



COSC 111: Computer Programming 1

Land Acknowledgement

We respectfully acknowledge the Syilx Okanagan Nation and their peoples, in whose traditional, ancestral, unceded territory UBC Okanagan is situated.

Outline

Instructor and General Course Info

Instructor: Bradley Rey

Instructor's Email: bradley.rey@ubc.ca

Duration: 2022W T2

Delivery Modality: In-Person

Course Location: ASC 130

Course Days: Wed/Fri

Class Hours: 2:00 PM - 3:30 PM

Course URL: <https://canvas.ubc.ca>

Office Hours and Location: FIP 309 (time TBA) and/or by appointment

Other Instructional Staff

- Teaching Assistant (L2B, L2C, L2D, L2F): Charles-Olivier Dufresne-Camaro (chcamaro@student.ubc.ca)
- Teaching Assistant (L2E): Brenden Trieu (brenden.trieu@gmail.com)

Course Description

Introduction to the design, implementation, and understanding of computer programs. Topics include problem solving, algorithm design, and procedural abstraction, with emphasis on the development of working programs. This course should be followed by COSC 121.

Prerequisite: A score of 70% or higher in one of PREC 12, MATH 12, MATH 125, MATH 126.

Learning Outcomes

Upon completion of this course, students will be able to:

- understand, identify, and use basic terminology used in computer programming
- design and develop strategies for solving basic programming problems
- identify and use different data types in a computer program
- use algorithmic expressions to manipulate data
- use arrays to store and process data
- design programs involving selection statements, loops, and methods
- identify different types of errors in Java programs
- use selected set of predefined Java classes
- write a simple program using Java objects
- use an IDE to develop programs

Learning and Assessment

Learning Materials

- Optional Textbook: Y. D. Liang, Intro to Java Programming and Data Structures, 11th Edition, ISBN: 0134670949, 2017 (Earlier editions are okay and are referenced in the table below)
 - You can order a physical copy online, e.g., from Pearson website, Amazon, etc.
- Other Materials
 - (Free online): David J. Eck, Introduction to Programming Using Java, Sixth Edition, available at <http://math.hws.edu/javanotes/>
 - P. Deitel and H. Deitel, Java How To Program (late objects) (10th Edition), ISBN: 0132575655, 2014
 - Many websites provide coding activities for fun. Here are two examples: codewars.com, codingame.com. Note that I am not affiliated with any of the two websites. Also note, that some of the questions on these websites are not covered in the course.
 - Question bank provided by UBC faculty (information to access will be provided through Canvas). Note, some questions within this question bank are not covered in the course.

Learning Resources

This course has provided SL sessions. SL is an academic enhancement program designed to help students match what they are learning in class with how to best engage with and study that information. SL should provide additional support for students outside of class time. More information about SL program will be given during class time and can be found on: <https://students.ok.ubc.ca/academic-success/learning-hub/supplemental-learning/>

Assessments of Learning

- | | |
|---------------------------|---|
| • In-Class Activities | 10% (full marks if you correctly submit 80% or more) |
| • Labs | 10% |
| • Assignments | 20% |
| • Exams | |
| ○ Midterm 1 | 15% |
| ○ Midterm 2 (cumulative) | 15% |
| ○ Final Exam (cumulative) | 30% |

Passing/Grading Criteria

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Passing criteria:

Students **MUST** achieve a passing grade of 50% or higher in the lab component of the course.

Students **MUST** achieve a combined grade of at least 50% on the exams (midterms and final).

Failure to do so will result in a 45% grade, or the resulting grade, whichever is the lowest. Students will not be able to receive a passing grade if they are not registered to a required lab section.

Final grades will be based on the evaluations listed above, and the final grade will be assigned according to the standardized grading system outlined in the UBC Okanagan Calendar.

Expectations

I am here to help students pass the course, receive good grades, and feel that the course was useful. For that to happen, help me by putting enough effort into the course. I expect that you will attend **all classes** and participate in class activities, read the lecture notes **before** the lecture, attend **all labs**, finish all your assignments on time, and practice on the course materials. I also expect that you will spend (on average) **at least 5 hours per week** in out-of-class relevant activities (homework, preparation, practicing).

Course Format

The course will be delivered via in-class lectures. Assignments, labs, and in-class activities (individual and team-based) will provide continual practice of material taught. All course content and announcements will be posted on the course website. Midterm break and other calendar dates can be found at <http://okanagan.students.ubc.ca/calendar/>.

Lectures: This course is given **in-person**.

In-Class Activities: In-class activities will be done in-person **throughout the lectures**, offering time to work individually and in groups on small practice questions.

Labs: Labs will be offered in-person, and a student **must be registered in a lab section**. Labs will offer reiteration of material taught, lab questions to complete during the given lab time, and time for working on assignments, all with a TA present.

Assignments: There will be three assignments within this course. Each will provide multiple questions which allow for practice of material taught in-class. Assignments will be code-based, and you will be expected to submit Java files containing your solutions.

Exams:

- **Platform:** Exams will be held **in-person and on-paper**: Midterms in the same classroom used for the lectures, during the scheduled lecture times. Location for final exam will be announced later.
- **Scope:** Exam will focus on material discussed in the lectures. **Only language accepted for coding in the exams is Java.**
- **Format:** The examinations in this course are all closed book, so you are NOT permitted to access any of the course materials, including your notes, during the exam. You are also NOT to communicate with anyone about the exam during the scheduled write time or after the examination – you are to work independently. Communication with other students (written, text, verbal, etc.) is not permitted and will constitute Academic Misconduct.

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Tentative Course Schedule

Week	Lecture	Date	Topics	Suggested Readings (Based on the 10th Edition)	Deliverable	Notes
W1	L1	11-Jan	Course Introduction			No labs this week
	L2	13-Jan	Computer HW and SW, First Java Program	Sect. 1.1-1.8, 1.12, 2.16		
W2	L3	18-Jan	Programming Basics	Sect. 1.9-1.10, 2.1-2.18		
	L4	20-Jan	Programming Basics Cont'd	Sect. 1.9-1.10, 2.1-2.18	A1 Posted (inclusive of L5)	Jan 20 - Last day to drop without a W
W3	L5	25-Jan	Predefined Classes	Sect 4.2-4.4		
	L6	27-Jan	Conditionals	Chapter 3		
W4	L7	01-Feb	Conditionals Cont'd	Chapter 3		
	L8	03-Feb	Loops	Chapter 5	A1 Due Feb 3 at 11:59 pm	
W5	L9	08-Feb	Loops Cont'd	Chapter 5		
	L10	10-Feb	Midterm Q&A	---		
W6	L11	15-Feb	Midterm	---	Midterm (inclusive of L7)	
	L12	17-Feb	Midterm Review, Methods Intro	---		
W7			Reading Week (University Closed)			No labs this week
W8	L13	01-Mar	Methods Intro	Chapter 6	A2 Posted (inclusive of L14)	
	L14	03-Mar	Methods			
W9	L15	08-Mar	1D Arrays	Sect. 7.1-7.9		
	L16	10-Mar	Primitive vs Reference and Arrays as a Class	Sect. 7.12	A2 Due Mar 3 at 11:59 pm	
W10	L17	15-Mar	Multidimensional Arrays	Chapter 8		
	L18	17-Mar	Midterm Q&A	---		
W11	L19	22-Mar	Midterm	---	Midterm (inclusive of L16)	
	L20	24-Mar	Midterm Review, OOP Intro	---	A3 Posted (inclusive of L22)	Mar 24 - Last day to withdraw with W
W12	L21	29-Mar	Object Oriented Programming Intro	Sect. 9.1-9.6		
	L22	31-Mar	Object Oriented Programming Cont'd	Sect. 9.7-9.11, 9.13-9.14		
W13	L23	05-Apr	Intro to Advanced Topics	TBA		No labs this week
		07-Apr	Good Friday (University Closed)		A3 Due Apr 7 at 11:59 pm	
W14	L24	12-Apr	Final Exam Q&A	---		No labs this week

Late and Missed Policies

Late Policy

All in-class activities and labs must be done in class and in lab respectively at the specified time and cannot be submitted late. Assignments are due on the posted dates and times and can be accepted up to 3 days late with a penalty of -10% per day. That is, if an assignment is out of 20 marks and a student submits a solution one day late, then the maximum mark for that submission is 18/20. Submissions beyond 3 days late will receive a score of 0.

Life-Happens Extension Policy

Over the course of the semester **2 days** are given to all students to use as they see fit, to submit assignments later than the posted due date. Use this extension wisely as I will give no additional extensions unless in extreme documented situations (e.g., admission to hospital, death in family, etc.). Please note:

- **This policy only applies to assignments**
- You may use all 2 days for one assignment or use 1 day for each of two assignments
- **You do not have to ask for permission to use the 2-day extension.** Just inform your TA directly through email and CC the instructor.

Missed Exam Policy

Missed Midterms: If the student misses a midterm without a medical note or other documented reason, the mark received will be zero. If a valid reason is provided to the instructor, then the midterm portion of the grade will be combined with the other midterm and the final exam marks, so that all the exams are still worth 60% of the grade. If the student misses both midterms with valid reasons then the final exam will be worth 60% of the course.

Missed Final Exam: If the student misses the final exam without a reason that is acceptable by the Dean's Office, the mark received is zero. If a valid reason is provided, alternate arrangement for a make-up final exam will be made with the permission of the Dean's Office.

Missed Activity and Lab Policy

Missed In-Class Activities: If the student misses an in-class activity without a medical note or other documented reason, the mark received will be zero. If a valid reason is provided to the instructor, then a new activity will be provided for the student to complete, or the in-class activities grade will be calculated over the reduced number of activities completed. **You need only complete 80% of the in-class activities to receive 100% in this portion of the course.**

Missed Lab Policy: Students must be registered in a lab to pass this course. If the student misses a lab without a medical note or other valid documented reason, the mark received will be zero. If a medical note or other valid documented reason is provided to the instructor, new lab questions will be provided for the student to complete, or the lab grade will be calculated over the reduced number of labs completed.

Other Course Policies

Academic Integrity

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise, and harsh sanctions are imposed. **For example, incidences of plagiarism or cheating usually result in a failing grade or mark of zero on the assignment or in the course.** Careful records are kept to monitor and prevent recidivism.

A more detailed description of academic integrity, including the University's policies and procedures, may be found in the Academic Calendar at: <http://www.calendar.ubc.ca/okanagan/>

Cooperation Vs. Cheating

Working with others on assignments is a good way to learn the material and we encourage it. However, there are limits to the degree of cooperation that we will permit. Any level of cooperation beyond what is permitted is considered cheating.

When working on programming assignments, you must work only with others whose understanding of the material is approximately equal to yours. In this situation, working together to find a good approach for solving a programming problem is cooperation; listening while someone dictates a solution is cheating. You must limit collaboration to a high-level discussion of solution strategies and stop short of writing down a group answer. Anything that you hand in, whether it is a written problem or a computer program, must be written by you, from scratch, in your own words. If you base your solution on any other written solution, you are cheating. If you provide your solution for others to use, you are also cheating.

NO GROUP WORK IS ALLOWED: For all work, you may talk with others about the given problems and which parts of the course they are related to, but in all cases, you must **write your own code and never share your code!** Please note that we use a **special software to detect plagiarism** in all submitted code.

The **only** exception of the group-work rule is some in-class questions which you may discuss with your peers and before you provide the answer.

Final Examinations

You can find the [Senate-approved term and examination dates here](#). Except in the case of examination clashes and hardships (three or more formal examinations scheduled within a 27-hour period) or unforeseen events, students will be permitted to apply for out-of-time final examinations only if they are representing the University, the province, or the country in a competition or performance; serving in the Canadian military; observing a religious rite; working to support themselves or their family; or caring for a family member. Unforeseen events include (but may not be limited to) the following: ill health or other personal challenges that arise during a term and changes in the requirements of an ongoing job.

Further information on Academic Concession can be found under Policies and Regulation in the Okanagan Academic Calendar <http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,48,0,0>

Grading Practices

Faculties, departments, and schools reserve the right to scale grades in order to maintain equity among sections and conformity to UBC, faculty, department, or school norms. Students should therefore note that an unofficial grade given by an instructor might be changed by the faculty, department, or school. Grades are not official until they appear on a student's academic record. <http://www.calendar.ubc.ca/okanagan/>

Resources to Support Student Success

UBC Okanagan Disability Resource Centre

The DRC facilitates disability-related accommodations and programming initiatives to remove barriers for students with disabilities and ongoing medical conditions. If you require academic accommodations to achieve the objectives of a course, please contact the DRC at:

UNC 215 - 250.807.8053

Email: drc.questions@ubc.ca

Web: www.students.ok.ubc.ca/drc

UBC Okanagan Equity and Inclusion Office

Through leadership, vision, and collaborative action, the Equity & Inclusion Office (EIO) develops action strategies in support of efforts to embed equity and inclusion in the daily operations across the campus. The EIO provides education and training from cultivating respectful, inclusive spaces and communities to understanding unconscious/implicit bias and its operation within campus environments. UBC Policy 3 prohibits discrimination and harassment on the basis of BC's Human Rights Code. If you require assistance related to an issue of equity, educational programs, discrimination or harassment please contact the EIO.

UNC 325H - 250.807.9291

Email: equity.ubco@ubc.ca

Web: www.equity.ok.ubc.ca

Student Wellness

At UBC Okanagan health services to students are provided by Student Wellness. Nurses, physicians and counsellors provide health care and counselling related to physical health, emotional/mental health and sexual/reproductive health concerns. As well, health promotion, education and research activities are provided to the campus community. If you require assistance with your health, please contact Student Wellness for more information or to book an appointment.

UNC 337 - 250.807.9270

Email: healthwellness.okanagan@ubc.ca

Web: www.students.ok.ubc.ca/health-wellness

Office of the Ombudperson

The Office of the Ombudsperson for Students is an independent, confidential and impartial resource to ensure students are treated fairly. The Ombuds Office helps students navigate campus-related fairness concerns. They work with UBC community members individually and at the systemic level to ensure students are treated fairly and can learn, work and live in a fair, equitable and respectful environment. Ombuds helps students gain clarity on UBC policies and procedures, explore options, identify next steps, recommend resources, plan strategies and receive objective feedback to promote constructive problem solving. If you require assistance, please feel free to reach out for more information or to arrange an appointment.

UNC 328 - 250.807.9818

Email: ombuds.office.ok@ubc.ca

Web: www.ombudsoffice.ubc.ca

Student Learning Hub

The Student Learning Hub is your go-to resource for free math, science, writing, and language learning support. The Hub welcomes undergraduate students from all disciplines and year levels to access a range of supports that include **tutoring in math, sciences, languages, and writing, as well as help with study skills and learning strategies**. Students are encouraged to visit often and early to build the skills, strategies and behaviors that are essential to being a confident and independent learner. For more information, please visit the Hub's website.

LIB 237 - 250.807.8491

Email: learning.hub@ubc.ca

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Web: www.students.ok.ubc.ca/slh

The Global Engagement Office

The Global Engagement Office provides advising and resources to assist International students in navigating immigration, health insurance, and settlement matters, as well as opportunities for intercultural learning, and resources for Go Global experiences available to all UBC Okanagan students, and more.

Come and see us – we are here to help! You may also contact geo.ubco@ubc.ca

Safewalk

*Don't want to walk alone at night? Not too sure how to get somewhere on campus? Call Safewalk at **250-807-8076**. For more information, see: www.security.ok.ubc.ca*