CS1026b - Computer Science Fundamentals I

Course Outline – Winter 2018

Course Description

This course 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.

Course Prerequisites

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

Course Instructors

Instructor	Phone	Email	Office Hours
Charles Ling	661-3341	charles.ling@uwo.ca	(TBD; see course web page)

Course Schedule

Lectures

Lectures begin the week of January 9, 2018.

Room	Time
WSC-55	Tuesday 9:30am - 10:30am
WSC-55	Thursday 9:30am - 11:30am

For location and room information, please see below link

https://wts.uwo.ca/ctg/classrooms/western_science_centre/wsc_55.html

Labs

Room	time	

MC-235	Monday 12:30pm - 2:30pm	
MC-235	Monday 2:30pm - 4:30pm	
MC-235	Tuesday 11:30am - 1:30pm	
MC-235	Wednesday 10:30am - 12:30pm	
MC-235	Thursday 3:30pm - 5:30pm	
MC-235	Friday 10:30am - 12:30pm	
MC-235	Friday 12:30pm - 2:30pm	

Please note:

NO Lectures or labs during Spring Reading Week:
Monday, February 19 - Friday, February 23, 2018

For lecture and lab times, see the online timetable at
http://studentservices.uwo.ca/secure/timetables/mastertt/ttindex.cfm

For other information about programs, courses, etc., see the Registrar's web site:
http://www.registrar.uwo.ca

Course Materials

Textbooks

Recommended: 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. Necaise, Wiley, 2016.

There are two versions available:

o Paperback: ISBN : 978-1-119-05655-3 o e-Text: ISBN : 978-1-118-73522-0

The first edition of this textbook can also be used.

Lecture Notes

Course lecture notes will be made available in PDF format on the course website (OWL) on a regular basis. They are provided as a courtesy by the course instructor. Possessing (and even reading) these notes is not a suitable substitute for attending lectures. The notes do follow the text and do make use of examples in the text.

Programming Tools

The course makes use of the Python programming language (https://www.python.org/). We will be using Python 3.6 and versions for Windows and Macs 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 4 which can be downloaded from: https://www.jetbrains.com/pycharm-edu/. Please make sure that you download PyCharm:

• This version is also used to run all the labs in the course. More details on this will be covered in the initial labs.

• It also contains an interactive Python course that you may use at your own pace to review material.

Other Course Material Additional course material including laboratory exercises, examples, etc. will also be available on the course website (OWL) on a regular basis.

Course Website

The CS1026b 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.

TA Consulting Schedule

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 information is available to the instructors.

Computing Facilities

Each student enrolled in CS1026 will be given an account on the Computer Science Department First Year Network. By using your CS1026 account, you agree to abide by the Rules of Ethical Conduct established by the Department of Computer Science.

Labs

The purpose of the weekly labs is to give students guided, hands-on experience with Python programming. It is expected that students will come prepared to the labs by reading the lab instructions. Lab instructions will be available on the CS1026 course website in advance.

Labs begin the week of January 15, 2018.

• Labs are mandatory. Each completed lab is worth 1% of your final grade (to a maximum of 8%).

• There will be 11 labs; your lab mark will be based on your best 8 lab performances.

• You must attend the lab session for which you are registered.

• There are NO labs the week of February 19th; Monday is Family day and the rest of the week has been designated as Spring Reading Week.

• There are no make-up labs, and students who are absent for a lab do not have the option of attending

another lab; however, students who encounter serious health or other personal difficulties are encouraged to contact their Dean's office.

• Students must bring their UWO identification to all labs.

Assignments

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 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. Weekends count 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.

Assignment marking:

• Assignments are marked by the Teaching Assistants, who follow marking schemes provided by instructors.

• 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 revaluation 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

• There is a midterm exam and a final exam. Both exams are closed book. No reference materials, calculators or other electronic devices are allowed.

• Students must bring their UWO identification to the exams.

• 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 45% 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.

Student Evaluation (tentative dates)

Element	Weight	Due
Labs	8%	11 weekly labs throughout the term; Labs start week of January 15
Assignment 1	5%	February 7 (9pm)
Assignment 2	8%	February 28 (9pm)
Mid-Term	20%	2 hours Time: 9:30 - 11:30, Thursday, March 1 Location: TBD see announcement in OWL
Assignment 3	10%	March 21 (9pm)
Assignment 4	14%	April 11 (9pm)
Final	35%	3 hours; Time & Location: TBD see announcement in 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%.)

IMPORTANT NOTE: 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%.

Email Contact

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 Information Technology Services (ITS) (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 ITS 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, 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.

Academic Accommodation for Medical Illness or Distress

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to your Dean's office as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. In the event of a missed final exam, a "Recommendation of Special Examination" form must be obtained from the Dean's Office immediately. For further information please see: Policy on Accommodation for Illness www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf .

A student requiring academic accommodation due to illness should use the Student Medical Certificate when visiting an off-campus medical facility or request a Record's Release Form (located in the Dean's Office) for visits to Student Health Services. Policy on Accommodation for Illness www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf .

Students who are in emotional/mental distress should refer to Mental Health@Western http://www.uwo.ca/uwocom/mentalhealth/ for a complete list of options about how to obtain help.

Accessibility Statement Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may

also wish to contact Services for Students with Disabilities (SSD for any specific question regarding an accommodation. More information can also be found here: www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_disabilities.pdf .

Accommodation for Religious Holidays If you require accommodation for religious holidays, please consult the University's policy on accommodation for religious holidays: www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf .

Learning Skills

For assistance in study skills, examination preparation, etc., visit the Student Development Center (http://www.sdc.uwo.ca) as well as contacting the University Students' Council (http://westernusc.ca/services/).

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, at the following Web site: http://www.uwo.ca/univsec/handbook/appeals/scholoff.pdf.

• 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. 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.