



## DEPARTMENT OF SCIENCE

### COURSE OUTLINE - CS2010 ( FALL 2016)

#### PRACTICAL PROGRAMMING METHODOLOGY -3 (3-0-3) UT

**INSTRUCTOR:** franco carlacci  
**OFFICE:** c422  
**OFFICE HOURS:**TBA

**PHONE:**780 539 2091  
**E-MAIL :** fcarlacci@gprc.ab.ca

**DELIVERY MODE(S):** classroom

**PREREQUISITE(S) :** CS1150

#### **REQUIRED TEXT/RESOURCE MATERIALS:**

The text for this course is *C++ Primer, fifth edition* by Lippman, Lajoie and Moo. I will also provide powerpoint slides on the website <http://www.carlacci.com>

#### **CALENDAR DESCRIPTION:**

This course introduces you to the principles, methods, tools, and practices of a professional programmer working in a rich programming environment. The lectures focus on the fundamental principles of programming methodology based on abstract data types and their implementations. The laboratories offer an intensive apprenticeship opportunity for the aspiring software developer. You will use the programming languages C and C++ and software development tools supported by the Microsoft Windows and UNIX programming environment.

## **LEARNING OUTCOMES:**

- Students should be able to design, write and debug/test any intermediate C and C++ program .
- Students should be able to use development tools such as git, github, make, vi, and gcc.
- Students should be able to use the Standard template library.
- Students should have the skills to combine knowledge of program design and data structures with useful algorithms and mathematics and application-specific knowledge to design and implement non-trivial software.

## **COURSE OBJECTIVES:**

- To be able to handle any intermediate programming problem using C and C++ programming languages under Linux and Windows
- To have the skills to combine knowledge of program design and data structures with useful algorithms and mathematics and application-specific knowledge to design and implement non-trivial software.

## **COURSE SCHEDULE/TENTATIVE TIMELINE:**

C / C++ basics

Expressions

Statements

functions

Strings, Vectors, arrays

Classes

Objected-Oriented programming

Templates and Generic programming

Standard Template Library

## **EVALUATIONS:**

Take home assignments and	
Lab assignments (min of 10)	: 45%
Midterm	: 25%
Final	: 30%

Assignments that are less than one week late will be penalized 20%; assignments submitted after that period will receive a grade of 0. Please note that you must submit ALL assignments (even late ones!) if you want the assignment portion to count towards your final grade.

## **STUDENT RESPONSIBILITIES:**

1. Student are responsible for adhering to all requirements laid out in the assignments.
2. Students must attend all lectures/labs. A student missing more than 20% of classes/labs may be barred from writing the final exam.
3. Students must submit ALL assignments ( even late ones) if they want the assignment portion to count towards your final grade.

## GRADING CRITERIA:

GRANDE PRAIRIE REGIONAL COLLEGE			
GRADING CONVERSION CHART			
Alpha Grade	4-point Equivalent	Percentage Guidelines	Designation
A <sup>+</sup>	4.0	90 - 100	EXCELLENT
A	4.0	85 - 89	
A <sup>-</sup>	3.7	80 - 84	FIRST CLASS STANDING
B <sup>+</sup>	3.3	77 - 79	
B	3.0	73 - 76	GOOD
B <sup>-</sup>	2.7	70 - 72	
C <sup>+</sup>	2.3	67 - 69	SATISFACTORY
C	2.0	63 - 66	
C <sup>-</sup>	1.7	60 - 62	
D <sup>+</sup>	1.3	55 - 59	MINIMAL PASS
D	1.0	50 - 54	
F	0.0	0 - 49	FAIL
WF	0.0	0	FAIL, withdrawal after the deadline

## STUDENT RESPONSIBILITIES:

Refer to the College Policy on Student Rights and Responsibilities at [www.gprc.ab.ca/d/STUDENTRIGHTSRESPONSIBILITIES](http://www.gprc.ab.ca/d/STUDENTRIGHTSRESPONSIBILITIES)

## STATEMENT ON PLAGIARISM AND CHEATING:

Refer to the College Student Misconduct: Academic and Non-Academic Policy at [www.gprc.ab.ca/d/STUDENTMISCONDUCT](http://www.gprc.ab.ca/d/STUDENTMISCONDUCT)

\*\*Note: all Academic and Administrative policies are available at [www.gprc.ab.ca/about/administration/policies/](http://www.gprc.ab.ca/about/administration/policies/)

***UNIVERSITY TRANSFER (If applicable):***

**\*\* 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.**

Please refer to the Alberta Transfer guide for current transfer agreements:

[www.transferralberta.ca](http://www.transferralberta.ca)