

# CS 1027A: Computer Science Fundamentals II

## Fall 2019

### 1. General Course Information

#### Course Information

Section 001
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Lectures: Mondays 11:30am – 1:30pm and Wednesdays 11:30am – 12:30pm, both in HSB-236

Labs Info (all labs are in MC-235):

- Section 003: Wednesdays 1:30pm - 2:30pm
- Section 004: Tuesdays 7:30pm - 8:30pm
- Section 005: Mondays 9:30am - 10:30am
- Section 006: Fridays 3:30pm - 4:30pm
- Section 007: Thursdays 3:30pm - 4:40pm

Office Hours: Wednesdays 2:00pm - 4:00pm or by appointment

Section 002
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Lectures: Mondays 3:30pm – 5:30pm and Wednesdays 3:30pm – 4:30pm, both in MC-105B

Labs Info (all labs are in TEB-454):

- Section 008: Thursdays 6:30pm - 7:30pm
- Section 009: Thursdays 4:30pm - 5:30pm
- Section 010: Thursdays 5:30pm - 6:30pm

Office Hours: Mondays 10:00am - 12:00pm or by appointment

#### List of Prerequisites

CS 1025A/B or CS 1026A/B (ES 1036A/B engineering students), with a mark of at least 65% in either. You cannot do either course concurrently with this course.

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

## 2. Instructor Information

Section 001

Instructor: Bryan Sarlo  
Email: [bsarlo@uwo.ca](mailto:bsarlo@uwo.ca)

Section 002

Instructor: Andrew Bloch-Hansen  
Email: [ablochha@uwo.ca](mailto:ablochha@uwo.ca)

Please note that we do not check email very much on weekends so don't expect a quick response then. During weekdays, we are generally very quick to respond to emails.

Students must use their Western (@uwo.ca) email addresses when contacting their instructors. Include the course code "CS 1027" in the subject line or the email may go unseen. It is your responsibility to make sure the email is clearly labelled so it does not get lost or filtered out.

Note that Western email and other email providers such as gmail.com or yahoo.com may have quotas or limits on the amount of space for your inbox. If you let your email accumulate there, your mailbox may fill up and you may lose important email from your instructors. Losing email that you have forwarded to an alternative email address is not an excuse for missing out on important information.

## 3. Course Description/Syllabus

This course serves as a continuation of both CS1025a/b and CS1026a/b (ES 1036A/B engineering students). Major emphasis is placed on the organization and manipulation of abstract data types, such as lists, stacks, queues, and trees. In addition, high-level language implementations of these data types are examined. Object-oriented design principles are emphasized throughout the course. Additional topics include sorting, searching, recursion, and analysis of algorithms. Java is the programming language in use for this course.

Course Topics (not necessarily in order):

- Introduction to Java and OOP
- Inheritance
- Collections
- Stacks and Queues
- Debugging and Exceptions
- Lists and Linked Lists
- Analysis of Algorithms
- Recursion
- Memory management
- Iterators
- Trees and Binary Trees

- Sorting

#### Course Learning Outcomes:

- Programming in an object-oriented language, namely Java
- Creating classes and using inheritance for sub-classes
- Using abstract data types, including stacks, queues, trees, lists, and linked lists
- Debugging code and using exceptions to handle bugs gracefully
- Analyzing algorithms and their complexities
- Programming methods from pseudo-code or a set of instructions

#### 4. Course Materials

Suggested Text: Java Software Structures: Designing and Using Data Structures, Lewis and Chase, Addison Wesley, 4th Edition.

Students should check OWL (<http://owl.uwo.ca>) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class. Students are responsible for checking OWL on a regular basis. Note that Section 001 has a different OWL website than Section 002.

Students should also check the official course website (<https://www.csd.uwo.ca/Courses/CS1027a/>) on a regular basis. This website will contain certain resources that may not be posted on OWL (i.e. lecture slides). Note that Sections 001 and 002 share the same course website.

#### 5. Methods of Evaluation

The overall course grade will be calculated as listed below:

Assignments (4)	35%
Labs (11)	10%
Quizzes (5)	5%
Midterm Exam	20%
Final Exam	30%

Schedule (dates are tentative and may be subject to change)

Assessment Title	Submission Due Date
Assignment 1	Friday, September 27, 2019
Assignment 2	Friday, October 18, 2019
Assignment 3	Friday, November 15, 2019
Assignment 4	Tuesday, December 3, 2019
Quiz 1	Tuesday, September 24, 2019
Quiz 2	Tuesday, October 8, 2019
Quiz 3	Tuesday, October 22, 2019
Quiz 4	Tuesday, November 12, 2019

Quiz 5	Tuesday, November 26, 2019
Midterm Exam	Saturday, October 26, 2019
Final Exam	TBD

All assignments are due via OWL at 11:55pm on the due date unless states otherwise. If an assignment has to be canceled for any reason, the remaining assignment weights will be prorated to add up to 35%. If for any reason the midterm examination has to be cancelled, the final exam will be worth 50% of the final mark.

Late Policy on Assignments: 10% penalty per day up to 2 days late. Assignments will not be accepted more than 2 days after the due date and will be graded as 0. Weekends count as 1 day in determining late penalties.

Lab instructions will be available on the course website in advance. It is expected that students will come prepared to the labs by reading the instructions and performing any preparatory work in advance.

- Labs begin during the second week of classes.
- There is a total of 11 labs.
- Each completed lab is worth 1% of your final grade. Since there are 11 labs for a total of 10%, you may miss 1 lab without penalty. There are no bonus marks for completing more than 10 labs.
- To receive credit for a lab, you must show up during your lab session's hours and get marked on an attendance sheet; you must show the completed lab to the TA responsible for that lab session, and you must submit the lab files to OWL no later than 11:55pm on the same day as your lab session.
- You must attend the lab session for which you are registered. We encourage students who encounter serious health or personal difficulties to contact their Dean's office and then follow up with the instructor to determine proper accommodations. Do NOT come to the instructor without first contacting academic counselling.
- Students must bring their UWO identification to all labs.

There will be no makeup Midterm Exam, except for students requesting a Special Midterm Exam for religious reasons. These students must have notified the course instructor and filed documentation with their Dean's office at least 2 weeks prior to the Midterm Exam.

If you miss the midterm exam for any other reason, follow the procedure for Academic Accommodation for Medical Illness given below. If accommodation is approved by your Dean's office, your final exam mark will be re-weighted to include the weight of the midterm exam.

To be eligible to receive a passing grade in the course (50% or higher), your average on the exams must be at least 45% and your average on the 4 assignments must be at least 45%. Otherwise your final grade cannot be greater than 45%. To be eligible to receive a grade of 65% or higher in the course (i.e. to be eligible to go on in a Computer Science module), your average on the exams must be at least 50% and your average on the 4 assignments must also be at least 50%. Otherwise your grade cannot be greater than 60%.

If your final exam grade is higher than your midterm grade, the final exam grade will count for your full exam grade.

## **6. Accommodation and Accessibility**

If you are unable to meet a course requirement due to illness or other serious circumstances, you must seek approval for the absence as soon as possible. Approval can be granted either through a self-reporting of absence or via the Dean's Office/Academic Counselling unit of your Home Faculty. If you are a Science student, the Academic Counselling Office of the Faculty of Science is located in NCB 280, and can be contacted at [scibmsac@uwo.ca](mailto:scibmsac@uwo.ca).

For further information, please consult the university's policy on academic consideration for student absences:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/Academic\\_Consideration\\_for\\_absences.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Consideration_for_absences.pdf).

If you miss any quizzes or labs (after the one dropped lab), the weight of those missed assessments will be shifted to the weight of the final exam. Extensions will not be given for accommodations on quizzes or labs. For assignments, you will be expected to follow the previously mentioned procedure of contacting your academic counsellor to seek official accommodations. Do not come to the instructor or TA asking for accommodations; they are only done if you go through your academic counsellor / Dean's office.

If you miss the Final Exam, please contact your faculty's Academic Counselling Office as soon as you are able to do so. They will assess your eligibility to write the Special Exam (the name given by the university to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (see [http://www.registrar.uwo.ca/examinations/exam\\_schedule.html](http://www.registrar.uwo.ca/examinations/exam_schedule.html)).

## **7. Academic Policies**

The website for Registrarial Services is <http://www.registrar.uwo.ca>.

In accordance with policy, <http://www.uwo.ca/its/identity/activatenonstudent.html>, the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

Electronic devices including phones and calculators are not permitted during the midterm and final examinations.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: [http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf).

Labs and assignment submissions may be subject to plagiarism-detection software such as MOSS. Code from two or more students that is found to be very similar may be identified as plagiarism and standard procedures will ensue.

## **8. Support Services**

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Student Accessibility Services (SAS) at 661-2147 if you have any questions regarding accommodations.

The policy on Accommodation for Students with Disabilities can be found here:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/Academic%20Accommodation\\_disabilities.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic%20Accommodation_disabilities.pdf)

The policy on Accommodation for Religious Holidays can be found here:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_religious.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf)

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Students who are in emotional/mental distress should refer to Mental Health@Western ([http://www.health.uwo.ca/mental\\_health](http://www.health.uwo.ca/mental_health)) for a complete list of options about how to obtain help.

Additional student-run support services are offered by the USC, <http://westernusc.ca/services>.