zero (0) for that test or assignment.

The Attending Physician's Statement is part of the Registrar's Petition Package, available at:
http://www.registrar.yorku.ca/pdf/attend_physician_statement.pdf

IMPORTANT COURSE INFORMATION FOR STUDENTS

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Academic Standards, Curriculum & Pedagogy webpage (see Reports, Initiatives, Documents) -
<http://www.yorku.ca/secretariat/senate/committees/ascp/documents/CourseInformationForStudentsAugust2012.pdf>

- Senate Policy on Academic Honesty and the Academic Integrity Website
- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation

January 2015