ITEC 5010 W/B (0.5/1 credit)
Applied Programming I
Fall 2021

Instructor:	Sima Soltanpour
Office Hours:	By appointment
Lecture:	Tue/Thurs 8:35 AM- 9:55 AM
Tutorial/Lab:	Fri 11:35 AM- 2:25 PM
Email:	simasoltanpour@cunet.carleton.ca
TA:	TBA

Course Description:

Algorithm design and computer programming with practical industry problems in information technology. Topics include algorithms and pseudocode, programming fundamentals, memory operations, data structures, object-oriented programming, program design, testing and debugging.

Course Objectives/Learning Outcomes:

By the end of this class, successful students should be able to:

1. Recall the basic design of a modern computer and the interaction between hardware and software

2. Recall Python syntax

3. Understand basic programming concepts including variable types, loops, function, structures, classes, and objects

4. Apply basic programming concepts

5. Create solutions to complex programs using computer programming

Textbook/Equipment/Material:

Recommended Textbook - Python Programming: An Introduction to Computer Science, Third Edition by John Zelle (ISBN-10: 1590282752, ISBN-13: 978-1590282755)

Python version: 3.6.X

Grading Scheme:

Item	Due Date	%
Weekly Online Homework Quizzes	Every Wednesday at 11:55 PM	20
Weekly Lab Assignments	Every Friday during tutorial	40
Final Project	December 10, 2021	40
Total		100

Course Policies:

The quizzes will be administered online. Late quiz submissions will not be allowed unless a legitimate reason (as detailed in the Academic Accommodation section below) is presented 24 hours after the quiz deadline has passed. If a quiz is missed and a legitimate reason is presented, then the weight of the quiz will be transferred between the other quizzes.

Lab assignments and the course project are mandatory for this course. All assignments will be submitted online. If assignments are missed for a legitimate reason, an extension or alternative assignment will be provided. Students are encouraged to email the instructor ahead of time if they have concerns about completing assignments to ensure that reasonable accommodations can be made.

Course Schedule/List of Topics by Week:

Week	Due Date	Topics / Teaching Activities	Readings / Assignments
1		Course Outline Computers and Programs Writing Simple Programs	
2		Computing with Numbers	Quiz 1: Wednesday Sept 22
3		Object-Oriented Design and Graphics	Lab 1: Friday Sept 24 Quiz 2: Wednesday Sept 29
4		Sequences: Strings and Lists	Lab 2: Friday Oct 1 Quiz 3: Wednesday Oct 6
5		Files and Functions	Lab 3: Friday Oct 8 Quiz 4: Wednesday Oct 13
6		Decision Structures	Lab 4: Friday Oct 15 Quiz 5: Wednesday Oct 20
7		Fall Break (Oct 25-29)	
8		Booleans and Loop Structures	Lab 5: Friday Oct 22 Quiz 6: Wednesday Nov 3 **Final Project Proposal, Wednesday Nov 3**
9		Simulation and Design	Lab 6: Friday Nov 5 Quiz 7: Wednesday Nov 10
10		Defining Classes	Lab 7: Friday Nov 12 Quiz 8: Wednesday Nov 17
11		Data Collections	Lab 8: Friday Nov 19 Quiz 9: Wednesday Nov 24
12		Algorithms	Lab 9: Friday Nov 26
13		Machine Learning	Lab 10: Friday Dec 3
14		Additional Topics/Wrap-up	**Final Project, Friday Dec 10**

While every attempt will be made to keep to the schedule listed above, circumstances may necessitate modifications throughout the semester.

ACADEMIC ACCOMMODATION

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy obligation:

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website **carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf**.

Religious obligation:

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website **carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf**

Academic Accommodations for Students with Disabilities:

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. For more details, visit the Paul Menton website **carleton.ca/pmc**.

Survivors of Sexual Violence:

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and where survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit **carleton.ca/sexual-violence-support**.

Accommodation for Student Activities:

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit **https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf**

ACADEMIC INTEGRITY

The University Senate defines plagiarism in the regulations on instructional offenses as "to use and pass off as one's own idea or product work of another without expressly giving credit to another."

Borrowing someone else's answers, unauthorized possession of tests or answers to tests, or possession of material designed in answering exam questions, are also subject to university policy regarding instructional offences. Students who post their code online are making themselves a potential party to plagiarism and are subject to the consequences. For more information on Carleton University's Academic Integrity Policy, consult *https://carleton.ca/secretariat/wp-content/uploads/Academic-Integrity-Policy.pdf*

COURSE COPYRIGHT

Student or professor materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

IMPORTANT DATES TO REMEMBER – Academic Year 2021-2022

WITHDRAWALS
The last day to withdraw from fall term courses with a full fee adjustment is **September 30, 2021**. Withdrawals after this date will create no financial change to fall term fees and will result in a permanent notation of WDN appearing on your official transcript.

The last day to withdraw from fall term courses is **December 10, 2021**.

OFFICIAL FINAL EXAMINATION PERIOD
Winter term: **December 11 - 23, 2021 –** Examinations are normally held all seven days of the week.

For a complete listing of academic and financial dates and deadlines for the 2021/2022 academic year, please visit https://carleton.ca/registrar/registration/dates/academic-dates/.