

# COURSE OUTLINE FOR CS1026A (ONLINE)

## Fall 2021

### 1. Course Information

*Computer Science CS1026: Computer Science Fundamentals I* provides an introduction to 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.***

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.

### 2. Prerequisites

There are no prerequisites to CS1026. However, programming experience may be an asset.

### 3. Instructors

Section	Instructor	Email	Phone	Office Hours
650	M.A. Bauer	<a href="mailto:bauer@uwo.ca">bauer@uwo.ca</a>	519 661 3562	TBA

### 4. Lecture Sections

There are no associated lectures with this course. Weekly instructor demonstration/question-answer sessions through Zoom are scheduled for the following days and times:

- Wednesdays 10:30am-11:30am.
- Thursdays 12:30pm-1:30pm.

Zoom links will be posted by September 14<sup>th</sup>.

## 5. Tutorials and Labs

### Tutorials

The purpose of the weekly tutorials is to give students opportunities to work in smaller groups with a Teaching Assistant, ask questions, review material, see programming examples, etc. For each tutorial, there is a small set of exercises that should be done by the student **before** the tutorial. These exercises and other examples will be covered in the tutorials. The tutorial material will be available on the CS1026 course website in advance.

Key notes about CS1026 Tutorials for the fall of 2021-22:

- **Tutorials begin the week of September 20, 2021.**
- There are 10 tutorial sessions.
- Monday October 11<sup>th</sup> is Thanksgiving.
- **There are NO tutorials the week of November 1<sup>st</sup>-7<sup>th</sup>**; that week has been designated as Fall Reading Week.

Attendance at tutorials is not mandatory.

For lab/tutorial times, see the online timetable at Student Services:

<https://studentservices.uwo.ca/secure/Timetables/mastertt/ttindex.cfm> .

### Labs

There are Labs in the Zybooks interactive course (see *Textbooks*); there are a number of Labs associated with most chapters in the Zybooks course. Students are expected to do the Zybook labs. The Zybook labs will count for 8% of the final mark; students need to earn a score an average of 80% over the Zybook labs to earn the 8%. Students completing less than 80% will see the mark adjusted proportionately (see Student Evaluation).

## 6. Important Dates

- Classes begin Wednesday September 8<sup>th</sup>, 2021
- Thanksgiving holiday is on Monday October 11<sup>th</sup>, 2021
- Fall reading week is from November 1<sup>st</sup> to November 7<sup>th</sup>, 2021
- Classes end Wednesday December 8<sup>th</sup>, 2021

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<https://studentservices.uwo.ca/secure/Timetables/mastertt/ttindex.cfm>

## 7. Textbooks

### Zybooks Interactive Online Course: **Required**

CS1026 makes use of an online, interactive Python textbook developed by zyBooks

(<https://www.zybooks.com/>). ***Each student will be required to purchase the zyBook.*** The cost of the course is \$77USD. You will need to create a zyBooks account; you **must use** your UWO email. The instructions are as follows:

1. Sign in or create an account at <https://learn.zybooks.com/>
2. Enter zyBook code: UWOCOMPSCI1026ABOnlineBauerFall2021
3. Subscribe

**Important:** Make sure that the zyBook that you subscribe to is for the Online version of CS1026:

### **COMPSCI 1026A/B: Computer Science Fundamentals I (Online) Fall 2021**

#### **Recommended Textbook**

For those that prefer a traditional textbook (either hard copy or digital), the textbook used for this course is available for purchase from the University Bookstore on campus. The textbook is: Python for Everyone, (2nd Edition) by Cay S. Horstmann and Rance D. Nicaise, Wiley, 2016.

There are two versions available:

- Paperback: ISBN: 978-1-119-05655-3

- e-Text: ISBN: 978-1-118-73522-0

The first edition of this textbook can also be used.

## 8. Lecture Notes

Lecture notes without annotations will be made available in PDF format on the course website. In addition, annotated course lecture notes are available through the OWL course website. These can be found under the Lessons tab. Lecture notes are organized into Chapters and into subsections. Each button in the Lessons tab is a link to a YouTube video of slides with annotation; this is a private YouTube channel, but the videos are accessible through the links in the Lessons tab. These videos are also available for download from the UWO OneDrive at: **CS1026\_Annotated\_Lectures**. The lecture notes (both annotated and non-annotated) do follow the text **Python for Everyone**.

To access your OneDrive log into your Western Office 365: [myoffice.uwo.ca](https://myoffice.uwo.ca) (to get more information on Office 365 at Western see [https://wts.uwo.ca/office\\_365/](https://wts.uwo.ca/office_365/) ).

## 9. Programming Tools

The course makes use of the Python programming language (<https://www.python.org/>). We will be using **Python 3.9** and versions for Windows and Macs can be found at: <https://www.python.org/downloads/>. **To avoid some installation problems, download Python first.**

When you download and install Python, you will get a simple editor/development environment called IDLE; you may use this for editing and creating your Python programs. We will also make use of **PyCharm** – a richer development environment. We will make use of **PyCharm Educational Version 2021.1.3** which can be downloaded from: <https://www.jetbrains.com/pycharm-edu/>.

## 10. Course Website

- The CS1026a website is accessible through OWL: <https://owl.uwo.ca/portal>. Announcements, assignments, labs, lecture notes, and other course-related information will be posted on this website. ***It is the responsibility of the student to check this website often.***
- Additional course material including tutorial exercises, examples, etc. will also be available on the course website (OWL) on a regular basis.

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.

## 11. TA Consulting

Teaching Assistants and their consulting hours for CS1026 will be posted on the course website and announced during the second or third week of the term once the information is available to the instructors.

## 12. E-Mail Contact

- ***In accordance with UWO policy, 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.
- We may need to send email messages to the whole class or to students individually. **Email will be sent to the UWO email address assigned to students by Western Technology Services (WTS) (user\_name@uwo.ca). It is the responsibility of the student to read this email on a regular basis.** You may wish to have mail forwarded to an alternative email address. See the WTS website for instructions on forwarding email.
- Note that UWO and most other email providers establish quotas or limits on the amount of space available to you. If you let your email accumulate there, your mailbox may fill up and you may lose important email from your instructors. Losing email is not an acceptable excuse for not knowing about the information that was sent.
- Students are encouraged to contact their course instructor via email with brief, appropriate questions regarding lecture materials or clarification of assignments. However, before sending email to an instructor, the student should check the course website to see if the requested information is already there. Students must send email from their UWO ITS account and include CS1026 in the subject line of the email.

## 13. Methods of Evaluation

### Assignment Submission

- Instructions for the submission of assignments will be posted on the course website or as part of each assignment description. It is each student's responsibility to read and follow the instructions. Failure to follow the submission instructions may result in the assignment losing marks or receiving a mark of zero.

- You will be required to submit each programming assignment electronically through OWL. Details will be given in the assignment descriptions. We reserve the right to use similarity detection software to detect possible cheating cases.
- It is each student's responsibility to keep up-to-date backups of assignment disk files in case of system crashes or inadvertently erased files.

## Assignment Due Dates

- The date and exact time assignments are due will be given in the assignment specifications.
- The late penalty for assignments is 10% per day late, for a maximum of 2 days, after which assignments will not be marked. Each day of a weekend counts as one day of lateness.
- No extensions will be given for assignments; however, if a student has serious medical or compassionate grounds, they should take supporting documentation to the Office of the Dean of their faculty and their instructor will be contacted.
- **Students using Self-Reported Absences for an assignment will have up to one week to submit the assignment, after which the assignment will not be marked.** See **Using Self-Reported Absences**.

## Assignment Marking

- Assignments are marked in two steps:
  1. Assignments are tested by automated testing software and the software provides a score. It is imperative that when submitting assignments that students adhere to the requirements for naming files and components of programs. Failure to do so will cause the automated testing software to assign 0; such assignments will be marked by the Teaching Assistants, and the assignments will be penalized by 10%-20%.
  2. Assignments are reviewed by the Teaching Assistants who evaluate the program design, structure, use of required programming constructs, and adherence to good programming practices and assign marks for good programming practices and adherence to assignment requirements.
  3. Assignments may be compared for similarity to one another using software such as MOSS.
- A request for adjustment in an assignment mark must be made within 2 weeks of the date on which it was first available after marking; beyond that date, regrading will not be considered. Such a request must be submitted to the course instructor in writing or via email and must include specific reasons why you believe you deserve more marks. The request must be accompanied by all materials that were originally handed in, as well as the original marker's grade summary sheet. The instructor will inform you by email when the reevaluation process is complete.

- It is each student's responsibility to keep up-to-date backups of assignment disk files in case of system crashes or inadvertently erased files. Students must keep disk copies of all material submitted, as well as the actual graded assignment, to guard against the possibility of errors in recording marks. It is not safe to discard these materials until you are satisfied that your final mark for the course has been computed properly.

## Exams and Tests

- **There is a midterm exam and a final exam; both will be given online via OWL.** There is a midterm exam and a final exam. Both exams are closed book. No reference materials, calculators or other electronic devices are allowed.
- There will be no makeup midterm exam, except for students requesting a special midterm exam for University recognized 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 there are other serious medical or compassionate grounds for missing the midterm exam, please take supporting documentation to the office of the Dean of your faculty, who will contact the instructor. In such cases, the weight of your midterm exam will be shifted to the final exam, which would then be worth 55% of your final overall grade.
- The final exam is scheduled by the Office of the Registrar during the final exam period. Students are advised not to make travel plans until they have consulted the final exam schedule.
- Computer-marked multiple-choice exams may be screened for similarity by software that checks for unusual coincidences in answer patterns that may indicate cheating.

## Zybook Labs

- **Students are expected to do the labs in each Zybook chapter (Labs in Chapters designated as "Optional" are not required).** Doing the labs on a regular basis provides useful practice and feedback to the student. Students receive 8% of their mark for achieving an overall average of at least 80% over all the Zybooks labs.
- Each lab usually contains a small number of exercises which should be completed. These exercises usually require the student to complete some code or to create code to do the exercise. Zybooks runs test cases to evaluate the code and scores it between 0 and 100 based on test cases. There are no limits to the number of times a lab can be tried.
- At the end of the course, the scores for the labs are totaled and the overall average is determined. If that average is 80% or greater then the full 8% of the marks are allocated. Otherwise, a portion of the marks is determined based on the average attained, .e.g. if the overall average is 40% then 4% will be allocated to the final mark.

- Labs must be completed by the end of the day of the last day of classes (December 8<sup>th</sup>, 2021), though it is most beneficial to complete labs ongoing through the course. Lab marks may be computed December 9<sup>th</sup>, 2021. Since labs should be completed ongoing throughout the term, no extensions for completion of the labs will be allowed.

## Student Evaluation

Assessments in CS1026 consist of assignments, Lab exercises, a midterm and a final exam. Weights and due dates (tentative dates) are as follows:

Element	Weight	Due
Zybook Lab Exercises	8%	Labs must be completed by the last day of classes.
Assignment 1	5%	October 6 <sup>th</sup> 9:00pm
Assignment 2	8%	October 20 <sup>th</sup> 9:00pm
Assignment 3	12%	November 17 <sup>th</sup> 9:00pm
Assignment 4	12%	December 6 <sup>th</sup> 9:00pm
Mid-Term Exam	20%	October 24 <sup>th</sup> , 2:00-4:00pm
Final Exam	35%	TBD

If for any reason the assignment schedule given cannot be adhered to, the assignment marks will be prorated. (The assignments are worth 37% of the overall mark for the course. If an assignment has to be cancelled for any reason, the remaining assignment weights will be prorated to add up to 37%.)

## 14. Performance Requirements

- **To be eligible to receive a passing grade in the course, your mark on the final exam must be at least 40%, and your weighted average on the assignments must be at least 40%. Otherwise, the maximum overall mark you can receive is 45%.**
- **To be eligible to receive a grade of 60% or higher, your mark on the final exam must be at least 50%, and your weighted average on the assignments must be at least 50%. Otherwise, the maximum overall mark you can receive is 58%.**



# 15. Self-Reported Absences

## How it Works

Students using self-reported absences should adhere to the University policies around Self-Reported Absences. For CS1026, self-reported absences are handled as follows:

### Self-reported absence for an assignment:

- For **Assignments 1-3**, the student may use an SRA to request an extended late period in which to submit the assignment after the due date; this extended late period is one week after the assigned due date. The assignment would be marked as usual, but without a late penalty.
- For **Assignment 4**, the extend late period is 2 days; the assignment is due December 6<sup>th</sup>, 2021 and December 8<sup>th</sup>, 2021 is the last day of class.
- The extended late period is to allow the student to complete the assignment or a substantial part of the assignment. *The student should endeavor to submit something by the end of the extended late period, even if the assignment is incomplete. Not submitting anything will result in a mark of 0 for the assignment.*

### Self-reported absence for the midterm:

- The marks will be allocated to the final exam

### Self-reported absence for tutorials:

- Tutorials are not mandatory. Consequently, SRAs do not apply to tutorials.

### Self-reported absence for Zybooks labs:

- Labs are done online at the student's convenience and are expected to be done during the term. Consequently, SRAs do not apply to labs.

## Using the Self-Reported Absence Form

Students who experience an unexpected illness or injury or an extenuating circumstance (48 hours or less) that is sufficiently severe to temporarily render them unable to meet academic requirements (e.g., attending lectures or labs, writing tests or midterm exams, completing and submitting assignments, participating in presentations) should self-declare **using the online Self-Reported Absence portal**. This option should be used in situations where the student expects to resume academic responsibilities within 48 hours or less. The following conditions are in place for self-reporting of medical or extenuating circumstances:

- **Students will be allowed a maximum of two self-reported absences between September and April** and one self-reported absence between May and August
- Any absences in excess of the number designated in clause a above, regardless of duration, will require students to present a Student Medical Certificate (SMC), signed by a licensed medical or mental health practitioner, detailing the duration and severity of illness, or appropriate documentation supporting extenuating circumstances to the Academic Counselling unit in their Faculty of registration no later than two business days after the date specified for resuming responsibilities. Please see section 4 below for more details
- The duration of the excused absence will be for a maximum of 48 hours from the time the Self-Reported Absence form is completed through the online portal, or from 8:30 am the following morning if the form is submitted after 4:30 pm
- The duration of the excused absence will terminate prior to the end of the 48-hour period should the student undertake significant academic responsibilities (write a test, submit a paper) during that time
- The duration of an excused absence will terminate at 8:30 am on the day following the last day of classes each semester regardless of how many days of absence have elapsed
- Self-reported absences will not be allowed for scheduled final examinations; for midterm examinations scheduled during the December examination period; or for final lab examinations scheduled during the final week of term
- Self-reporting may not be used for assessments (e.g. midterm exams, tests, reports, presentations, or essays) worth more than 30% of any given course. Students must be in touch with their instructors no later than 24 hours after the end of the period covered by the Self-Reported Absence form, to clarify how they will be expected to fulfil the academic expectations they may have missed during the absence

## **16. Accommodation and Accessibility**

Students with disabilities work with Accessible Education (formerly SSD) which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The Academic Accommodation for Students with Disabilities policy can be found at: [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)

### **Academic Consideration for Student Absence**

#### **Academic Consideration for Student Absences**

Students who experience an extenuating circumstance (illness, injury or other extenuating circumstance) sufficiently significant to temporarily render them unable to meet academic requirements may submit a request for academic consideration through the following routes:

- (i) Submitting a Self-Reported Absence (SRA) form provided that the conditions for submission are met. To be eligible for a Self-Reported Absence:
  - an absence must be no more than 48 hours
  - the assessments must be worth no more than 30% of the student's final grade
  - no more than two SRAs may be submitted during the Fall/Winter term
- (ii) For medical absences, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner to the Academic Counselling office of their Faculty of Registration.
- (iii) Submitting appropriate documentation for non-medical absences to the Academic Counselling office in their Faculty of Registration.

Note that in all cases, students are required to contact their instructors within 24 hours of the end of the period covered, unless otherwise instructed in the course outline.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. **All documentation required for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.**

For policy on Academic Consideration for Student Absences - Undergraduate Students in First Entry Programs, see:

[www.uwo.ca/sci/counselling/procedures/academic\\_consideration\\_for\\_absences/index.html](http://www.uwo.ca/sci/counselling/procedures/academic_consideration_for_absences/index.html)

For the Student Medical Certificate (SMC), see:

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

### **Religious Accommodations**

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>

### **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) (see [https://www.registrar.uwo.ca/examinations/exam\\_schedule.html](https://www.registrar.uwo.ca/examinations/exam_schedule.html)).

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).

## 17. Academic Policies

### Registrar’s Services

The website for the Registrar’s Services is <http://www.registrar.uwo.ca>.

### Policies on Ethical Conduct

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:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf)

- Students must write their assignments (or essays) 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 the Scholastic Offence Policy in the Western Academic Calendar)
- Your assignments must be your own individual work, not the products of group effort. You may discuss approaches to problems with other students, but the work you submit (programming code, answers to concept questions, etc.) must be an individual effort
- With each assignment, you are required to confirm that you did the material you have submitted is exclusively your own work and that you understand the course policies concerning plagiarism and individual effort. You are responsible for reading and respecting the departmental policies on Scholastic Offences and Rules of Ethical Conduct. The University of Western Ontario uses software for plagiarism checking
- The standard departmental policy for assignments that are judged to be the product of academic dishonesty is, for the student's first offence, a mark of zero for the assignment, with an additional penalty equal to the weight of the assignment also being applied to the overall grade

- The role of tutoring is to help students understand course material. Tutors should not write assignments or take-home tests for the students who hire them. Submitting an assignment that contains material written by a tutor is an academic offence. 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

## 18. Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on add/drop courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: <https://www.uwo.ca/sci/counselling/>.

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 (519) 661-2147 if you have any questions regarding accommodations.

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/>.

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 at 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/your-services/>.

This course is supported by the Science Student Donation Fund. If you are a BSc or BMSc student registered in the Faculty of Science or Schulich School of Medicine and Dentistry, you pay the Science Student Donation Fee. This fee contributes to the Science Student Donation Fund, which is administered by the Science Students' Council (SSC). One or more grants from the Fund have allowed for the purchase of equipment integral to teaching this course. You may opt out of the Fee by the end of September of each academic year by completing the online form linked from the Faculty of Science's Academic Counselling site. For further information on the process of awarding grants from the Fund or how these grants have benefitted undergraduate education in this course, consult the chair of the department or email the Science Students' Council at [ssc@uwo.ca](mailto:ssc@uwo.ca).