

**Western University
Faculty of Science
Department of Computer Science**

**CS1026A – Computer Science Fundamentals
Course Outline – Summer 2021**

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Course Description

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.

Prerequisites

There are no prerequisites for CS1026; however, programming experience may be an asset.

Instructor

Instructor	Email	Office Hours
Duff Jones	djone5<at>uwo.ca	TBD

Lecture and Lab Sections

Lectures

Because of the unique circumstances caused by the pandemic, **CS1026 will be fully online for the Summer 2021 academic term.** Course materials include zyBooks, which students must enroll in, lecture slides with commentary, along with programming examples and other material available on the OWL site. These are described in more detail in the Course Materials section on OWL.

There are no in-person lecture sections for CS1026. The course, however, is listed as a Summer Evening course, so there are still existing lecture times. **These lecture times will be used by the instructor to review material, provide examples and answer questions; these will be held via Zoom.** The allotted time may not always be used. A link to the Zoom meetings can be found in the Zoom section on OWL. The lecture times are as follows:

Day	Location	Time
Tuesday	Online (Zoom)	7:00pm – 8:45pm
Thursday	Online (Zoom)	7:00pm – 8:45pm

Labs and Tutorials

Every student should also be registered in one of the CS1026 Lab sections. Because of social distancing, there are no hands-on labs. **Lab times will be used as group tutorials done via Zoom and run by the course Teaching Assistants (TAs).** The accelerated nature of a summer course means that students will be assigned to two lab/tutorial sections per week.

There are labs in the zyBooks interactive course; there are a number of labs associated with most chapters in the zyBooks course. Students are expected to do the zyBooks labs. The zyBooks labs will count for 8% of the final mark; students need to complete 80% of the zyBooks labs to earn the 8%. Students completing less than 80% will see the mark adjusted proportionately (see Student Evaluation).

The purpose of the tutorials is to give students opportunities to work in smaller groups with a TA, 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.

The tutorials are tentatively scheduled for the following times, and **they will begin on Thursday, May 6:**

Lab Section	Day	Location	Time
002	Tuesday	Online (Zoom)	6:00pm – 6:50pm
	Thursday		
003	Tuesday	Online (Zoom)	9:00pm – 9:50pm
	Thursday		

Zoom tutorials are not mandatory; however, students will find that the opportunities for seeing examples and asking questions make the course material much easier to understand, so students are encouraged to attend.

Course Materials

Required: zyBooks Interactive Online Course

CS1026 is delivered through an online, interactive Python course developed by zyBooks (<https://www.zybooks.com/>); each student will be required to purchase the zyBook, as the course is done via the interactive course. 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 learn.zybooks.com
2. Enter zyBook code: [UWOCOMPSCI1026AJonesSpring2021](#)

3. Subscribe

Recommended Textbook

For those that prefer a traditional textbook, the textbook used for this course is available for purchase from the University Bookstore on campus. The textbook is: *Python for Everyone*, (3rd Edition) by Cay S. Horstmann and Rance D. Necaise, Wiley, E-Text (ISBN: 9781119498537). It is available in electronic format.

Lecture Notes

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 with subsections. Each link in the Lessons tab is a link to a YouTube video of annotated slides; this is a private YouTube channel, but the videos are accessible through the links in the Lessons tab.

Lecture notes without annotations will be made available in PDF format on OWL in [Resources > Lecture Slides](#).

The lecture notes follow the text *Python for Everyone* and also follow the zyBook chapters.

Programming Tools

The course makes use of the Python programming language (<https://www.python.org/>). **We will be using Python 3.9.** Versions for Windows, macOS and Linux can be found at: <https://www.python.org/downloads/>. Please 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 (PyCharm Edu)** which can be downloaded from: <https://www.jetbrains.com/pycharm-edu/>. Please make sure that you download **PyCharm Edu**.

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.

Other Course Material

Additional course material including laboratory exercises, examples, etc. will also be available on OWL on a regular basis.

Summary of Required Course Materials and Resources

Resource	Description
zyBooks Interactive Python Course	The zyBooks course is an online interactive course that covers Python. It also provides question-answers and programming exercises. The material in the course parallels the material covered in the in-class lectures and includes programming exercises (labs). https://learn.zybooks.com/
Zoom	Zoom is available to UWO students at no cost and is used for synchronous question and answer sessions and the tutorials. This provides an interactive session for asking questions and seeing programming demonstrations. You can get Zoom through Western Technology Services. https://wts.uwo.ca/zoom/index.html
Python 3.9	Python 3.9 can be downloaded and provides the version of Python that is used for the course. https://www.python.org/downloads/
PyCharm Edu 2021.1	PyCharm is the Interactive Development Environment that is used within the course for developing Python programs. https://www.jetbrains.com/pycharm-edu/

TA Consulting Schedule

In addition to the lab/tutorial sessions, each TA will have consulting hours to help out with questions that may arise regarding course material or assignments. This consulting will take place via Zoom, and the hours will begin during the second week of the summer semester.

Email Contact

In accordance with policy, https://wts.uwo.ca/identity/identities_and_access/index.html the centrally administered email 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 email received from the University at the holder's 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 https://wts.uwo.ca/office_365/email/email.html 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, email 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.

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 (0).

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.

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 can choose to have an assignment submitted late (up to two days) without penalty. See [Using Self-Reported Absences](#) for more information.

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. Marks are assigned for good programming practices and adherence to assignment requirements.

A [request for adjustment](#) in an assignment mark must be made within one week 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 it 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. Prior to requesting a mark adjustment, the student should speak to the TA regarding the assignment to ensure that they have correctly understood the TA's comments. The instructor will inform you by email when the re-evaluation 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 of which will be given online via OWL and **may make use of the remote proctoring service, Proctortrack, or Zoom proctoring**. Note that [Proctortrack](#) takes screen captures as well as video captures.

The midterm exam and final exam are closed-book exams. 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 will be scheduled during the final week of class or on that weekend. Students are advised not to make travel plans that conflict with the final exam.

Computer-marked multiple-choice exams may be screened for similarity by software that checks for unusual coincidences in answer patterns that may indicate cheating.

Student Evaluation

Assessments in CS1026 consist of assignments, lab exercises (from zyBooks), a midterm and a final exam. Weights and due dates (**all dates are currently tentative dates**) are as follows:

Assessment	Weight	Due Date
Lab Exercises	8%	Done in zyBooks. 80% must be completed to get the full 8%. Less than 80% completion will see the mark adjusted.
Assignment #1	9%	Date: Monday, May 17 Time: 11:55pm Submit via OWL
Assignment #2	12%	Date: Friday, May 28 Time: 11:55pm Submit via OWL
Assignment #3	16%	Date: Wednesday, June 9 Time: 11:55pm Submit via OWL

Midterm Exam	20%	Date: Tuesday, May 25 Time: 7:00pm – 9:00pm Location: OWL
Final Exam	35%	Date: Thursday, June 10 Time: 7:00pm – 10:00pm Location: OWL

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%.)

Performance Requirements (IMPORTANT)

IMPORTANT NOTE - Please be aware of the following performance constraints:

1. 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%.
2. 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%.

Using 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:
 - The student may choose to submit the assignment after the due date, but only up to the two-day maximum. (i.e., The assignment must still be submitted within two days of the original due date. The student **cannot** submit the assignment four days late, taking two days for the self-reported absence and two late days.) The assignment would be marked as usual, but without a late penalty.
- Self-reported absence for the midterm:
 - The marks will be allocated to the final exam.
- Self-reported absence for lab exercises in zyBooks:

- Not applicable. The lab exercises in zyBooks are done during the student's own availability.

Accommodation & Accessibility

Accommodation Policies

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

Academic Consideration for Student Absence

Students are allowed a maximum of one self-reported absence between May and August, excluding final exams. Students have access to an on-line portal to self-report an absence during the semester, provided the following conditions are met: the absence is no more than 48 hours in duration, and the assessment for which consideration is being sought is worth 31% or less of the student's final grade. Students are expected to contact their instructors within 24 hours of the end of the period of the self-reported absence, unless noted on the syllabus. Students are not able to use the self-reporting option in the following circumstances:

- for exams scheduled by the Office of the Registrar (e.g., December and April exams)
- absence of a duration greater than 48 hours,
- assessments worth more than 31% of the student's final grade,
- if a student has already used the self-reporting portal during the summer.

If the conditions for a Self-Reported Absence are *not* met, students will need to provide a Student Medical Certificate, if the absence is medical, or provide appropriate documentation if there are compassionate grounds for the absence in question. Students are encouraged to contact their Faculty academic counselling office to obtain more information about the relevant documentation.

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: https://uwo.ca/sci/counselling/procedures/academic_consideration_for_absences/index.htm

and for the Student Medical Certificate (SMC),
see: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf

Religious Accommodation

Students should consult the University's list of recognized religious holidays, and should give reasonable notice in writing, prior to the holiday, to the Instructor and an Academic Counsellor if their course requirements will be affected by a religious observance. More information can be found here:

https://uwo.ca/sci/counselling/procedures/academic_consideration_for_absences/religious.html

Academic Policies

Registrar's Services

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

In accordance with policy,

https://wts.uwo.ca/identity/identities_and_access/index.html, the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

Course, Department, University 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 in the Department of Computer Science can be found here:

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

- Plagiarism: 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 (linked above). 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.