**CS 1026B: Computer Science Fundamentals I
Online Section (650)
Winter 2023
Course Outline**

Welcome to the class!!

1. Course Information
Lecture Schedule

Computer Science **CS 1026B 650**
Computer Science Fundamentals I
Course Outline – **Winter Term 2023**

Please note that this outline is for Section 650 only, the online course.
If you are in the in-person sections, please refer to the course outline on that OWL site.

Online Section: <u>All</u> elements of this course section can be completed online, and you will not be required to physically visit the campus for any component of the course if you are enrolled in this section 650 only. Though the content is similar to the in-person sections, please note that the requirements for the online section may differ from Section 01, 02, and 03 (the in-person sections).
Important – when speaking with a TA, please let them know you're in the online section of the course.

Lectures – asynchronous format:

Most material will be provided in an asynchronous format (readings, videos, labs, etc.)

Students are strongly encouraged to attend at least one of the synchronous TA lab/office hour components of the class per week to ask questions or seek clarification, and complete all asynchronous materials and complete the online exercises to prepare for the assignments.

You may need to read ahead in the textbook/resources and review all posted material, as well as consult with the TAs in the live office sessions to complete the assignments or labs.

Lab Schedule

For the online section of the course, the labs will be asynchronous activities, with weekly TA lab/office hours available for consultation.

List of Prerequisites

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

2. Instructors Information

Instructor:	L. Russell
Office:	Online
Office Hours:	MS Teams/Zoom : Typically Thursday at 6pm (email 48h before for a meeting link)
E-Mail:	luke.russell<at>uwo.ca

Email Communication

Students must use their Western (@uwo.ca) email addresses when contacting their instructors or TAs. Students are encouraged to contact their course instructor/TAs via email with brief, appropriate questions regarding lecture materials or clarification of assignments. **However, before sending any email to an instructor, you must follow the following steps:**

1. Check the course outline for the information you want. If you didn't find what you want in the course outline,
2. Check the announcements tab, as the instructor/TAs regularly posts new information, clarification, and extra details. If you can't find an answer,
3. Check the course MS Teams site. MS Teams is a place that you can ask your colleagues for help or you can provide help for your peers. Teams is a good place to regularly visit, you may get inspired by others or you can inspire others. If you can't find an answer to your issue,
4. You may finally use the email as follows:
   a. If the question is about the course material (clarification, problem in code, technical problems, or any material-related question), you **MUST** contact one of the TAs first about your issue. If the TAs can't solve your issue, they will forward your email to your course professor. To keep responses timely, your course professor will not answer material-related emails without getting them forwarded by TAs.
   b. If the question is about the course logistics or a personal issue, you can directly email your course professor (given that you have already tried the outline, announcements, and forums.
   c. As our communication is done electronically, there will be lots of incoming emails and therefore you must include the exact course code (**CS1026B 650**) in the subject line of emails you send regarding this course to reply as soon as possible. Other than that, ***delayed responses are expected as your email may get lost.***
   d. Though the instructor checks their emails on school days and will typically reply within 72 business hours, delays are possible. Please don't expect any response on weekends or after 7:00 pm on a typical weekday.

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 (compress) the file(s) and send the ZIP (filename.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 an 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 primarily using the Python programming language. Course topics, depending on time, will aim to 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.

Tentative Lectures Topics

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

Key Sessional Dates

Classes begin: Jan 9, 2023
Spring Reading Week: Feb 18 – Feb 26, 2023 (no classes)
Classes end: April 8, 2023
Final Exam period: April 2023

Delivery Mode

This course is entirely delivered online. You will not be required to physically attend the campus in this section of the course.

Tentative Lab Schedule

Lab #	Week
Lab 1	Jan 24-26
Lab 2	Jan 31 - Feb 2nd
Lab 3	Feb 7-9
Lab 4	Feb 14-16
Reading Week (No Labs)	
Lab 5	Feb 28 – Mar 2
Lab 6	Mar 7-9
Lab 7	Mar 14-16
Lab 8	Mar 21-23
Lab 9	Mar 28-30
Lab 10	Apr 4-6

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, as well as Microsoft Teams. All course material will be posted to OWL. The CS 1026B course site on OWL is labelled as "**COMPSCI 1026B 650 FW22**". Note that this is <u>different</u> than the OWL site for the in-person sections.

Lecture notes, assignments and class information will be posted at this site. You are responsible for checking the course site regularly.

The course will also use Microsoft Teams for some components of the course. Please be sure to install MS Teams on your computer (do not rely on the web version).

If you 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.

Technical Requirements:
- Internet connection reliable for synchronous components of the course.
- Ability to connect to lab resources and to run required software
- Stable internet connection: computer that can run Python 9.X or higher and **any of** the following editors:
  - *VScode: https://code.visualstudio.com/download*
  - *Spyder: https://www.spyder-ide.org/*
  - *CoLAB: https://colab.research.google.com/*
  - *PyCharm: https://www.jetbrains.com/pycharm-edu/*

Required Textbooks:
Since this course is online, there is a required online textbook (ZyBooks) purchase, which includes interactive diagrams, examples, and quiz questions along with written text. 4% of your overall course grade will come from the completion of the activities in the ZyBooks.

Note that if you took this course previously and subscribed to the ZyBooks at that time, it may be possible that you do not have to pay again! You have to email support@zybooks.com and let them know that you previously paid and wish to subscribe to the new textbook.

Follow these steps to subscribe to the *ZyBook* now:

1. Sign in or create an account at https://learn.zybooks.com/
    - Please use your UWO email address to ensure your mark is recorded.
2. Enter *zyBook* code
3. Subscribe

Instructor	section	ZyBook code
Prof. Luke Russell	650	**UWOCOMPSCI1026ABOnlineRussellWinter2023**

Course Information

Emergencies and Extenuating Circumstances

COVID-19 has created many challenges for everyone. If you have an emergency or extenuating circumstance and are unable to complete a requirement, please discuss the situation with the instructor.

Helping peers on MS Teams:

Computer scientists often work in teams throughout our careers, and this work is more and more asynchronous in nature. To facilitate this, please ask technical questions in the MS Teams "Technical help-Questions" channel on MS Teams.

Please help your peers by replying to this channel and helping your peers. Actively helping peers is accounted in the contribution category of your grade, and may also be used to "round up" your final grade.

Class Conduct

- It is expected that students behave in a professional manner, and unacceptable or unsafe conduct will not be tolerated. Out of respect for all course participants, please refrain from recording videos or audio, using SnapChat, Instagram Stories, E-mail, WhatsApp etc, or in any other medium. Even if it is to share every exciting moment of the class :)

Course Recordings:

- Portions of this class may be recorded by the instructor for educational purposes. These recordings may be shared with students enrolled in the course, if applicable. Students are not to initiate course recordings without prior permission.

Unauthorized Recordings/Distribution:

- Unauthorized student recording of classroom or other academic activities (including advising sessions or office hours) is prohibited. Unauthorized recording is unethical and may also be a violation of University policy. Students requesting the use of assistive technology as an accommodation should contact the Accessibility Centre. Unauthorized use of classroom recordings – including distributing or posting them – is also prohibited.
- Under the University's Copyright Policy, instructors own the copyright to instructional materials – including those resources created specifically for the purposes of instruction, such as lectures slides, lecture notes, and presentations.
- Students cannot copy, reproduce, display, or distribute these materials or otherwise circulate these materials without the instructor's written permission.
- Students who engage in unauthorized recording, unauthorized use of a recording, or unauthorized distribution of instructional materials will be reported to the appropriate University office.

Help/TAs:

Questions regarding assignments or lecture materials can be directed to a peer, or Teaching Assistant (TA) through the "Technical Help-Questions". Questions requiring further information can be dealt with by contacting the course instructor. Peers may help you faster than the TA or instructor can get to it!

A list of teaching assistants and their contact information will be posted to OWL once available.

Time zone and Scheduling of Course Components:

All times listed in this document, Microsoft Teams, and on the OWL course site are assumed to be in Eastern Time (the local time of the Western University campus) unless otherwise stated. Lectures, quizzes, meetings, and exams will be scheduled for the Eastern Time Zone.

Students must ensure they are available during these times even if they are located outside of Ontario. No alterative deadlines, quiz dates/times, or exam dates/times will be offered for students outside of the Eastern Time Zone.

5. Methods of Evaluation

The overall course grade will be calculated as listed below. Description provided for interest. Final details will be posted to course Owl page.

Element	Weight	Notes
Assignments (4)	30%	4%, 7%, 9%, and 10%

Class contribution	7%	4%: Zybook Activities
		3%: Other Activities
		   1) an introduction post on MS Teams
		   2) quiz review video
		   3) a final exam review video

Labs (10)	8%	1% each; lowest 2 are dropped
Quizzes (3)	20%	Online
Final Exam	35%	Online

If for any reason the assignment, lab, or exercise schedule or frequency cannot be adhered to, the marks will be prorated, or if necessary, added to the final exam.

Assignments

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

All assignments are due via *Gradescope* at 11:55 PM EST on the due date unless stated otherwise. If an assignment must be cancelled by the instructors for any reason, the remaining assignments will be re-weighted to add up to 30%.

Late Policy on Assignments

 If you submit an assignment late, there will be a late penalty of 10% per day. If you have a valid reason for a late submission, please contact your academic counsellor.

Assignments can be submitted up to 3 days late. Assignments will not be accepted more than 3 days after the due date and will be graded as 0.

Re-submissions are allowed and the latest submission is considered the final submission. Note that re-submissions after the deadline will be considered late, regardless of when the initial submission was made.

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 (if the tests pass on your local machine but not on *Gradescope*, you will not get those marks).

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	February 8
Assignment 2	March 8
Assignment 3	March 22
Assignment 4	April 5

Labs

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

- There are 10 weekly labs which should each take 1 hour or less to complete.
- The labs begin Week 2 (week of January 24-26)
- **In the online section, labs are completed as homework exercises.** However, you are strongly encouraged to attend at least 1 TA lab/office hour per week to discuss the labs, assignments, and get help.
- 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 submit your lab on OWL during the lab completion time.
- 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.
- Labs that are missed without accommodations will be given a grade of 0 and will not be re-weighted. Only two are dropped so absences after that will be considered a 0 toward your grade.
- It is your responsibility to ensure your lab is submitted properly. If you're not sure, please ask a TA in their office hour.

Quizzes

- Each quiz will occur during a 24h 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 in which the quiz will take place will be announced):

Quiz # 1	Week 3 (January 23rd-27th)
Quiz # 2	Week 6 (February 13th-17th)
Quiz # 3	Week 10 (March 13th-17th)

Final Exam

The final exam will be scheduled by the University. The exam period is from April 13-30, 2023, and the exact date, time, and location for our exam will likely be announced in March. The final exam is cumulative and will be 2.5 hours in length. The final exam will be online.

Grade Requirements

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

- at least 50% on the course exam component (the final exam and the quizzes);
- at least 50% weighted average on the remaining coursework.

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 55% on the course exam component (the final exam and the quizzes);
- at least 66% weighted average on the remaining coursework.

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.

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

You can miss up to 2 labs without any penalty since we drop the lowest 2 labs. If you miss several 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.

For assignments, if you required additional time with assignments 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.

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

For work totalling 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.

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 can 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 midterm or 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 sections of 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.

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.

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 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/.

Good Luck!