

EECS 1012: Net-Centric Introduction to Computing Sections B & C Fall 2016

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This is an introductory course in computer science. Rather than providing a broad overview of the discipline it takes a single aspect of computer science -- web-based programming -- and uses that to introduce a number of concepts related to data organization and retrieval, procedural programming and networking. Along the way it will introduce you to a number of representation schemes HTML, CSS, JSON and the like, as well as the JavaScript programming language and AJAX.

This is a single term course lasting 12 weeks. You will find that you have something to do each week. A key element of the course is a set of weekly exercises (labs). These labs are supervised, in that you will do the lab in a specific location at a specific time and there will be someone there to help you work your way through the labs. Labs are intended to be completed in teams of two. You can have a single team for the course. You can change up your team during the course. You can even try to do the labs on your own (not recommended). Labs are intended to be experiential and collaborative. You are encouraged to ask for help from others, from the web, and from any other resources you may have open to you. Help your fellow student and they will help you. Other portions of the course are evaluative. You are expected to complete these sections of the course individually using only the aids that are specifically permitted for that evaluation.

The primary mechanism for providing information to you outside of class will be through Moodle (moodle.yorku.ca). You are responsible for any and all information posted on the Moodle site.

Learning Outcomes for the course:

By the end of the course, the students will be able to:

- Use a set of computing skills such as reasoning about algorithms, tracing programs, test-driven development, and diagnosing faults.
- Explain and apply fundamental constructs in event-driven programs, including variables and expressions, control structures (conditionals/loops), and API usage.
- Write simple programs using a given software infrastructure, API, and tool chain.
- Gain exposure to net-centric computing, client-server applications, and simple relational database use.
- Become familiar with the notion of syntax, both for programs and documents, and the principle of separation of concerns.

Lectures. MF 16:30-17:30 Lassonde Lecture Hall A or Lassonde Lecture Hall B.

Labs. Labs take place in William Small 106 and 108. Labs occur every week. You have a

scheduled lab time. It is not possible to change your lab section. Please don't ask.

Office Hours. Michael Jenkin's office hours are Monday 15:30-16:30 in Lassonde 1003H. Robert Codd-Downey's office hours are Monday 5:30-6:30 in Sherman 1030. Feel free to go to either office hour regardless of which section you are enrolled in.

Emails. Emails related to this course should be sent to eeecs1012fall2016@gmail.com. The subject line of the email **must** include your student number. Emails not sent to this account, or not including your student number in the subject line will receive a terse response asking you to follow this policy. Given the lack of privacy associated with email it is not possible to discuss specific issues related to course performance, etc. via email. (There are approximately 700 students in the class. Following this policy will help to ensure that your email is answered promptly and not lost.)

Textbook. [Web Programming Step by Step](#) by Marty Stepp, Jessica Miller and Victoria Kirst. It is available at the bookstore. The textbook is required.

Marking Scheme. Each piece of work in the course will be assigned a numerical grade. Individual grades will be combined based on the weightings given below. Your final numerical grade out of 100 will be converted to a university letter grade using the standard table for the mapping. There are no make up tests, alternate mechanisms of evaluation, etc. Should you miss an evaluation due to medical reasons, a properly completed [Attending Physician's Statement](#) is required. Once available, marks will be posted on Moodle. Check marks as they appear. Consideration for any remarking will only be considered for five working days after the grade has appeared on the Moodle site.

The grade components of the course are as follows.

- **Subject-matter quizzes (10%).** Five pass/fail subject mastery assignments/quizzes at 2% each - 10% total. These Moodle quizzes are to be completed individually and at your own convenience. They are time limited (20 minutes max), and each has a due date associated with it. They are open book. You may use any resource – except another person – when answering these quizzes. A minimum of 80% is required on an individual quiz to pass it, and you may take each quiz as many times as you like up until the due date. There is a minimum delay between attempts of 24 hours.
- **Midterm tests (40%).** Two midterm tests at 20% each - 40% total. These two multiple-choice tests will be held in class on the dates given on the Moodle site. These tests are closed book. There is no final exam.
- **Lab tests (32%).** Two lab tests at 16% each - 32% total. These are two labs that you will conduct **on your own**. These are supervised events during which you will solve coding problems in the lab. There is a practice lab test scheduled during one of the labs. Attempting the lab test without completing the practice lab test is not recommended.
- **Labs (18%).** Nine labs at 2% each - 18% total. Details on each lab can be found through the Moodle site. Each lab has a lab ePub that you are expected to have read prior to the lab. This expectation is encouraged through the use of a pre-lab quiz that

you must complete prior to the lab. No grade will be given for labs for which no pre-lab quiz was properly completed. Pre-lab quizzes can be found on Moodle.

Syllabus. The following week-by-week tentative syllabus will be updated as required on the Moodle site. Draft versions of the slides will be available on the Moodle site roughly 1 week before the lecture.

5 September - 9 September

Lecture: Introduction to the course. What can you do with an interconnected collection of computing machines?

Reading: You are responsible for reading Chapter 1 of the **textbook** before the first lecture.

Laboratories: There are no laboratories this week. Organized labs start next week.

Note: First class is September 9th.

12 September - 16 September

Lecture: Building an interactive web application for a mobile device. Note: Prof. Jenkin's lectures will be given by other instructors this week.

Reading: You are responsible for reading chapter 2 of the **textbook** prior to Monday's lecture.

Laboratories: Lab 0: Lab Tools. You can find the lab materials on the **jr web site**.

19 September - 23 September

Lecture: Building an interactive web application for a mobile device.

Reading: You are responsible for reading chapter 3 of the **textbook** prior to Monday's lecture.

Laboratories: Lab 1: CV. You can find the lab materials on the **jr web site**.

26 September – 30 September

Lecture: Searching for survivors with JavaScript.

Reading: You are responsible for reading chapter 4 of the **textbook** prior to Monday's lecture.

Laboratories: Lab 2: Calendar. You can find the lab materials on the **jr web site**

3 October - 6 October

Lecture: Searching for survivors with JavaScript.

Reading: You are responsible for reading chapter 8.1-8.4 of the **textbook** prior to Monday's class.

Laboratories: Lab 3: Search and Rescue. You can find the lab materials on the **jr web site**.

10 October - 14 October

Lecture: Dealing with the external world orientation, location and the like.

Reading: You are responsible for reading chapter 8.5 of the **textbook** prior to Friday's class.

Laboratories: Lab 4: Practice Lab Test. This is a practice lab test. It will not be graded, but it is a good practice for the lab text next week. It also counts as a lab in terms of grading.

Note: If you normally have your lab on Monday, you should go to one of the other labs this week to do the practice lab test.

Note: Monday October 10th is a holiday.

17 October - 21 October

Lecture: Dealing with the external world orientation, location and the like.

Reading: You are responsible for reading chapter 9.1-9.3 of the **textbook** prior to Monday's class.

Laboratories: Lab Test #1 (16%)

24 October – 28 October

Lecture: Client-server programming.

Reading: You are responsible for reading chapter 9.4 of the **textbook** prior to Monday's class.

Laboratories: There are no laboratories this week.

Note: Fall reading period October 27-30.

31 October - 4 November

Lecture: Client-server programming.

Reading: You are responsible for reading chapter 12 of the **textbook** prior to Monday's class.

Laboratories: Lab 5: Pan and Tilt. You can find the lab materials on the **jr web site**.

Note: The midterm will be held in-class on Monday October 31st (20%)

7 November - 11 November

Lecture: The internet of things.

Reading: You are responsible for reading chapter 13 of the **textbook** prior to Monday's class.

Laboratories: Lab 6: GPS. You can find the lab materials on the **jr web site**.

Note: November 11th is the last day to drop a course without receiving a grade.

14 November - 18 November

Lecture: Database systems

Reading: You are responsible for reading chapter 14.1-14.2 of the **textbook** prior to Monday's class.

Laboratories: Lab 7: Database I. You can find the lab materials on the **jr web site**.

21 November - 25 November

Lecture: Slides: Database systems

Reading: You are responsible for reading chapter 15 of the **textbook** prior to Monday's class.

Laboratories: Lab 8: Databases II. You can find the lab materials on the **jr web site**.

28 November - 2 December

Lecture: Advanced topics and review.

Reading: Catch up on any reading you might have missed.

Laboratories: Lab Test #2 (16%)

5 December - 9 December

Lecture: Test

Reading: Catch up on any reading you might have missed.

Laboratories: No labs this week.

Note: Final test, in-class Friday Monday December 5th (20%)