SOFE 3950U Operating Systems

Instructor : **Dr. Khalid A. Hafeez**,

:Department of Electrical, Computer, and Software Engineering,
Email :Blackboard email,
Tel. :(905) 721 8668 x 3453

Office :ENG 1023,
Office Hours :Monday: 11:00AM- 12:00 Noon

Teaching Assistants: Jonathan Gillet
Somayyeh Aghababaei

Overview:

- The organization and structure of modern OSes
- Concurrent programming concepts.
- Internals and design issues.
- Process description and control.
- Threads,
- Concurrency: mutual exclusion and synchronization.
- Deadlocks and starvation.
- Memory management and virtual memory.
- Uniprocessor scheduling.
- Multiprocessor and real-time scheduling.
- I/O management and disk scheduling.
- File management.
- Security, performance, and protection.

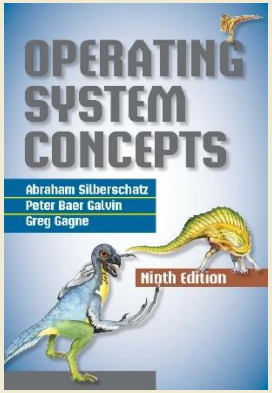
Course outcomes:

- At the end of this course the students will have sufficient knowledge to analyze different aspects of operating systems in terms of functionality, performance and robustness.
- They should also have the knowledge and expertise to design and implement complex data structures and functionality of simple tasks in an operating system.

Syllabus and Teaching Philosophy

Textbook:

- Operating System Concepts, 9th Edition.
- Publisher: Wiley.
- ISBN 978-1-118-06333-0.
- Book by Silberschatz, Galvin, and Gagne



Evaluation:

Quizzes and Assignments	10%
Tutorials and in-class participation	10%
Labs	20%
Midterm Exam	20%
Final Exam	40%

No midterm deferral, marks will be added to final exam
Student should pass final exam (more than 50%) to pass the course

Syllabus and Teaching Philosophy

Lectures: Mondays: 09:40 – 11:00 am, room UL 11

Wednesdays: 08:10 – 09:30 am, room UL 11

Tutorials: Wednesdays 11:10 am – 12:30 pm

Quizzes: at least 4

In-class Participation: The attendance is NOT mandatory but you are expected to participate in the classroom discussions. Answering and asking questions will be considered as positive participation and will be rewarded.

Labs:

Section	Group	Location	Day	Time	Start Date
Lab (43516)	A	A9-ENG2045	Friday	11:10 am -02:00 pm	Sept. 18
Lab (43964)	B	ERC1094	Friday	11:10 am -02:00 pm	Sept. 25
Lab (40258)	C	A9-ENG2045	Friday	11:10 am -02:00 pm	Sept. 18

Lab #	Lab	Group ID	Date
Lab 0	Introduction	A &C	Sep 18, 2015
		B	
Lab 1	UNIX Shell	A &C	Oct 02, 2015
		B	Sept 25, 2015
Lab 2	Threads	A &C	Oct 16, 2015
		B	Oct 09, 2015
Lab 3	Scheduling	A &C	Oct 30, 2015
		B	Oct 23, 2015
Lab 4	Multithreading and Deadlocks	A &C	Nov 13, 2015
		B	Nov 06, 2015
Lab 5	Virtual Memory Manager	A &C	Nov 27, 2015
		B	Nov 20, 2015

Lectures Schedule

	Date	Description	Other info
1	Sept 14	Introduction	
2	Sept 21	Operating System Structures	
3	Sept 28	Processes	
4	Oct 05	Threads	
5	Oct 12	Thanksgiving, Process Synchronization	
6	Oct 19	Process Synchronization, Midterm	
7	Oct 26	CPU Scheduling	
8	Nov 02	Deadlocks	
9	Nov 09	Main and Virtual Memory	
10	Nov 16	File System Interface	
11	Nov 23	File System Implementation	
12	Nov 30	Review	

GENERAL REQUIREMENTS

- Confirm Blackboard access to SOFE 3950
- All communications will be through Blackboard

Religious Accommodations: If participation in some part of this class conflicts with your observation of specific religious holidays during the semester, please contact me during the first week of class to make alternative arrangements.

Academic Integrity:

Students are expected to be familiar with UOIT's regulations on Academic Conduct (Section 5.15 of the Academic Calendar)

Accessibility:

If you are eligible, send your request to the Centre for Students with Disabilities on time.

HOW TO SUCCEED IN THIS COURSE:

1. Attend the classes regularly and participate by asking questions
2. Review the material lecture by lecture and do NOT wait until the exam time
3. If you do not understand something in the class, consult the instructor during office hours
4. Work on the assignments independently and then within a group
5. Make sure that you can independently solve the problem sets posted on the blackboard

MIDTERM EXAM

- Midterm exam will be on **Wednesday Oct. 21st** during class time.
- Place will be determined later.
- Is it OPEN book or CLOSED book?
- Or allowed cheat sheet?