Computer Science 1026a

Computer Science Fundamentals

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 Instructors

Lecture Section	Instructor	Email	Office Hours
001	M. Bauer MC 28A-1	bauer@uwo.ca	(TBD)
002	S. Beauchemin MC 28C	sbeauche@uwo.ca	(TBD)
003	A. Khatouni MC ??	??@uwo.ca	(TBD)

Course Schedule

Lecture Section	Room	Times
001	AHB-1R40	Tu. 9:30am -11:30pm Th. 9:30am -10:30pm
002	MC 110	Tu. 12:30pm-2:30pm Th. 12:30pm-1:30pm
003	AHB-1R40	Tu. 3:30pm-5:30pm Th. 3:30pm-4:30pm
Lab Section		
004, 012	NCB 105	See Timetable
005	HSB 14	See Timetable
006, 007,008, 011, 028	HSB 13	See Timetable
009, 010	HSB 16	
013-027	MC 235	See Timetable

Student Learning Outcomes

By the end of this course, students will be able to
- Use data structures to store various forms of data
- Write code to perform arithmetic and logical operations
- Utilize predefined functions and user-defined functions
- Troubleshoot/de-bug code
- Describe object-oriented elements and use them in development
- Implement python programs that address real-world issues

Course Prerequisites

There are no prerequisites to CS1026.

Course Materials

- *Lecture Notes*
  - Available from the CS1026a website
  - They are copies of the slides used in class, and are intended to help in note-taking during lectures
  - They are **NOT** a substitute for attending lectures
- *Programming Tools:*
  - Interpreter: Python 3.7
  - Development Environment: PyCharm Educational Version 2019.2
- *Textbook: Python for Everyone*, 2nd Edition
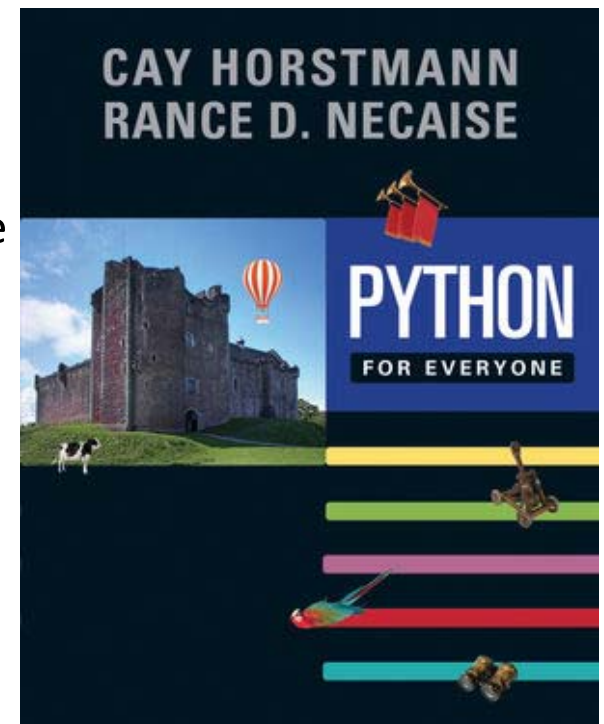
Course Website

The CS1026A website is accessible through OWL:
https://owl.uwo.ca/portal

Page name is ***COMPSCI CS1026A 001 FW19***
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.

Computing Facilities

Each student enrolled in CS1026 will be given access to the computing labs in MC 235, HSB (13,14,16) and NCB 105. You may use the computers in the lab or your own.

Course Structure

This course is comprised of three main components, namely:—in-class sessions, lab sessions, and student deliverables.

- ***In-Class Sessions***
- ***Lab Sessions***
  - Labs are mandatory and each student is required to attend the lab session for which you are registered.
  - There will be **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.
  - There are 11 labs total but only your top 8 scores will be used.
  - Students must bring their UWO identification to all labs.
  - Lab instructions will be posted on the course website
    - Read through instructions before coming to lab
  - ***Labs begin the week of September 9th.***

Student Deliverables will seek to assess how well each student understands and can apply course content

- **Assignments** help ascertain student's ability to transfer knowledge learned in labs to real-world situations.
- **Exams** are cumulative student evaluations that provide a structured assessment of learning.
- **Labs** incorporate guided tasks as well as stand alone exercises that allow you to practice and hone your programming skills.

Student Evaluation

Element	Weight	Due
Labs	8%	Weekly throughout the term; Labs start week of September 9
Assignment 1	5%	October 2 (9pm)
Assignment 2	8%	October 16 (9pm)
Assignment 3	10%	November 12 (9pm)
Assignment 4	14%	December 5 (9pm)
Mid-Term	20%	Sunday, October 27; 2 hours; Time: *TBD*; Location: *TBD*
Final	35%	3 hours; *TBD*

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%.*

Assignment Submission:

- Instructions for the submission of assignments will be posted on the course website. 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 assignment electronically through OWL.

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.

Exams

- There is a midterm exam and a final exam. No electronic devices or resources will be 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.
- The final exam is scheduled by the Office of the Registrar during the final exam period.

Please read over the course outline for additional information which includes:

- Email Contact
- Academic Accommodation for Medical Illness or Distress
- Accessibility Statement
- Course, Department, University Policies on Ethical Conduct