CS 1027B: Computer Science Fundamentals II
Summer 2020

1. General Course Information

Course Information

Lectures: combination of lecture recordings, demos, and zyBooks readings, posted weekly on OWL

Labs: 2 one-hour labs per week

Instructor: Bryan Sarlo

Email: bsarlo@uwo.ca
Office: MC 361
Office Hours: online through Zoom (Tuesdays 12-2pm and Thursdays 1-2pm)

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. Contact Information

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

Students must use their Western (@uwo.ca) email addresses when contacting their instructor. 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
- Introduction to Java and OOP
- Debugging and Exceptions
- Memory management
- Inheritance
- Collections
- Linked Lists
- Stacks and Queues
- Ordered and Unordered Lists
- Analysis of Algorithms
- Recursion
- 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 and implementing abstract data types, i.e. stacks, queues, trees, lists, and linked lists
- Debugging code and using exceptions to handle bugs gracefully
- Understanding how classes, objects, and other variables are stored in memory
- Programming methods from pseudo-code or a set of instructions

4. Course Materials

zyBook – Steps to subscribe:

1. Sign in or create an account at learn.zybooks.com
2. Enter zyBook code: UWOCOMPSCI1027SarloSummer2020
3. Subscribe

The zyBook is a required text. A portion of your mark (5%) will come from completing the activities within the book in the chapters we're covering (there are a few chapters that do not relate to topics we're covering so you do **not** need to read those chapters nor participate in those activities). Note that you don't have to get all the questions correct on the first try to get the full 5%. If you answer most of the questions correctly, you can still get the full participation marks.

Students are responsible for checking OWL (http://owl.uwo.ca) regularly for news and updates. This is the primary method by which information will be disseminated to all students in the class.

5. Methods of Evaluation

The overall course grade will be calculated as listed below:

Assignments (4)	32%
Labs (10)	10%
Participation (zyBooks)	5%
Midterm Exam	16%
Final Exam	37%

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

Assessment Title	Submission Due Date
Assignment 1	Friday, July 3
Assignment 2	Friday, July 10
Assignment 3	Friday, July 24
Assignment 4	Friday, July 31
Midterm Exam	Saturday, July 18
Final Exam	TBD

Assignments

All assignments are due via OWL at 11:55pm on the due date unless stated otherwise. If an assignment has to be canceled for any reason, the remaining assignments will be re-weighted to add up to 32%.

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. If you are ill or have another valid reason to not be able to complete an assignment by the due date, you must obtain accommodations from your academic counsellor or a self-reported absence, and then send an email to the instructor to follow up. This will give you an extension (generally 48 hours) to complete the assignment.

Labs

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 first week of classes.
- There is a total of 10 labs, usually 2 per week unless stated otherwise
- Each completed lab is worth 1% of your final grade.
- To receive credit for a lab, you must complete the work as explained in the instructions and then submit the completed .java files on OWL by the specified due date each week.
- If you are ill or have another valid reason to not be able to complete a lab, you must obtain accommodations from your academic counsellor or a self-reported absence, and then send an email to the instructor to follow up. The weight of accommodated missed labs will be pushed to the final exam. Labs that are missed without accommodations will be a 0 and will not be re-weighted.
- Labs not submitted on time will not be accepted or will incur large late penalties.

Midterm and Final Exam

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 for any reason the midterm examination has to be cancelled, the final exam will be worth 53% of the final mark.

Technical Requirements for Exams

Tests and examinations in this course will be conducted using the remote proctoring service Proctortrack. By taking this course, you are consenting to the use of this software and declaring that you have a reliable internet connection with sufficient capacity to support video proctoring. You will be required to complete a video face scan and show photo identification. You will also be monitored during tests and examinations. The video and desktop screen are recorded and uploaded to

Proctortrack servers and your instructor may review the recording. More information about this remote proctoring service is available in the Online Proctoring Guidelines at the following link:

https://www.uwo.ca/univsec/pdf/onlineproctorguidelines.pdf

Completion of this course will require you to have a device that meets the technical requirements for this service. Information about the technical requirements are available at the following link:

https://www.proctortrack.com/tech-requirements/

Please contact the course instructor if you are not able to meet the technical requirements or if you have any questions about the use of this remote proctoring service for this course.

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.

Submitting a self-reported absence during or at the end of an assignment period will provide you with a 2 day (48-hour) extension. Accommodations handled from your Academic Counsellor may result in extensions of varying lengths, depending on the timeline suggested by the counsellor. It is your responsibility to follow up with your instructor after submitting any form of accommodation.

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.

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).

7. Academic Policies

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

In accordance with the policy, https://wts.uwo.ca/identity/identities_and_access/index.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.

Assignment, lab, and exam 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.

Programming and other work for this course is to be done individually without the help of others. Some of the common forms of plagiarism within CS are:

- Sharing code files or screenshots of your work to classmates
- Looking at others' code on their computer, in a file they shared, or on a screenshot
- Requesting that others to do your work (whether paid or not) or doing work for others (whether paid or not)
- Copying code from online websites

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.

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

The policy on Accommodation for Religious Holidays can be found here: 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) for a complete list of options about how to obtain help.