



## **DEPARTMENT OF SCIENCE**

### **COURSE OUTLINE - CS3790 ( FALL 2016)**

#### **OPERATING SYSTEMS - 3 ( 3-0-2) UT**

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

**DELIVERY MODE(S):** classroom

**PREREQUISITE(S)/COREQUISITE:** cs1150

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

The text to be used in this course is : *Operating Systems Concepts , Internals and Design Principles, Eighth Edition* by William Stallings.

Also material for this course will be made available at <http://www.carlacci.com>.

#### **CALENDAR DESCRIPTION:**

You will be introduced to concepts and features commonly found in operating systems. Class discussion will concentrate on traditional operating system topics (processes, memory management, file systems, input/output) as well as distributed operating system topics (communication, synchronization, and distributed file systems). UNIX will be studied as an example of traditional and distributed operating systems.

## **LEARNING OUTCOMES:**

- students will be able define the different subsystems that make up a modern operating system
- Students will be able to summarize the different algorithms used in the construction of the different subsystems that make up modern operating system
- Students will be able to explain how the different subsystems work.

## **COURSE OBJECTIVES:**

- Have a basic understanding of operating system organization
- Understand several new aspects of programming such as:
  - Process scheduling
  - Process synchronization
  - Multi-process computation
  - Deadlock avoidance
  - File system organization
  - Security

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

Computer System Overview

Operating System Overview

Process Description and control

Threads

Mutual Exclusion and Synchronization

Deadlock and Starvation

Memory Management

Virtual Memory

Uni and multiprocessor scheduling  
I/O management and Disk Scheduling  
File Management  
OS Security

## **EVALUATIONS:**

Assignments (takehome and labs)	: 50%
Midterm	: 15%
Final	: 35%

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)