Course Syllabus

EECS 1022 3.0 Programming for Mobile Computing
Section M, N, O, P; Winter 2022

As per the university’s mandate (as of January 6th, 2022), all course components will commence on the week of January 10 with online delivery. The in-person delivery will resume on the week of January 31. This plan may change in accordance with any future mandate of the university, if any.

Please note that – in the case of any period of in-person delivery mandated by the university—it is not feasible to accommodate any students to conduct the course works remotely or online. Due to enrollment size and academic integrity, no exception will be made or accepted. As instructed by the Provost office, anyone not in compliance with the university’s vaccine mandate must not come to campuses for any reason and violating this requirement will have disciplinary consequences for the student.

The course materials and course announcements will be posted on the York eClass website.

IF YOU ARE IN WAITING LIST OR PLAN TO ENROLL IN EECS1022?
Students who are not officially enrolled in the course (and plan to enroll) are expected to attend the lectures and labs from the first week of the term and complete all required works within the deadlines. Please contact the course instructor for details on how to obtain temporary access to the course materials while your enrolment status is being decided. Otherwise, if you miss any assessment deadline, you will receive 0 for that assessment.

Course Description

This course provides a first exposure to object-oriented programming and enhances student understanding of key computing skills such as reasoning about algorithms, designing user interfaces, and working with software tools. It uses problem-based approach to expose the underlying concepts and an experiential laboratory to implement them. A mature mobile software infrastructure (such as Java and the Android programming environment) is used to expose and provide context to the underlying ideas. Laboratory exercises expose students to a range of real-world problems with a
view of motivating computational thinking and grounding the material covered in lectures.

**The lectures (two hours weekly) are supplemented by a three-hour weekly lab.**

**Prerequisites:** LE/EECS1012 3.00 or LE/EECS1015 3.00

### Learning Outcomes

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

- Understand software development within an object-oriented framework using a modern programming language and tool set.
- 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 a comprehensive mobile computing framework.
- Gain exposure to user interface design.

### Instructors

- **Section M:**
  - Dr. Amir H Chinaei
  - Email: chinaei at yorku.ca
  - Office hours: Wednesday and Friday 9:30-10:30 or by appointments.

- **Section N:**
  - Dr. Larry Yueli Zhang
  - Email: larryyz at yorku.ca
  - Office hours: Monday and Thursday 16:30-17:30 or by appointment.

- **Section O & P:**
  - Dr. Mufleh Al-Shatnawi
  - Email: mufleh at yorku.ca
  - Office hours: by appointment (please email to schedule a Zoom meeting).

### Lectures

- **Section M:** Tuesday, 14:30 (2 hours). Location: VH C.
- **Section N:** Monday, 14:30 (2 hours). Location: LAS B.
• Section O: Wednesday, 18:30 (2 hours). Location: LAS B.
• Section P: Tuesday, 8:30 (2 hours). Location: VH B.

Locations stated above is for the periods that the course is delivered in person.

**Labs**

• Section M:
  o LAB 01: Wednesday, 14:30 (3 hours). Location: WSC 105.
  o LAB 02: Wednesday, 14:30 (3 hours). Location: WSC 106.
  o LAB 03: Thursday, 16:30 (3 hours). Location: WSC 106.
  o LAB 04: Thursday, 16:30 (3 hours). Location: WSC 108.

• Section N:
  o LAB 01: Friday, 10:30 (3 hours). Location: WSC 105.
  o LAB 02: Friday, 10:30 (3 hours). Location: WSC 106.
  o LAB 03: Thursday, 13:00 (3 hours). Location: WSC 106.
  o LAB 04: Thursday, 13:00 (3 hours). Location: WSC 108.

• Section O:
  o LAB 01: Monday, 18:00 (3 hours). Location: WSC 105.
  o LAB 02: Monday, 18:00 (3 hours). Location: WSC 106.
  o LAB 03: Tuesday, 18:30 (3 hours). Location: WSC 106.

• Section P:
  o LAB 01: Wednesday, 14:30 (3 hours). Location: WSC 108.
  o LAB 02: Friday, 10:30 (3 hours). Location: WSC 108.
  o LAB 03: Monday, 18:00 (3 hours). Location: WSC 108.

Locations stated above is for the periods that the course is delivered in person.

• Labs start on *the week of January 17, 2022*.
• All labs are to be completed individually: no group work is allowed for the weekly labs.
  o TAs will perform thorough checks on all lab submissions: convincingly suspicious submissions will be reported to the Lassonde Student Service for a formal investigation immediately. Breach of Academic Integrity results in severe consequences. It's the student's responsibility to learn what is and what is not a breach of academic honesty.

**Students must only attend the lab section that they are enrolled in.**
• It's important that students start the lab work way before they go to their lab session and try to complete it. However, if they get stuck and can't complete the lab solution before their lab session, that's OK: the lab session is intended
primarily as a learning environment. Students should attend the lab session and TAs will be happy to help.

- The labs will be checked and graded by TAs and files must be uploaded using the course eClass by the following deadlines:
  - Lab1 by Friday January 28, 22:00.
  - Lab2 by Friday February 4, 22:00.
  - Lab3 by Friday February 11, 22:00.
  - Lab4 by Friday March 4, 22:00.
  - Lab5 by Friday March 11, 22:00.
  - Lab6 by Friday March 18, 22:00.
  - Lab7 by Friday March 25, 22:00.
  - Lab8 by Friday April 8, 22:00.
- Everyone may have some bad days. Hence, some contingency mechanisms (in particular, omitting two of each student’s lowest grades in the labs when calculating their final grade) have been provided to all students in case they miss a deadline due to illness, technical issues, or any other problems beyond their control or performing weak in the lab.
- Deadlines will not be extended and exceptions for individuals’ personal problems/illness will not be made. Instead, we automatically apply the contingency mechanisms stated above. All emails or requests for making such exceptions will be ignored.

Email Policies

- We highly encourage students to ask questions during lectures or office hours, and use the eClass discussion forum, before emailing the course instructors. They should use eClass to upload any paperwork within the designated deadlines. Email should be used only for special circumstances that are not facilitated in eClass.
- To save yourself time, do not ask a question for which an answer is in the Course Outline and Syllabus or in the forum. Search this document and the course forum first.
- Only use your York email account. If your preferred email address is not set to your York email account, see an IT desk (online or in person) and change it.
- Please include “EECS1022”, a brief indication of the topic in the subject line, and your formal name (the one used within YorkU systems), Passport York username, and student number at the end of your message. These are necessary to access your course records and materials. Also include any additional information that is pertinent to the topic of your email.
• Use grammatical English. Do not use SMS-style talk (e.g., “r u gonna return the tests tmr?”) or other shorthand or slang. For some guides on drafting professional emails, read this.

• For all administrative matters (e.g., missing an assignment or a test), students should primarily follow the corresponding links in the eClass page within the deadlines. For circumstances that are not already facilitated in eClass, email the course coordinator (Amir H Chinaei) and not to your instructor. For academic integrity and administrative fairness, we should not make any exception--beyond the policies stated in this document--if a student misses a test or an assignment deadline.

• Email messages not complying with these guidelines may not be answered in a timely manner.

• We generally respond to emails within 24 hours (usually much sooner) during working days. However, we reserve the right to not respond to any emails after hours, on weekends or during holidays, as well as the emails that pose questions that have been already answered in this document or in the discussion forum.

Textbook


The book website (https://www.eecs.yorku.ca/~roumani/i2c_2/) contains a series of video clips (the "Walkthrough") that walks one through the entire app development process. Chapter 0 is also available for download on the website.
Evaluation Scheme

<table>
<thead>
<tr>
<th>Components</th>
<th>Weights</th>
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<tbody>
<tr>
<td><strong>Labs (Best 6 out of 8 x 2%)</strong></td>
<td>12%</td>
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For the labs, TAs will grade students' work not only by JUnit tests given to them but also by additional tests covering some other input values. This is to encourage students to take more responsibility for the correctness of their code by writing their own additional tests.

As a contingency mechanism, we will exclude two of every student’s lowest grades when it comes to calculation of the final grade in the course.

| Project                                      | 18%     |

For the project, students will start developing a Mobile App using the Android Studio IDE from the first weeks of classes. The project has several milestones and deadlines starting from Week 1 of classes. For further information, please see [here](#).

| LabTest1: Week of February 14 (in student’s official lab hour) | 20%     |
| LabTest2: Week of March 28 (in student’s official lab hour)   | 20%     |

| Final exam (TBA)                                          | 30%     |

All LabTests and Final exam are held in-person (as per the university’s mandate as of December 20th, 2021). Due to enrollment size and academic integrity, no exception will be made or accepted. Students with accommodation should arrange with the office of Students Accessibility Services far in advance in order to conduct all these tests and exams in person on corresponding scheduled dates and times.
**Bonus points:** students who actively participate in the discussion forum in eClass or consistently participate in their officially enrolled weekly labs will receive up to 2% points towards their final course grade. Examples of active participation in the forum is when a student checks the forum on regular basis (e.g., at least once per day) and participates by providing high-quality answers to questions asked by others or posing their own questions.

**Project**

Please refer to the project instruction document (link).

**Tentative Schedule**

Please see eClass for tentative weekly lecture topics

**Policies**

- **Plagiarism:** When a student submits their labs or programming test, they are in fact claiming that it is solely their own work. It is considered as a violation of academic integrity if a student copies or shares any parts of their work (e.g., code, diagrams) during any stages of their development as well as after that—both directly or through third-party websites. The instructor and TAs will examine all submitted code, and suspicious submissions will be reported immediately to Lassonde as a breach of academic integrity. We do not tolerate academic dishonesty, so please be fully responsible for your learning.

- **Online Submission/Assessment:** **Stringent deadlines are imposed on all scheduled tests, as well as labs (to be submitted to eClass electronically to the EECS server).**

- **No Teamwork on labs and tests.** All labs and tests are to be developed and completed individually (i.e., teamwork is forbidden). This is meant for avoiding students having difficulties finding a suitable teammate and disputes between teammates (e.g., non-responsiveness, overdue progress, last-minute notice of withdrawal).
• The course announcements will appear the course’s eClass site. Students are responsible for checking these daily, especially the Course Announcements!

• Students can post questions to the course forum. Don't post solutions to lab or tests questions even after the lab or test is due!

• Communication with the course instructors on general matters ((such as clarification on lab works, lecture concepts, course structure, etc.) should be done only through the course forum in eClass and through office hours. Email should be used only for personal or sensitive matters that should not be posted in eClass. Moreover, if emailing instructors, everyone is required to use their YorkU email account, put EECS1022 in the Subject line, and include your Passport York ID in the message.

• If a student misses LabTest1 for any reasons including reasons beyond their control (such as illness or technical issues), the weight of their LabTest1 will be shifted to their LabTest2. If a student misses LabTest2 for any reasons, they should request a Deferred LabTest2 that normally is scheduled after classes end. If a student misses both LabTest1 or LabTest2 for any reasons, they will receive 0 in LabTest1 and should request a Deferred LabTest2. Once a student begins writing a test or other assessments, the weight of that assessment will not be shifted for any reason. Thus, if a student is feeling ill, the student should not attend the test.

• Missed final exam: Students who miss the final exam and want to take a makeup final exam must properly complete a Deferred Standing Agreement form and submit it to eClass within one week of the originally scheduled exam. Please read Deferred Exam Request. The deferred final exam will be normally offered in May/June 2022 or after—at the discretion of the course instructors.

**Academic Honesty**

During tests and exams as well as for all lab works, students are expected to work individually, and only access permitted resources. Communicating with others during the tests or exams or when doing a weekly lab, using aids that are not permitted, and impersonation are all examples of academically dishonest behaviour.
Every term, many students are reported for breach of academic honesty or integrity; Penalties are severe. It’s the student’s responsibility to learn what is and what is not a breach of academic honesty.

Copyrights

Images and materials presented in lectures are subject to Canadian copyright law. Lectures are the intellectual property of the professor. Course materials are the intellectual property of the associated author(s). You may not allow others to reproduce or distribute lecture notes, test questions and other course materials publicly for commercial and non-commercial purposes without an express written permission from the professor or author. If it can be shown that these terms were violated by you, your course grade may be changed to an F even after the course is completed.

Students are expected to read the Senate Policy on Academic Honesty. See also the EECS Department Academic Honesty Guidelines.

Programming Environment

- Students will need to have access to a computer with IntelliJ IDEA (Community Edition) and Android Studio IDE installed. Students should make sure the version they install on their devices is the same as the versions installed on the computers on YorkU labs. Otherwise, their labs and tests’ submission may not run properly when TAs marking it and will result in receiving 0.

- One option is to download this free IDE and install it on your home computer (see Chapter 0-Doing of the textbook).

- Another option is to login to a WSC lab workstation remotely through your browser using the EECS remotelab service. This gives students access to the workstation desktop in a browser window, and students can run any software available on the workstation, including Android Studio. See the next section for details on how to do this. Please note that having this remote option does not change the requirement on the in-person attendance of the labs for collecting bonus points.
EECS Remote Lab

The EECS Remote Lab service allows students to connect to EECS lab workstations from within their web browser. The workstation's desktop is displayed within the browser window and students can run any software available on the workstation as if they were there.

If a student doesn't already have one, they will need to generate an EECS account before using remotelab by visiting: https://webapp.eecs.yorku.ca/activ8. It takes about 40 minutes for the EECS account to get created, and then they can login to remotelab. They must be enrolled in EECS 1022 for this to work (if a student just enrolled in the course, it will take one day for the enrollment data to be uploaded to EECS systems).

Once they have an EECS account, they can use the remotelab service. Go to https://remotelab.eecs.yorku.ca, login, and select Linux Remote Desktop (EDU), and then any of the WSC workstations listed. They will be logged in as "user" and can work as if in the lab.

This uses Apache Guacamole; see this link for documentation. To cut-and-paste between your desktop and the remote desktop, open the Guacamole menu by pressing Ctrl+Alt+Shift and paste into the clipboard there.

To run Android Studio on the lab workstation, select it under development apps. There are two predefined projects there that you can run. Also preinstalled are two virtual devices that you can run apps on, a Nexus 9 API 29 tablet and a Pixel 3a XL API 29 phone.

York’s Course Accessibility Statement

York University is committed to principles of respect, inclusion and equality of all persons with disabilities across campus. The University provides services for students with disabilities (including physical, medical, learning and psychiatric disabilities) needing accommodation related to teaching and evaluation methods/materials. These services are made available to students in all faculties and programs at York University. Students in need of these services are asked to register with disability services as early as possible to ensure that appropriate academic accommodation can be provided with advance notice. Students are encouraged to schedule a time early in the term to meet
with each professor to discuss their accommodation needs. Please note that registering with disabilities services and discussing the needs with the professors is necessary to avoid any impediment to receiving the necessary academic accommodations to meet the needs. (http://www.yorku.ca/secretariat/senate/committees/ascp/index-ascp.html)