

**ASSUMPTION UNIVERSITY**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**DEPARTMENT OF COMPUTER SCIENCE**  
**COURSE OUTLINE**



**COURSE ORGANIZATION**

<b>Course ID:</b>	SC 3211						
<b>Course Title:</b>	Operating Systems						
<b>Course Status:</b>	Major Required (A minimum grade of "C" is required to pass this course. If a student receives a grade of "C-" or below, he or she is required to take this course again during the following semester.)						
<b>Prerequisite:</b>	SC 2220 Computer Organization						
<b>Credits:</b>	3 Credit Points						
<b>Semester:</b>	2/2010						
<b>Classroom:</b>	E25 (Saturday 9:30-12:30)						
<b>Description:</b>	A study of component and functions of operating systems which includes uni-programming, multi-programming, multi-tasking, multi-threading, resource management functions, process scheduling algorithms, device management algorithms, virtual memory management, and classical problems related to operating systems such as deadlock, starvation and concurrency.						
<b>Objectives:</b>	The objective of this course is to master the basic issues of operating system. At the end of this course, the students are expected to know inner workings of an operating system and have the ability to analyze the issues related to operating system. This allows the students to work out the tradeoffs involved in designing a modern operating system.						
<b>Marks Allocation:</b>	<table border="0"> <tr> <td>Programming Assignments</td> <td>20 %</td> </tr> <tr> <td>Midterm Examination</td> <td>30 %</td> </tr> <tr> <td>Final Examination</td> <td>50 %</td> </tr> </table>	Programming Assignments	20 %	Midterm Examination	30 %	Final Examination	50 %
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**COURSE INSTRUCTOR**

<b>Instructor:</b>	Mr. Piyabute Fuangkhn
<b>Office:</b>	Q72 (Q Building 7 <sup>th</sup> Floor, ABAC Hua Mak Campus)
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<b>Facebook:</b>	<a href="http://www.facebook.com/piyabute/">http://www.facebook.com/piyabute/</a>

**COURSE RESOURCES**

<b>Main Textbook:</b>	Operating System Concepts 8 <sup>th</sup> Edition, Abraham Silberschatz, Peter Galvin and Greg Gagne, Addison-Wesley, 2009 (ISBN: 978-0-470-23399-3)
<b>Reference:</b>	Operating Systems : Internals and Design Principles 6 <sup>th</sup> Edition, William Stallings, Prentice Hall, 2008 (ISBN: 978-0-13-603337-0)
<b>Discussion:</b>	<a href="http://www.scitech.au.edu/forum/">http://www.scitech.au.edu/forum/</a>

**COURSE POLICIES:**

- Students are required to have 80% of class attendance to be eligible for the final written examination. Absence of 20% is "INCLUSIVE" for all reasons such as illness, accidents, and etc.
- Proper uniform is required in class, or attendance will not be checked.
- Examination contents will be based on assigned reading materials and class assignments.

**COURSE EXAMINATIONS**

<b>Midterm-Written:</b>	Date: 12-01-2011	Time: 09:00-11:00
	Topics: Class 1 - 7	
<b>Final-Written:</b>	Date: 04-03-2011	Time: 09:00-12:00
	Topics: Class 1 - 15	

**COURSE CONTENTS AND TENTATIVE SCHEDULE**

Class	Topic	Chapter
Class 1	Introduction	Chapter 1
Class 2	Operating-System Structures	Chapter 2
Class 3	Processes	Chapter 3
Class 4	Threads	Chapter 4
Class 5	CPU Scheduling	Chapter 5
Class 6-7	Process Synchronization	Chapter 6
Class 8	Deadlocks	Chapter 7
Class 9	Main Memory	Chapter 8
Class 10-11	Virtual Memory	Chapter 9
Class 12	File-System Interface	Chapter 10
Class 13	File-System Implementation	Chapter 11
Class 14	Mass-Storage Structure	Chapter 12
Class 15	I/O Systems	Chapter 13