# DEPARTMENT OF SCIENCE

## COURSE OUTLINE – Fall 2021

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

Grande Prairie Regional College respectfully acknowledges that we are located on Treaty 8 territory, the traditional homeland and gathering place for many diverse Indigenous peoples. We are honoured to be on the ancestral lands of the Cree, Dene/Beaver and Métis, whose histories, languages, and cultures continue to influence our vibrant community. We are grateful to have the opportunity to work, learn, and live on this land.

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|---|---|---|---|
| **INSTRUCTOR:** | Libero Ficocelli | **PHONE:** | 780 539 - 2825 |
| **OFFICE:** | C424 | **E-MAIL:** | LFicocelli@gprc.ab.ca |

**OFFICE HOURS:**  TBA

## 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.

## 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

**DELIVERY Mode:** Onsite Delivery.

**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

**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

# TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page
http://www.transferalberta.ca.

\*\*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.**

**EVALUATIONS:**

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|---|---|
| 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 |

**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.

## 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 assignments will be accepted.  The student is responsible for adhering to all requirements as specified for each 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.