EXPANDED COURSE DESCRIPTION
ELECTRICAL ENGINEERING AND COMPUTER SCIENCE
Lassonde School of Engineering
Electrical Engineering Computer Science
LE / EECS 2501 1.0 SECTION E
FORTRAN AND SCIENTIFIC COMPUTING
FALL 2017 / WINTER 2018

Last Modified Date: 09/15/2017

COURSE CALENDAR DESCRIPTION
Covers computer-base problem solving in a variety of scientific and engineering settings. Introduces the FORTRAN programming language and its interface with scientific libraries. Applications are drawn mainly from scientific areas such as numerical methods, processing experimental data, simulation and data visualization. Prerequisites: General Prerequisite: One of LE/EECS 1020 3.00 or EECS1021 3.00 or EECS1022 3.00 or LE/EECS 1530 3.00. Course credit exclusions: LE/SC/CSE 2501 1.00. (NOTE: The General Prerequisite is a cumulative GPA of 4.50 or better over all major EECS courses. EECS courses with the second digit "5" are not major courses.)

INSTRUCTOR(S)

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<th>Name</th>
<th>Section / Format / Term</th>
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<td>Pisana, Simone</td>
<td>Sec. E / LECT / F</td>
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ADDITIONAL INFORMATION

Topics and Concepts:
- Introduction to Fortran, the programming environment, compilation, execution and debugging principles
- Program structure, statements, loops, decisions, input/output, arrays, subprograms
- Numerical methods to solve engineering problems, numerical packages

The format of the course will be a mix of lectures with live examples and lab sessions.

Course Learning Outcomes:
- Formulate tasks as computational problems to be solved algorithmically
- Implement algorithms for solving engineering problems in Fortran
- Test and debug programs
- Incorporate use of library routines into Fortran programs
- Apply simple numerical methods to solve problems

Required Textbook:
There is no required textbook. Recommended texts and online guides will be provided to students.

Grading scheme:
Three cumulative lab tests:
Lab test 1: 30%
Lab test 2: 30%
Lab test 3: 40%
ACADEMIC INTEGRITY LINKS

• Senate Policy on Academic Honesty - http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/
• Academic Integrity - http://lassonde.yorku.ca/academic-integrity

STUDENT LINKS

• Student Rights and Responsibilities - http://oscr.students.uit.yorku.ca/student-conduct
• Religious Observance - https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs
• Academic Accommodation for Students with Disabilities - http://secretariat-policies.info.yorku.ca/policies/academic-accommodation-for-students-with-disabilities-policy/
• Counselling and Disability Services - http://cds.info.yorku.ca/

Many courses utilize Moodle, York University’s course website system. If your course is using Moodle, click here to access it.

Moodle @ York University