

CS 1026B: Computer Science Fundamentals II

Winter 2024

Course Outline

1. Course Information

Lecture Schedule

Section 001 (LEC) <i>Prof. Prof. Max Magguilli</i>	Tuesdays 9:30am to 11:30am Thursdays 9:30am to 10:30am	WCS-55
Section 002 (LEC) <i>Prof. Zubair Fadlullah</i>	Tuesdays 12:30pm to 2:30pm Thursdays 12:30pm to 1:30pm	TC-141
Section 003 (LEC) <i>Prof. Abdelkareem Jaradat</i>	Tuesdays 4:30pm to 6:30pm Thursdays 4:30pm to 5:30pm	NCB-113
Section 650 (ONLINE LEC) <i>Prof. Max Magguilli</i>	ONLINE	ONLINE

Lab Schedule

This term there are 19 (21 max) lab sections. Check Western's Academic Timetable 2023/2024 to see times and locations for these sections.

List of Prerequisites

There are no prerequisites. No previous programming experience is required.

2. Instructor Information

Instructors	Email	Office	Office Hours
<i>Prof. Max Magguilli</i> <i>coordinator</i>	<i>lmagguil@uwo.ca</i>	MC 386	TBD
<i>Prof. Zubair Fudlullah</i>	<i>zubair.fadlullah@uwo.ca</i>	MC 360	TBD
<i>Prof. Abdelkareem Jaradat</i>	<i>ajarada3@uwo.ca</i>	MC 24	TBD

Students must use their Western (@uwo.ca) email addresses when contacting their instructors or TAs. Include the course code (CS 1026 W24) in the subject line of emails you send regarding this course.

NOTE: Email messages **must** be sent from your university account and **MUST** include: “**CS 1026 W24**” in the subject line. (spaces/case do not matter: ex: cs1026w24 works) Email messages without **CS 1026 W24** in the subject line will automatically be trapped and **deleted** by the instructor’s SPAM filter and will **NOT** be available, read or responded to.

Note that the Western email system does not allow Python files (.py) to be attached to any email. In general, you should avoid emailing code anyway, but if you ever need to send code to your TA or instructor, you will have to change the extension or ZIP the file(s) and send the ZIP file instead.

3. Course Syllabus, Schedule, Delivery Mode

Course Description

CS 1026 introduces the basic concepts of computer programming and program design. It is intended for students who have interest in learning basic programming skills including those who intend to study Computer Science. This course assumes no previous programming background, although having some experience with programming is an asset.

Programming skills will be developed using the Python programming language. Course topics include: data types, variables, expressions, program constructs, strings (text), functions, basic data structures (lists, tuples, sets dictionaries), objects, object-oriented design, classes, modularity, and problem-solving techniques. Programming examples and assignments are taken from a variety of disciplines.

Technology Requirements

To participate fully in this course you are required to have a device (laptop, cellphone, tablet, etc.) capable of using [iClicker](#) that you are able to bring to class each week. A laptop is recommended, but any device compatible with [iClicker](#) is sufficient.

Campus computer labs will be available for work on assignments and labs. We recommend also having a home computer that can run Python 3.9.X or higher and any of the following editors:

- **VScode:** (recommended) <https://code.visualstudio.com/download>
- **PyCharm:** <https://www.jetbrains.com/pycharm-edu/>

Lecture Topics

- Introduction to Computers and Python
- Variable Types
- Input/Output
- Conditionals
- Loops
- Functions
- Lists, Tuples, Sets, and Dictionaries
- Exception Handling
- Object-Oriented Programming
- Computer Hardware / Software overview

Key Sessional Dates

Classes begin: January 8, 2024

Spring Reading Week: February 17 – February 25, 2024

Classes end: April 8, 2024

Final exams period: April 11 – 30, 2024

Please refer to the course timeline (schedule) shared on OWL in a separate file.

Lab Schedule

Lab #	Week
Lab 1	Jan 22-26
Lab 2	Jan 29 - Feb 2nd
Lab 3	Feb 5-9
Lab 4	Feb 12-16
Reading Week (No Labs)	
Lab 5	Feb 26 – Mar 1
Lab 6	Mar 4 - 8
Lab 7	Mar 11-15
Lab 8	Mar 18 - 22
Lab 9	Mar 25 - 29
Lab 10	Apr 1 - 6

All labs are due on Fridays 11:55 PM ET of the same lab's week. This means that whenever your assigned lab is, you have up to the end of the week to submit it.

Contingency plan for an in-person class pivoting to 100% online learning

Although the intent is for this course to be delivered in person, should any university-declared emergency require some or all of the course to be delivered online, either synchronously or asynchronously, the course will adapt accordingly. The grading scheme will not change. Any assessments affected will be conducted online as determined by the course instructor.

4. Course Materials

Students are responsible for checking the course OWL site (<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. All course material will be posted to OWL: <http://owl.uwo.ca>. If students need assistance with the course OWL site, they can seek support on the OWL Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

Textbook

There is a strongly recommended (not mandatory) digital textbook, zyBooks, for this course. Although it is not required for grades, it is in your best interest to purchase it in order to do well in the course.

Follow these steps to purchase the the zyBook directly:

1. Sign in or create an account at <https://learn.zybooks.com/>
2. Enter zyBook code: **UWOCOMPSCI1026ABWinter2024**
3. Subscribe

You may also purchase an access key for the zyBook from the university bookstore in-person or using the following link:

[COMPSCI 1026A/B: Computer Science Fundamentals I | Western Bookstore \(uwo.ca\)](#)

Students are responsible for checking the course OWL site (<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. All course material will be posted to OWL. The CS 1026B course site on OWL is labelled as "**COMPSCI 1026B 001 FW23**". All sections of the course are using the same site.

5. Methods of Evaluation

The overall course grade will be calculated as listed below:

Assignments (4):	34%	(4%, 8%, 10%, and 12%)
Labs (10):	8%	(1% each; lowest 2 are dropped)
Orientation Quiz:	2%	
Two Quizzes:	16%	(8% each)
In-class Participation:	10%	
Final Exam:	30%	

Assignments

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

All assignments are due via Gradescope 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 reweighted to add up to 34%.

Late Policy on Assignments

It is expected that students budget enough time to properly submit their assignments via OWL and allow for any unforeseen technological issues. Students are expected to regularly backup their assignments and submit well before any deadline.

- Each student will be given **four (4)** “late coupons” in total for the semester that may be used to submit an assignment one day late per coupon (up to a maximum of **3 days late per assignment**).
- Late coupons will be applied automatically when an assignment is submitted late and tracked in the OWL gradebook. No intervention is required by the student.
- If a student has no late coupons remaining and submits late, a zero grade will be given for the assignment (no partial late marks will be given).
- Late coupons must be used before special circumstances are considered.
- Late coupons will **not** be replenished. For example, if you use 3 late coupons on Assignment 1, you will only have 1 left for the remainder of the course.
- Each late coupon is valid for a 24-hour period only. For example, if an assignment is due on February 1st at 11:55 pm and the student submits on February 1st at 11:56 pm this would require one late coupon, as would any submission between February 1st at 11:56pm and February 2nd at 11:55 pm. After February 2nd at 11:55pm and up to February 3rd at 11:55 pm, 2 late coupons would be required. After February 3rd at 11:55pm and up until February 4th at 11:55pm 3 late coupons would be required. After February 4th at 11:55pm, no more submissions will be accepted, and a zero grade will be given on the assignment.
- Late coupons will be applied automatically when an assignment is submitted late by the TA marking the assignment. No late coupons will be used if you submit before the deadline or fail to submit an assignment at all.
- A gradebook item on OWL will show an estimate of your current late coupons, however, this is not updated live and maybe out of date. It is the student’s responsibility to keep track of how many late coupons they have available throughout the semester. Occasionally the teaching assistants may be tardy on updating each student’s late coupon total. In case of a discrepancy, the actual number of coupons used (and not what is listed in OWL) will be applied.
- **After all late coupons are used, no extensions will be given for assignments** except for in the event of serious medical or compassionate grounds that are approved by academic counselling. A student must follow the procedure for Academic Accommodation for Medical Illness as given in this document.

- Even with accommodation, no assignment will be accepted after 4 days past the original due date. After this point the only possible accommodation will be moving the weight of the assignment onto the final exam (this is only for absences approved by academic counseling).
- **Late coupons can only be used on assignments.**

Re-submissions are allowed but note that re-submissions after the deadline will be considered late, regardless of when the initial submission was made. The date and time of your most recent resubmission will be used for determining lateness.

Assignments will be submitted through Gradescope (not OWL) unless otherwise stated. You have free access to Gradescope as a Western student. Steps to submit on Gradescope will be explained in more detail closer to the deadline of the first assignment. We will not accept assignments submitted via email or any other format.

A 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. It is your responsibility to ensure the tests run and pass on Gradescope in order to get full marks, regardless if the assignment runs on any other platform or environment or IDE.

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 (all assignments are due at 11:55 pm Eastern time):

Assignment 1	Wednesday, February 7
Assignment 2	Wednesday, March 6
Assignment 3	Wednesday, March 20
Assignment 4	Friday, April 5

Please refer to the course timeline (schedule) shared on OWL in a separate file.

Labs

Lab sessions offer an opportunity to work with a course teaching assistant and your fellow students to solve one or more python problems. They also provide an opportunity to meet with your teaching assistant and ask questions about course content and assignments.

Lab instructions will be available on the course website at the start of each week.

- There are 10 weekly labs which should each take 1 hour or less to complete.
- The labs begin the week of January 22-26
- **You must submit your lab work online to Gradescope.**

- 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 complete and submit the lab work by the end of the lab time that you are registered and upload your work to Gradescope.
- The labs are generally pass/fail, however you could get a partial mark if you missed a significant portion of the required work.
- 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 academic counsellor to request accommodations for the missed labs. If they approve your absence for the additional labs (after the first 2), then the weight of those additional missed labs will be shifted to your final exam.

On-Line Quizzes

There are two on-line quizzes. Each quiz will be 40 minutes in length and will be completely multiple-choice format. The quizzes will be presented on-line through OWL. Quizzes are to be taken individually and without the aid or assistance of any person or persons.

- Each quiz will occur during a 36h window, as announced by your instructor. The quiz will be timed (likely about 30-40 minutes). To make things easier for you, you will get to choose the time of day that works best to complete the quiz.
- In cases of emergency when a quiz must be missed, students can contact their academic counselling office to retrieve accommodation for an absence. In this case, the weight of the quiz will be carried over to the final exam.
- The quizzes will be online.

Tentative Quiz Dates (the exact day(s) in which the quiz will take place will be announced):

Quiz # 1	Week 5 (opens: February 08 th @ 12:00 noon - closes February 09 th @ 11:55 pm)
Quiz # 2	Week 10 (opens: March 14 th @ 12:00 noon - closes March 15 th @ 11:55 pm)

There will **not** be any make-up quizzes. If you cannot write the quiz for a valid reason (i.e. conflict with another university assessment, medical reasons, or religious reasons), you will **have to** contact your academic counsellor to request accommodations to miss the quiz. If you obtain such accommodation, the weight of the quiz will be shifted to the final exam. **Without such accommodations, missing the quiz will result in a mark of zero on the quiz and it cannot be made up.**

Participation

Your participation grade will be determined by your attendance (recorded via iClicker) in-class and participating in the iClicker quizzes/polls. This will be graded as a pass or fail for each lecture.

Up to four (4) lectures can be missed without penalty. (first week of class will not count in order to accommodate for late enrollments) After missing 4 lectures, you will be required to contact your academic counsellor to request accommodations, or you will receive a grade of zero for participation in

the missed lecture. If you enrolled after the first week of class, your permissible 4 absences will be affected.

To obtain these participation marks you must be physically present in-class and have your own device capable of using iClicker. Any attempt to circumvent the participation system or earn a passing participation grade without attending class is an academic offence and will result in an overall participation grade of zero and the offence being reported to the Dean's Office.

Final Exam

The final exam will be scheduled by the University. The exam period is from April 11 to 30 and the exact date, time, and location for our exam will likely be announced in March. The final exam is cumulative, closed book, and is 3 hours in length and will be completely multiple-choice format.

Grade Requirements

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

- at least 40% on the final exam, and
- at least 40% weighted average on 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 60% or higher, you must achieve:

- at least 50% on the final exam, and
- at least 50% weighted average on the four assignments

If you fail to meet **either** of these conditions, your final mark will be either 58% or your calculated grade, whichever is lower.

6. Student Absences

If you are unable to meet a course requirement due to illness or other serious circumstances, please follow the procedures below. In all cases you are required to send medical documentation to academic counselling for your home program and **NOT to your course instructors**. It is your responsibility to follow up with your instructors (via e-mail) to confirm how any missed work will be handled as soon as possible, but no later than 24 hours after notification of your absence being approved by academic counselling or the end of the period covered by the consideration request, whichever is later.

Assessments worth less than 10% of the overall course grade:

1. **Missing a lab:**

You can miss up to 2 labs without any penalty since we drop the lowest 2 labs. If you miss more than two labs due to an ongoing illness or other valid reason, you should contact your academic counsellor to seek accommodations for the other labs you miss and then contact your course instructor about it (within 24 hours of the end of the consideration request).

2. **Missing an assignment:**

For assignments, you have 4 late coupons that will automatically give leniency with due dates. If you require additional time with assignments (after your late coupons run out) with a valid reason, you should contact your academic counsellor to seek accommodations for the assignments that are late and then contact your course instructor about it (within 24 hours of the end of the consideration request). Late coupons must be used first, before other considerations are taken into account. After 4 days late (based on the original assignment due date) **the only accommodation possible will be moving the weight of the assignment to the final exam.**

3. **Missing a quiz:**

For quizzes missed due to illness or other serious circumstances, please contact your academic counsellor to seek accommodations for the missed quiz. If approved, the weight of the quiz will be moved to the final exam.

4. **Missing a lecture:**

For in-class participation, you may miss up to 5 lectures without penalty or action on your part. You would need to contact your academic counsellor to seek accommodations for absences beyond the 5 allowed lectures.

Assessments worth 10% or more of the overall course grade:

For work totaling 10% or more of the final course grade, you must provide valid medical or supporting documentation to the Academic Counselling Office of your Faculty of Registration as soon as possible. For further information, please consult the University's medical illness policy at https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf

The Student Medical Certificate is available at

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf.

5. **Absences from Final Examinations**

If you miss the Final Exam, please contact the Academic Counselling office of your Faculty of Registration as soon as you are able to do so. They will assess your eligibility to write the Special Examination (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” (e.g., more than 2 exams in 23-hour period, more than 3 exams in a 47-hour period).

If a student fails to write a scheduled Special Examination, the date of the next Special Examination (if granted) normally will be the scheduled date for the final exam the next time this course is offered. The maximum course load for that term will be reduced by the credit of the course(s) for which the final examination has been deferred. See the Academic Calendar for details (under [Special Examinations](#)).

Note: missed work can *only* be excused through one of the mechanisms above. Being asked not to attend an in-person course requirement due to potential COVID-19 symptoms is **not** sufficient on its own.

6. Accommodation and Accessibility

Religious Accommodation

When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at <https://multiculturalcalendar.com/ecal/index.php?s=c-univwo>.

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.

7. Academic Policies

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

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 e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at their official university address is attended to in a timely manner.

No electronic devices (including phones, calculators, etc.) are permitted on the final exam.

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.

Computer-marked multiple-choice tests and exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

Code submitted for labs, assignments, and/or exams may be run through comparison-checking software such as MOSS to look for cases of cheating.

Plagiarism

All required assignments, quizzes and exams may be subject to submission for textual and metadata similarity review to plagiarism detection software. All assignments, quizzes and exams submitted for such checking may be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of such services are subject to the licensing agreement with The University of Western Ontario. These services and software may include but are not limited to Turnitin (<http://www.turnitin.com>), MOSS, SCANEX, and custom plagiarism detection software developed for the course.

Computer-marked multiple-choice quizzes and exams may be subject to remote proctoring software and submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating. For details on remote proctoring see the final exam section.

Students must write their assignments in their own words. Whenever students take an idea, or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence (see Scholastic Offence Policy in the Western Academic Calendar).

All assignments are individual assignments. You may discuss approaches to problems among yourselves; however, the actual details of the work (assignment coding, answers to concept questions, etc.) must be an individual effort. All assignments will be subject to both content and metadata plagiarism analysis.

All quizzes and the final exam are to be written individually, the content and questions not shared and provided rules followed.

Tutors and Outside 'Help' on assignments

Students may receive the help of a tutor on assignments, so long as the tutor only identifies errors or demonstrates sample problems that are **not** part of the assignment. If the content of your assignment is significantly different than if you had not received help, then this is an indication you may have crossed the line into cheating. Again, if you are unsure about how much help is too much, ask your instructor.

The role of tutoring is to help students understand course material. Tutors should not write any part or all of an assignment for the students who hire them. Tutors should not 'advise' or 'suggest' what is to be entered into an assignment or the solutions to any portion of the assignments. Any aid beyond what you would have received directly from the instructor will be considered an academic offense. Having employed the same tutor as another student is not a legitimate defense against an accusation of collusion, should two students hand in assignments judged similar beyond the possibility of coincidence.

Academic dishonesty in assignments includes (but is not limited to):

- Unacceptable collaboration
- What is unacceptable? There is a difference between discussing assignments and solutions with fellow students and working together on the solutions to the point where the work submitted is clearly not individual work. If in doubt, ask your instructor.
- **Copying** of another student's assignment
- **Allowing** another student to copy your work ← *this is also an **Academic Offense***
- Sharing your assignment with another student electronically or otherwise ☒ *this an **Academic Offense** for **both** students.*
- Using another student's assignment or work as a "template" or "starting point" for your own work. ← *this is an **Academic Offense** for **both** students*
- Using sites dedicated to sharing assignment solutions or aiding cheating, including but not limited to Course Hero, OneClass, and Chegg.
- Using code from an external source (text, instructor, course website) where a student's own code is expected (if in doubt, ask your instructor)

Academic dishonesty in quizzes and exams includes (but is not limited to):

- Writing a quiz/exam with the aid of another person ← *this is an **Academic Offense** for **both** students.*
- Sharing quiz/exam questions/answers or using ones sent to/obtained by you.
- Having another person write a quiz/exam for you.
- Failing to follow the specific rules given in the quiz/exam.

- Sharing your screen or virtually taking a quiz/exam with others (e.g. being in an online chat of any kind while taking a quiz/exam).

The penalty for academic dishonesty in any course component is receiving 0% for that component **AND** the possibility of additional penalties as deemed appropriate by the course instructor, department or university including but not limited to an additional penalty equal to the course component, or a failing overall grade being entered for the course. Note that receiving 0% on an assignment may make you ineligible for a passing grade due to the 49% requirement given in the Student Evaluation section. Receiving a 0% on the final exam will make you ineligible for a passing grade in this course.

You are responsible for reading and respecting the Computer Science Department's policy on: Scholastic Offences:

https://www.csd.uwo.ca/undergraduate/current/policies/scholastic_offenses.html

and Rules of Ethical Conduct:

https://www.csd.uwo.ca/undergraduate/current/policies/ethical_conduct.html

In the event of health lock-down, tests and exams in this course may be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide **personal information** (including some biometric data) and the session will be **recorded**. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at:

<https://remoteproctoring.uwo.ca>.

8. Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, 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. 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.

Learning-skills counsellors at the Student Development Centre (<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 yearround 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/>.