EXPANDED COURSE DESCRIPTION
ELECTRICAL ENGINEERING AND COMPUTER SCIENCE
Lassonde School of Engineering
Electrical Engineering Computer Science
LE / EECS 3215 4.0 SECTION Z
EMBEDDED SYSTEMS
FALL 2017 / WINTER 2018

Last Modified Date: 08/23/2017

COURSE CALENDAR DESCRIPTION

Introduction to the design of embedded systems using both hardware and software. Topics include microcontrollers; their architecture, and programming; design and implementation of embedded systems using field programmable gate arrays. Lectures (three hours per week), laboratory (two hours per week); four credits. Prerequisites: General prerequisite; LE/EECS 2030 3.00 or LE/EECS 1030 3.00; LE/EECS 2031 3.00, LE/EECS 3201 4.00. Course credit exclusions: LE/CSE 3215 4.00, AK/AS/SC/CSE 3215 4.00. (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)

<table>
<thead>
<tr>
<th>Name</th>
<th>Section / Format / Term</th>
<th>Contact Email</th>
<th>Contact Phone</th>
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<tbody>
<tr>
<td>Smith, James A.</td>
<td>Sec. Z / LECT / W</td>
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LIST OF LEARNING OUTCOMES AND EXAMPLES OF

Course Outcomes

After taking the course, students should be able to:

• Describe/demonstrate how to work with at least one embedded system and be able to configure/program it to do basic tasks.
• Describe/demonstrate embedded microcontroller architecture, development, debug and testing
• Describe and/or demonstrate the use of parallel, serial and analog interfaces used in embedded platforms
• Design embedded software and hardware systems under tight constraints
• Prototype embedded systems using microcontrollers or FPGAs
• Design embedded computer systems to address problems in important application domains

GRADED ASSESSMENT

GRADES

The weight distribution of the course components is as follows:

Labs: 25%
Project: 25%
Flipped classrooms (approx 5 at 3% each): 15%
Midterm: 15%
Final Exam: 20%
ADDITIONAL INFORMATION

TEXTBOOK


**Other Useful Resources and Recommended References**

5. Altera University Program Installer - http://www.altera.com/education/univ/software/upds/unv-upds.html - make sure to select Quartus II Version 12.1 (same version as in the Lab, TA will use this version to mark labs).

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
- Counselling and Disability Services - http://cds.info.yorku.ca/

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

*Moodle @ York University*