UNIVERSITY OF CALGARY
FACULTY OF SCIENCE

COURSE OUTLINE

1. **Course:** CPSC 231, Introduction to Computer Science for Computer Science Majors I - Fall 2023

   Coordinator(s)

Name	Email	Phone	Office	Hours
Dr. Richard Zhao	richard.zhao1@ucalgary.ca	Zoom or Discord	ICT 748	Wednesday 2:30-4:30pm in office

   Section(s)

   Lecture 01 : MWF 11:00 - 11:50 - Online

Instructor	Email	Phone	Office	Hours
Nathaly Verwwal	nmverwaa@ucalgary.ca			

   Lecture 02 : MWF 11:00 - 11:50 in ES 162

Instructor	Email	Phone	Office	Hours
Aref Motamedi	aref78.m@gmail.com			

   Lecture 03 : MWF 14:00 - 14:50 in ES 162

Instructor	Email	Phone	Office	Hours
Fahim Anzum	fahim.anzum@ucalgary.ca			

This course introduces problem solving, the analysis and design of small-scale computational systems, and implementation using the Python programming language. Basic Linux commands are also introduced.

To account for any necessary transition to remote learning for the current semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

In Person Delivery Details:

All tutorials are in-person, regardless of which lecture section the student is enrolled in.

All exams are in-person, regardless of which lecture section the student is enrolled in.

Online Delivery Details:

Some aspects of this course are being offered in real-time via scheduled meeting times. For those aspects you are required to be online at the same time.

To help ensure Zoom sessions are private, do not share the Zoom link or password with others, or on any social media platforms. Zoom links and passwords are only intended for students registered in the course. Zoom recordings and materials presented in Zoom, including any teaching materials, must not be shared, distributed or published without the instructor's permission.

For students enrolled in Lecture Section 01, the lectures are delivered online.

For students enrolled in Lecture Sections 02 and 03, the lectures are delivered in-person.

Course Site:

https://d2l.ucalgary.ca : CPSC 231 L01-(Fall 2023)-Introduction to Computer Science for Computer Science Majors I

Note: Students must use their U of C account for all course correspondence.

Equity Diversity & Inclusion:

The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

2. **Requisites:**

    See section 3.5.C in the Faculty of Science section of the online Calendar.

    Prerequisite(s):
    Admission to Computer Science, Bioinformatics, or Natural Science with a primary concentration in Computer Science.
    Antirequisite(s):
    Credit for Computer Science 231 and any of Computer Science 215, 217, 235, Data Science 211, Computer Engineering 339, Engineering 233, or Digital Engineering 233 will not be allowed.
    Note(s):
    a. See the statements at the beginning of the Computer Science entry.

3. **Grading:**

    The University policy on grading and related matters is described in F.1 and F.2 of the online University Calendar.

    In determining the overall grade in the course the following weights will be used:

Course Component	Weight	Due Date (duration for exams)	Modality for exams	Location for exams
Exam 1[1]	18%	Ongoing		
Exam 2[2]	18%	Ongoing		
Exam 3[3]	18%	Ongoing		
Assignment 1[4]	3%	Sep 29 2023		
Assignment 2[5]	4%	Oct 20 2023		
Assignment 3[6]	4%	Nov 10 2023		
Assignment 4[7]	5%	Dec 08 2023		
Registrar Scheduled Final Exam	30%	Will be available when the final exam schedule is released by the Registrar	in person	Will be available when the final exam schedule is released by the Registrar

[1] Exam will be 50 minutes, conducted in-person, in each student's enrolled tutorial on Oct 3 or 4 (whichever comes first for a student), 2023.

[2] Exam will be 50 minutes, conducted in-person, in each student's enrolled tutorial on Oct 25 or 26 (whichever comes first for a student), 2023.

[3] Exam will be 50 minutes, conducted in-person, in each student's enrolled tutorial on Nov 21 or 22 (whichever comes first for a student), 2023.

[4] A total of 5 personal days can be used for assignment extensions, across all assignments.

[5] A total of 5 personal days can be used for assignment extensions, across all assignments.

[6] A total of 5 personal days can be used for assignment extensions, across all assignments.

[7] A total of 5 personal days can be used for assignment extensions, across all assignments.

Each of the above components will be given a letter grade using the official university grading system (see section F.1.1). The final grade will be calculated using the grade point equivalents weighted by the percentages given above and then converted to a final letter grade using the official university grade point equivalents.

This course will have a Registrar Scheduled Final exam that will be delivered in-person and on campus. The Final Examination Schedule will be published by the Registrar's Office approximately one month after the start of the term. The final exam for this course will be designed to be completed within 2 hours.

If a student receives a higher grade on the final exam than any other one exam, the lower grade of the other exam will be replaced by the higher grade of the final exam. This will be done for one exam at the end of the semester. This replacement of grades will not change assignment grades.

If a student receives D or lower on the final exam, the final course grade will be at most D.

All graded work in this course must be completed individually, following regulations on academic integrity.

The University of Calgary offers a flexible grade option, Credit Granted (CG) to support student's breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade

4. **Missed Components Of Term Work:**

   In the event that a student legitimately fails to submit any online or in-person assessment on time (e.g. due to illness, domestic affliction, etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date, or possible exemption and reweighing of components. Absences not reported within 48 hours will not be accommodated. Students may be asked to provide supporting documentation (Section M.1) for an excused absence, See FAQ.

   If an excused absence is approved, options for how the missed assessment is dealt with is at the discretion of the coordinator or course instructor. Some options such as an exemption and pro-rating among the components of the course may not be a viable option based on the design of this course.

   For a legitimate absence from an exam (except the final exam), the weight of the missed exam will be distributed to the other exams.

   For a legitimate absence from an assignment submission, the weight of the missed assignment will be distributed to the other assignments.

5. **Scheduled Out-of-Class Activities:**

   There are no scheduled out of class activities for this course.

6. **Course Materials:**

   Recommended Textbook(s):

   > Ben Stephenson, *The Python Workbook 2nd Edition*: Springer.

   Software and system used:

   Python 3

   PyCharm Community Edition 2023

   Linux - Fedora Cinnamon 38 (Used in Lab)

   Generative AI tools (Discussed in Class)

   Git

   In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

   - A computer with a supported operating system, as well as the latest security, and malware updates;
   - A current and updated web browser;
   - Webcam/Camera (built-in or external);
   - Microphone and speaker (built-in or external), or headset with microphone;
   - Current antivirus and/or firewall software enabled;
   - Stable internet connection.

   For more information please refer to the UofC ELearning online website.

7. **Examination Policy:**

   Exams must be completed individually, following regulations on academic integrity. Only a pencil and an eraser are allowed during exams. Electronic devices, including laptops, cell phones, and calculators, must be turned off and stored in bags.

   Each exam during the semester is 50 minutes in a tutorial section. The final exam is 2 hours.

   Students should also read the Calendar, Section G, on Examinations.

8. **Approved Mandatory And Optional Course Supplemental Fees:**

   There are no mandatory or optional course supplemental fees for this course.

9. **Writing Across The Curriculum Statement:**

   For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section E.2 of the University Calendar.

10. **Human Studies Statement:**

    Students will not participate as subjects or researchers in human studies.

    See also Section E.5 of the University Calendar.

11. **Reappraisal Of Grades:**

    A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See Section I.3 of the University Calendar.

    a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections I.1 and I.2 of the University Calendar

    b. **Final Exam:** The student shall submit the request to Enrolment Services. See Section I.3 of the University Calendar.

12. **Other Important Information For Students:**

    a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, Mental Health Services Website) and the Campus Mental Health Strategy website (Mental Health).

    b. **SU Wellness Services:** For more information, see their website or call 403-210-9355.

    c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at 403-220-2208. The complete University of Calgary policy on sexual violence can be viewed here.

    d. **Student Ombuds Office:** A safe place for all students of the University of Calgary to discuss student related issues, interpersonal conflict, academic and non-academic concerns, and many other problems.

    e. **Student Union Information:** SU contact, Email your SU Science Reps: science1@su.ucalgary.ca, science2@su.ucalgary.ca, science3@su.ucalgary.ca,

    f. **Academic Accommodation Policy:**

    It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf

    Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf.

    Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, by filling out the Request for Academic Accommodation Form and sending it to by email preferably 10 business days before the due date of an assessment or scheduled absence.

    g. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional Code of Conduct and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic

misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

> Student Handbook on Academic Integrity
> Student Academic Misconduct Policy and Procedure
> Faculty of Science Academic Misconduct Process
> Research Integrity Policy

Additional information is available on the Student Success Centre Academic Integrity page

h. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or non-academic misconduct, in addition to any other remedies available at law.

i. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see Legal Services website.

j. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction (USRI) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

Course Outcomes:

- Read small procedural Python programs, identify any syntax any logic errors, identify type of data stored in specific variables and predict result of running code. This includes code that contains assignment, conditional and looping statements; arithmetic and boolean expressions; functions and recursive functions; input statements from the keyboard, mouse and files and output statements to the screen and files; creates new instances of classes and invokes methods on these instances and code that uses data structures such as lists and strings.
- Write and run small Python procedural programs that contains assignment, conditional and looping statements; arithmetic and boolean expressions; functions and recursive functions; input statements from the keyboard, mouse and files and output statements to the screen and files; creates new instances of classes and invokes methods on these instances and code that uses data structures such as lists and strings.
- Develop debugging skills to systematically identify and fix syntax and logic errors in procedural code written by self and others.
- Create basic classes in Python that contain a constructor, instance variables and methods.
- Design and implement a small application with a graphical user interface implemented using procedural Python code.

Electronically Approved - Aug 22 2023 18:02

Department Approval