Western Science

Department of Computer Science

CS 1027A: Computer Science Fundamentals II

Fall 2025

Course Outline

1. Course Information

Course Information

Section 001 (LEC) *Marios Stavros Grigoriou*	Mondays 3:30pm to 5:30pm Wednesdays 3:30pm to 4:30pm	

Lab Schedule

This term there are 6 lab sections. Check Western's Academic Time Table 2025/2026 to see times and locations for these sections.

List of Prerequisites

CS 1025A/B or CS 1026A/B, ES 1036A/B or DS 1200A/B, with a mark of at least 65% in any prerequisite listed. 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

Instructors	Email	Office	Office Hours*
Marios Stavros Grigoriou (Course Coordinator)	mgrigori@uwo.ca		TBD

Students must use their Western (@uwo.ca) email addresses when contacting their instructors or TAs. Include the exact characters within the quotes(" <- that's a quote) in the subject line of your email: "[CS1027A-2025]" for all emails you send regarding this course.

3. Course Syllabus, Schedule, Delivery Mode

Course Description

A continuation for both Computer Science 1025A/B and Computer Science 1026A/B. We will study data organization and manipulation, object-oriented principles, abstract data types and their implementations in Java, arrays, linked structures, stacks, queues, trees, lists, recursion, and memory organization.

Course Learning Outcomes

- Program in an object-oriented language, namely Java
- Create classes and use inheritance for creating sub-classes
- Identify and implement arrays and linked data structures
- Implement and use abstract data types, i.e. stacks, queues, lists, and trees
- Debug code and use exceptions to handle bugs gracefully
- Identify the different parts of memory during the execution of a Java program
- Program algorithms from pseudo-code

Lecture Topics

- Object-Oriented Programming
- Encapsulation, inheritance, abstraction, polymorphism
- Exceptions and Debugging
- I/O and Memory Allocation
- Collections and Generics
- Arrays
- Linked Data Structures
- Stacks
- Queues
- Lists
- Recursion
- Memory Management
- Trees
- Sorting

Key Sessional Dates

Classes begin: September 4, 2025
Reading Week: November 3–9, 2025
Classes end: December 9, 2025

Lab Schedule

Lab #	Week
Lab 1	Sep. 15 – 19
Lab 2	Sep. 22 – 26
Lab 3	Sep. 29 – Oct. 3
Lab 4	Oct. 6 – 10
Lab 5	Oct. 13 – 17
Lab 6	Oct. 20 – Oct. 24
Lab 7	Oct. 27 – 31
Lab 8	Nov. 10 – 14
Lab 9	Nov. 17 – 21
Lab 10	Nov. 24 – 28

4. Course Materials

Students are responsible for checking the course OWL site (https://westernu.brightspace.com/) 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. All course material will be posted to OWL: https://westernu.brightspace.com/.

If students need assistance with the course OWL site, they can seek support on the OWL Brightspace Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

Technical Requirements

You are required to have a modern laptop or desktop computer that can run an up-to-date version of Java and an IDE such as Eclipse. You must also have a reliable internet connection.

Some office hours are going to be held on Zoom, so it is recommended that you have a working microphone and webcam to join the office hours when you have a question.

There is no required textbook for this course. The instructor will provide a list of suitable references wherever possible and available.

5. Methods of Evaluation

The overall course grade will be calculated as listed below:

Assignments (4 at 8% each)	32%
Labs (10 at 1% each)	8% (1% each, lowest 2 are dropped)
Midterm Test	20%
Final Exam	40%

General information about missed coursework

Students must familiarize themselves with the *University Policy on Academic Consideration – Undergraduate Students in First Entry Programs* posted on the Academic Calendar: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf

This policy does not apply to requests for Academic Consideration submitted for **attempted or completed work**, whether online or in person.

The policy also does not apply to students experiencing longer-term impacts on their academic responsibilities. These students should consult Accessible Education.

For procedures on how to submit Academic Consideration requests, please see the information posted on the Office of the Registrar's webpage: https://registrar.uwo.ca/academics/academic_considerations/ All requests for Academic Consideration must be made within 48 hours after the assessment date or submission deadline.

All Academic Consideration requests must include supporting documentation; however, recognizing that formal documentation may not be available in some extenuating circumstances, the policy allows students to make one Academic Consideration request **without supporting documentation** in this course. However, the following assessments are excluded from this, and therefore always require formal supporting documentation:

- Examinations scheduled during official examination periods (Defined by policy)
- Midterm Exam

When a student *mistakenly* submits their one allowed Academic Consideration request **without supporting documentation** for the assessments listed above or those with assessment flexibilit, the request cannot be recalled and reapplied. This privilege is forfeited.

Assignments

There are four assignments that require you to apply the topics you learned from the lectures and/or labs and to implement Java programs.

All assignments are due at 11:55pm on the due date unless stated otherwise. If an assignment has to be cancelled by the instructors for any reason, the remaining assignments will be re-weighted to add up to 32%. Appeals to assignment and lab marks must be made **within one week** of the assignment being marked and returned to the students.

Late Policy on Assignments

Late assignment submissions will be subject to a penalty of 10% per day late up to a maximum of 3 days. After 3 days, assignments will not be accepted anymore and will be marked as 0. If you have an illness or other valid reason for an extension, you must contact your home faculty's academic advising office to obtain an official **academic consideration** from them, when such consideration, is **approved** (documented or undocumented if available and applicable) an extension of **1 week** will be added for submitting an assignment **without a penalty**. (If your academic consideration covers a period longer than 1 week, the extension will be equal to the number of days stated on your academic consideration). If you receive multiple academic considerations for the same assignment, you will receive multiple –consecutive—extensions using the rule established above. In the case of approved academic consideration extension, there will be no grace period for submission past the extended deadline by incurring the 10% daily penalty mentioned above.

- Failure to submit an assignment for which an academic consideration has been approved will lead to the assignment's weight being redistributed to the other assignments.
- This can only happen for 1 assignment. Subsequent missed assignments will be forfeited and their contribution to your final mark lost.

Re-submissions are allowed but note that re-submissions after the deadline will be penalized for being late, regardless of when the initial submission was made. Assignments will contain instructions for submitting them, **which you must follow**. We will not accept assignments submitted via email or any format other than what is stated in the assignments.

A large portion of each assignment's grade will come from auto-graded tests and the rest will come from programming style, formatting, logic, comments, etc. Some of the tests will be provided, but note that additional tests may be run that are hidden from you, so you should create your own additional tests to ensure your code works properly in all cases.

Assignments are to be done individually, not in groups. The submitted code will be run through a similarity-checking software to look for cheating. **Do not copy or share code in any way**.

Tentative Assignment Due Dates:

Assignment 1	Tuesday, October 7
Assignment 2	Thursday, October 30
Assignment 3	Monday, November 17
Assignment 4	Thursday, December 4

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.

- There are 10 weekly labs which should each take 1 hour or less to complete.
- The labs begin the week of September 15-19
- **You must attend the lab section in which you are registered**. You **cannot** attend a different lab section even if you have a valid reason to miss your scheduled lab. You will receive a mark of 0 if you try to attend a different lab section.
- Each completed lab is worth 1% of your final grade, and we will drop the lowest 2 labs at the end

of the term.

- To receive credit for a lab, you must attend and work on the lab during your scheduled session **AND submit the completed specified files on OWL within 24 hours of your lab session.**
- Coming to your scheduled lab section with the work already complete **is not permitted**. You will receive a mark of 0 if you try to do this.
- The labs are generally pass/fail, however you could get a partial mark if you missed a significant portion of the required work, or if you forget to upload the files on OWL after attending your lab. It is up to the discretion of the TAs to determine the grade for each lab.

- Since we are dropping the lowest 2 labs, you can miss up to 2 labs without affecting your mark. If you must miss more than 2 labs, you should contact your home faculty's academic advising office to request an academic consideration for the missed labs. If they approve your absence for any additional labs (after the first 2), those missed labs will be re-weighted to your final exam.
- Labs that are missed without academic considerations will be given a grade of 0 and will not be re-weighted. Only 2 are dropped so absences after that will be considered a 0 toward your grade.
- **It is your responsibility to sign the TA's attendance sheet** and to show your completed lab work to them before leaving the lab room. It is also your responsibility to submit the specified files from the lab on OWL within 24 hours of the time of your lab session. Forgetting to do either of these is not a valid excuse to get the lab mark.

Midterm Exam

The midterm is tentatively scheduled for **Saturday, October 25**. Time and location will be announced on OWL closer to that date.

The midterm is 2 hours in length and is a combination of Multiple Choice, Written/Drawn Answers, and Algorithm Design. All portions of the exam are written on paper, not with computers. No electronic devices are allowed.

There will **not** be a make-up midterm. If you cannot write the midterm for a valid reason (i.e. exam conflict, medical, or religious reasons), you will have to contact your home faculty's academic advising office to request an academic consideration for your absence. If you receive their approval, the weight of the midterm will be shifted to the final exam, making it worth 60%.
Without such an academic consideration, missing the midterm will result in a mark of zero on the midterm and it cannot be made up.

Final Exam

The final exam will be scheduled by the University. The final exam is cumulative, meaning it covers topics from the entire semester. The final exam is 3 hours in length and is a combination of Multiple Choice, Written/Drawn Answers, and Algorithm Design. All portions of the exam are written on paper, not with computers. No electronic devices are allowed.

Grade Requirements

To be eligible to receive a grade of 50% or higher (i.e. to pass the course), you must achieve:

- at least 45% average between the midterm and final exams, and
- at least 45% average between the four assignments

If you fail to meet **either** of these conditions, your final mark will be either 45% or your calculated grade, whichever is lower.

To be eligible to receive a grade of 65% or higher (i.e. to be eligible to go on in a Computer Science module), you must achieve:

- at least 50% average between the midterm and final exams, and
- at least 50% average between the four assignments

If you fail to meet **either** of these conditions, your final mark will be either 60% or your calculated grade, whichever is lower.

6. Additional Statements

6.1 Religious Accommodation

When conflicts arise with a religious holiday that requires an absence from the University or prohibits certain activities, students should request an accommodation for their absence in writing to the course instructor and/or the Academic Advising office of their Faculty of Registration. This notice should be made as early as possible, but not later than two weeks prior to the writing of the examination (or one week prior to the writing of the test).

Please visit the Diversity Calendars posted on our university's EDID website for the recognized religious holidays - https://www.edi.uwo.ca

6.2 Academic Accommodation Policies

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic Accommodation_disabilities.pdf.

6.3 General Academic Policies

The website for Registrar Services is https://www.registrar.uwo.ca/.

Use of @uwo.ca email: In accordance with policy, https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf, the centrally administered e-mail account provided to students will be considered the individual's official university email address. It is the responsibility of the account holder to ensure that emails received from the University at their official university address are attended to in a timely manner.

Requests for Relief (formally known as "appeals")

Policy on Request for Relief from Academic Decision:
https://uwo.ca/univsec//pdf/academic_policies/appeals/requests_for_relief_from_academic_decisions.pdf

Procedures on Request for Relief from Academic Decision (Undergraduate):
https://uwo.ca/univsec//pdf/academic_policies/appeals/undergrad_requests_for_relief_procedure.pdf

6.4 Scholastic Offences

Policy on Scholastic Offences:
https://uwo.ca/univsec//pdf/academic_policies/appeals/scholastic_offences.pdf

Procedures on Scholastic Offences (Undergraduate):
https://uwo.ca/univsec//pdf/academic_policies/appeals/undergrad_scholastic_offence_procedure.pdf

Use of Electronic Devices During Assessments

In courses offered by the Faculty of Science, the possession of unauthorized electronic devices during any in-person assessment (such as tests, midterms, and final examinations) is strictly prohibited. This includes, but is not limited to: mobile phones, smart watches, smart glasses, and wireless earbuds or headphones.

Unless explicitly stated otherwise in advance by the instructor, the presence of any such device at your desk, on your person, or within reach during an assessment will be treated as a *scholastic offence*, even if the device is not in use.

Only devices expressly permitted by the instructor (e.g., non-programmable calculators) may be brought into the assessment room. It is your responsibility to review and comply with these expectations.

Use of Generative AI Tools

Unless otherwise stated, the use of generative AI tools (e.g., ChatGPT, Microsoft Copilot, Google Gemini, or similar platforms) is **not permitted** in the completion of any course assessments, including but not limited to: assignments, lab reports, presentations, tests, and final examinations.

Using such tools for content generation, code writing, problem solving, translation, or summarization—when not explicitly allowed—will be treated as a **scholastic offence**.

If the use of generative AI is permitted for a particular assessment, the conditions of use will be specified by the instructor in advance. If no such permission is granted, students must assume that use is prohibited. It is your responsibility to seek clarification before using any AI tools in academic work.

6.5 Support Services

Please visit the Science & Basic Medical Sciences Academic Advising webpage for information on adding/dropping courses, academic considerations for absences, requests for relief, exam conflicts, and many other academic-related matters: https://www.uwo.ca/sci/counselling/.

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

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at

https://www.uwo.ca/health/student_support/survivor_support/get-help.html.

To connect with a case manager or set up an appointment, please contact support@uwo.ca.

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. If you have any questions regarding accommodations, you may also wish to contact Accessible Education at

http://academicsupport.uwo.ca/accessible_education/index.html

Learning-skills counsellors at Learning Development and Success (https://learning.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.

Western University is committed to a thriving campus as we deliver our courses in the mixed model of both virtual and face-to-face formats. We encourage you to check out the Digital Student Experience website to manage your academics and well-being: https://www.uwo.ca/se/digital/.

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