Tentative Course Outline

Course Description:
A first course in programming emphasizing problem solving and computational thinking. Topics include pseudocode, variables, conditionals, iteration, arrays, objects, functions, sorting, searching, and simulation.

Instructor:
Farah Chanchary (email: farahchanchary@cunet.carleton.ca)

Course Information:
- Lecture Hours: Tuesdays and Thursdays: 2:35 – 3:55 pm. (online)
- Course Website: https://culearn.carleton.ca/moodle/course/view.php?id=154899
- Instructor’s Online Office Hours: Mondays 10-12pm or by appointment.
- TA’s Online Office Hours: TA's office hours and contact information are available on the course webpage.
- Discord and Student Forum: All questions pertaining to lectures, tutorials, general course material and exams will be answered on Discord. Students are also encouraged to use the Student Forum on the course webpage to ask any general course related questions.

Learning Modality:
This is a blended (online) course. Lectures will be a combination of live classes (held and recorded during the scheduled class times) and pre-recorded lectures. Recorded live classes will be posted to the course webpage within 24 hours. Pre-recorded lectures will be posted 24 hours before the scheduled class time, and class time will be spent working through examples, live coding, class discussions and Q&A. We will use Zoom for all live classes. Tutorials and Office hours will also be conducted online using Discord and BigBlueButton.

Learning Outcomes:
If a student attends every lecture and completes every assignment and tutorial, then by the end of this course that student should be able to:
- Use a programming language to write computer programs (in the imperative paradigm)
- Explain the differences between algorithm design and implementation
- Apply different problem-solving heuristics (e.g., divide-and-conquer, abstraction)
- Explain the following topics:
  - data types, variable assignment, propositional logic, Boolean values
  - branching, repeating, and nested control structures (i.e., "if", "for", "while")
  - one-dimensional and multi-dimensional lists, other collections (dictionaries, etc.)
  - functions and recursion, objects for data storage, simulation
- Implement some basic searching and sorting algorithms
Recommended Textbooks:
We will be using a free online textbook for this course. The public version of this book (with free, interactive text) can be found at https://runestone.academy/runestone/books/published/thinkcspy/index.html

We will be working on a modified version of this book, the updates and link will be posted on culearn.

Software Requirements:
We will use Python (version 3.x) in this course. Download and install the latest version of Python from the official website https://www.python.org/.

In addition, you would benefit from using an IDE (Integrated Development Environment). You are recommended to download and configure Visual Studio Code (VS Code) or the IDE of your choice. IDE installation should be a relatively simple process, but it is suggested that configuration problems and advice for IDE’s be posted to the student forum.

- Download and setup VS Code https://code.visualstudio.com/docs
- Getting Started with Python in VS Code https://code.visualstudio.com/docs/python/python-tutorial

Assessment Scheme:
In this course students will be evaluated according to the following criteria.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>#</th>
<th>Weight</th>
<th>Tentative dates*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutorials</td>
<td>10</td>
<td>10 x 1 = 10%</td>
<td>Weekly, beginning the week of September 16th (see the course calendar)</td>
</tr>
<tr>
<td>In-class Tests</td>
<td>3</td>
<td>5 + 10 + 15 = 30%</td>
<td>October 8th, October 22nd and November 19th (more information will appear on culearn course webpage)</td>
</tr>
<tr>
<td>Study group</td>
<td>---</td>
<td>5%</td>
<td>Weekly (more information will appear on culearn course webpage)</td>
</tr>
<tr>
<td>Assignments</td>
<td>5</td>
<td>5 x 7 = 35%</td>
<td>Biweekly (see the course calendar)</td>
</tr>
<tr>
<td>Final</td>
<td>1</td>
<td>20%</td>
<td>Scheduled by the Registrar</td>
</tr>
</tbody>
</table>

*Dates are subject to change. Announcements will be made in lecture and on the course website.
The course uses a **double pass rule** (Component-1: tutorials and assignments, Component-2: tests and final). In order to pass the course, you must pass Component-1 and Component-2 individually. There will be no exceptions.

For example, if a student does not attend tutorials and receives a 60% on each assignment, their assigned work receives a mark of \((0 \times .01) + (60 \times .35) = 21\) of a possible 45, and thus the student would receive an F in the course regardless of exam marks. The combined weight of Component-2 is 50% of your final grade. If you receive less than 25 out of 50 in this component, then your final grade will be an F.

Note that the double pass requirement does not include the study group participation grade. If a student fails the course because of the double pass requirement AND if modifying ONE of the grade components to include the study group mark would result in a pass then this will be applied.

**Tutorials:**
Attendance is mandatory. You must attend the tutorial session in which you are registered. You must submit your completed work on culearn during your own scheduled tutorial. In order to receive full marks, you must complete the work and demonstrate your understanding of the topic if asked by a TA before the end of the tutorial. No late tutorials will be accepted.

**Tests:**
Tests are mandatory and will be conducted online. Tests will be held during the lecture time. You must attend, write, and submit your tests immediately upon completion in order to be graded. If you are unable to attend a test due to extenuating circumstances, you must inform the instructor via email before the test begins. You may miss at most one (1) test. There will be no make-up test but students who receive accommodations will have the weight of the missed test moved to the other. Accommodations are granted at the discretion of the instructor. Failure to follow the above instructions will result in a grade of 0 for your missed test. You should contact the marking TA within 5 working days of the dates the marks are released to resolve your concerns or questions. After this time absolutely no remarking will be done.

**Study Groups:**
Every COMP1405B student will be part of a Recognized Study Group. You will get chance to meet other first year student and an upper year student. Attendance and participation will be graded. More details will be posted on culearn when the semester starts,
Assignments:
Assignments are mandatory. All assignments will be made available on cuLearn and you will use cuLearn to submit your assignments. The assignment component of your final grade is computed from the score you receive on five (5) assignments. All assignments submissions must be your own individual and original work (see Plagiarism section below).

You are expected to work on your assignments consistently once they are released (uploading your progress periodically). As a result, the instructor does not grant exemptions for the assignments due to sudden sickness, or any technical problems, for example, problems regarding internet connectivity or computer hardware and/or software. So, if you wait until the last minute and then have issues with your connection, you will still receive a mark of zero. No provision is made for missed assignments, and no extra credit assignments will be available. Consequently, you are advised to:
- periodically upload you progress (i.e., upload your progress at least daily)
- attempt to submit your final submission at least one hour in advance of the due date and time

Late assignments are accepted for 3 hours after the posted deadline, but they incur a penalty of (five) 5% / hour. Assignment submissions are handled electronically, so there is no "grace period" with respect to the deadline - 3 hours after the official submission deadline, you will not be able to submit your work.

For each assignment, you will be submitting one or more files that contain source code, and these files must be given the correct filename and be provided in the specified format. Assignments that are incorrectly named or in the incorrect format will be penalized and may receive a mark of zero.

If any of the source code files you submit does not run it will receive a mark of zero. Consequently, after you upload your submission to cuLearn you must re-download it immediately and ensure that:
- your submission is a "zip" file that is not corrupt (i.e., it can be opened properly)
- each of your source code files can be run from an IDE or command line without error
- each of your source code files can be viewed in a text editor (for marking purposes)
- your submission and each of your source code files follow the proper naming scheme

You are expected to demonstrate good programming practices at all times, and your code may be penalized if it is poorly written.

Grading and Appeal:
All assignments submitted through cuLearn will be graded by the TAs. It is your responsibility to ensure that your test, tutorial, and assignment marks posted to cuLearn are correct within five (5) working days of the date the marks were released.
Concerns or complaints about the grading must be communicated first to the TA that marked your work, then, if the result is unsatisfactory, to the instructor within that time. After those five days, all marks are considered final and will not be changed under any circumstances.

Please note that a student cannot, for any reason, be exempted from more than one (1) tutorial or more than one (1) test.

**Final Exam**
The time and the format of the final exam will be announced later in the term. Attendance of this exam is mandatory. The exam period can be found at http://carleton.ca/registrar/registration/dates-and-deadlines/. The deferral process for formally scheduled exams is handled through the registrar's office, see the registrar’s website for more details.

**Additional Notes**
In addition to the time spent reading/viewing lecture materials and completing tutorials, **students can expect to spend at least ten (10) hours per week on this course.** Students are responsible for all course materials, including lecture notes, tutorial exercises, and all materials discussed in class and on any of the official discussion boards.

Students are asked to **pose all questions related to course content using the official discussion boards on Discord and cuLearn; students should not email the instructor directly** unless the question contains confidential information or is of a personal nature.

The instructor will attempt to answer every student email received within **two (2) working days** of the time the message was received, unless the email requests information already posted on cuLearn or in the course outline. To ensure that all announcements are received, **students are expected to check their email on a daily basis.**

All materials created for this course (including, but not limited to, lecture notes, recorded videos, in-class examples, tutorial exercises, assignments, examinations, and posted solutions) remain the intellectual property of the instructor. These materials are intended for the personal and non-transferable use of students registered in the current offering of the course. **Reposting, reproducing, or redistributing any course materials, in part or in whole, without the written consent of the instructor, is strictly prohibited.**

**Online Student Success Module:**
This module has been designed to introduce the students to online learning and provide them with strategies and resources to help them successfully navigate this learning experience. It is brought to the students in collaboration with Carleton's Centre for Student Academic Support (CSAS) and Teaching and Learning Services (TLS).
The module covers the main features, benefits and challenges of online learning and explores various tips, including how to effectively manage time, how to optimize the learning space, how to interact and engage online, and where to seek additional supports.

https://carleton.ca/online/online-student-success-module/

Plagiarism Policy:
There is a separate plagiarism policy document for this course that is located on cuLearn. Students must read this document thoroughly and must agree to adhere to this policy (and to all policies stated in this course outline) before the assignment resources will be made available.

Academic Integrity: Standard penalties for offences starting 6 January 2020

- First offence, first-year students (< 4.0 credits completed): No credit for assignment/activity in question, or a final grade reduction of one full letter grade (e.g., A- becomes B-, if reduction results in an F, so be it), whichever is greater.
- First offence (everyone else): F in the course
- Second offence: One-year suspension from program
- Third offence: Expulsion from the University

Note: these are minimum penalties. More-severe penalties will be applied in cases of egregious offences (e.g., a first-year student accessing CULearn from their phone during an exam will be given an F in the course; bribing a faculty member for a better grade would be grounds for suspension, etc.)

Penalties for such offences can be found on the ODS webpage: https://science.carleton.ca/academic-integrity/

Students are invited to discuss any concerns with the instructor at the earliest opportunity.

Undergraduate Academic Advisor
The Undergraduate Advisor for the School of Computer Science is available in Room 5302C HP, by telephone at 520-2600, ext. 4364 or by email at undergraduate_advisor@scs.carleton.ca. The undergraduate advisor can assist with information about prerequisites and preclusions, course substitutions or equivalencies, understanding your academic audit and the remaining requirements for graduation. The undergraduate advisor will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services and the Writing Tutorial Services.
SCS Computer Laboratory
SCS students can access one of the designated labs for your course. The lab schedule can be found at: https://carleton.ca/scs/tech-support/computer-laboratories/. All SCS computer lab and technical support information can be found at: https://carleton.ca/scs/technical-support/. Technical support is available in room HP5161 Monday to Friday from 9:00 until 17:00 or by emailing support@scs.carleton.ca.

University Policies

For information about Carleton’s academic year, including registration and withdrawal dates, see Carleton’s Academic Calendar.

Requests for 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 Equity Services.

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 Equity Services.

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 Centre website.

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 is 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, see the policy.

Student Academic Integrity Policy. Every student should be familiar with the Carleton University student academic integrity policy. A student found in violation of academic integrity standards may be awarded penalties which range from a reprimand to receiving a grade of F in the course or even being expelled from the program or University. Examples of punishable offences include: plagiarism and unauthorized co-operation or collaboration. Information on this policy may be found here.

Plagiarism. As defined by Senate, "plagiarism is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own". Such reported offences will be reviewed by the office of the Dean of Science.

Unauthorized Co-operation or Collaboration. Senate policy states that "to ensure fairness and equity in assessment of term work, students shall not co-operate or collaborate in the completion of an academic assignment, in whole or in part, when the instructor has indicated that the assignment is to be completed on an individual basis". Please refer to the course outline statement or the instructor concerning this issue.