



DEPARTMENT OF SCIENCE

COURSE OUTLINE – Fall 2020

CS1140 – INTRODUCTION TO COMPUTING SCIENCE - 3 (3-0-3) 90 HOURS

INSTRUCTOR: Libero Ficocelli

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OFFICE HOURS: TBA

FALL 2020 DELIVERY: Mixed Delivery. This course is delivered remotely with some face-to-face/onsite components at the GPRC campus.

- For the remote delivery components: students must have a computer with a webcam and reliable internet connection. Technological support is available through helpdesk@gprc.ab.ca.
- For the onsite components: students must supply their own mask and follow GPRC Campus Access Guidelines and Expectations (<https://www.gprc.ab.ca/doc.php?d=ACCESSGUIDE>). The dates and locations of the onsite components can be found on the Course Calendar.

PREREQUISITE(S)/COREQUISITE: Pure Math 30

REQUIRED TEXT/RESOURCE MATERIALS:

Introduction to Java Programming 12th Edition, Comprehensive Version,

By Y. Daniel Liang, Pearson Publishing

ISBN 12th Edition 9780136520238

The 11th edition is acceptable

ISBN 11th Edition 9780134671048

CALENDAR DESCRIPTION:

An introduction to Computing Science in which you learn to solve simple problems by writing small computer programs in JAVA. This course presents a high-level object-

oriented computing model based on objects as well as primitive data types, control structures and methods. It will be limited to basic elementary algorithms and techniques for constructing elegant and robust solutions to simple problems. The laboratories will offer you the opportunity to translate concepts presented in lectures into interesting application programs.

LEARNING OUTCOMES:

- Be able to create, edit and run Java programs
- Write Java code to solve small defined problems
- Transform simpler operations into larger, integrated solutions
- Be able to debug programs (find and fix errors)
- Be able to design programs so that they are easy to maintain and update

COURSE OBJECTIVES:

- Think about problems in a manner that allows them to be solved computationally
- Understand how computation is related to representation
- Understand your computations so that you can verify they are doing what you intend them to do
- Learn ways to specify and organize computations so that machines can perform them and others can understand them
- Understand the basic architecture of machines that make computation possible

COURSE SCHEDULE/TENTATIVE TIMELINE:

Chapter 1	Introduction to Java
Chapter 2	Elementary Programming
Chapter 3	Selection Statements
Chapter 4	Mathematical Functions and Strings
Chapter 5	Loops
Chapter 6	Methods
Chapter 7	Single-Dimensional Arrays
Chapter 8	Multiple Dimensional Arrays

Chapter 9 Objects and Classes

Chapter 10 Object Oriented Thinking

Selected topics from other chapters.

EVALUATIONS:

Lab Assignments	30%
Quizzes	10%
Midterm	25%
Final Exam	35%

GRADING CRITERIA:

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100	C+	2.3	67-69
A	4.0	85-89	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

STUDENT RESPONSIBILITIES:

- The Student must pass the theory/concepts portion of the course in order to qualify for a passing grade for the term. In other words, a student must obtain 35 out of a possible 70 points (from exams/quizzes) before adding the lab assignment marks to compute the final grade. If you cannot achieve the required 50% (on exams) then regardless of your lab assignment grades, you cannot pass the course.
- No late project assignments will be accepted. The student is responsible for adhering to all requirements as specified for each project assignment.
- When necessary lab time may be utilized for lecturing on specific Java features. The remainder of the lab time will generally be used as "hands-on" programming time.

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the College Calendar at <http://www.gprc.ab.ca/programs/calendar/> or the College Policy on Student Misconduct: Plagiarism and Cheating at <https://www.gprc.ab.ca/about/administration/policies>

**Note: all Academic and Administrative policies are available on the same page.

TRANSFERABILITY:

A list of institutions to which this course transfers: University of Alberta , University of Lethbridge *, Athabasca University , Augustana Faculty University of Alberta , Concordia University College , Canadian University College, King's University College, Grant MacEwan University

* An asterisk (*) beside any transfer institution indicates important transfer information. Consult the Alberta Transfer Guide.

Warning: Although we strive to make the transferability information in this document up-to-date and accurate, **the student has the final responsibility for ensuring the transferability of this course to Alberta Colleges and Universities.** Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at Alberta Transfer Guide main page <http://www.transferalberta.ca> or, if you do not want to navigate through few links, at <http://alis.alberta.ca/ps/tsp/ta/tbi/onlinesearch.html?SearchMode=S&step=2>

Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. **Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability.**