Kingdom of Saudi Arabia

Ministry Of Higher Education

Majmaah University

Deanship of Quality assurance

and Human Development

Course Specification

Operating System Concept

CIS 229-Z

(Summary)

1432/1433

Course Specification

Institution : **Majmaah University**

College/Department : **College of Science in AL-Zulfi / Computer Science& Information**

A- Course Identification and General Information

1. Course title and code**: Operating system concept - CIS 229-Z**

2. Credit hours: **4**

4. Name of faculty member responsible for the course : **Mohammad Al-Othman**

5. Level/year at which this course is offered**: 4 level / 2 year**

6. Co-requisites for this course (if any) : CIS 126

7. Location if not on main campus **: College of Science in AL-Zulfi**

B- Objectives

1. To explain what operating systems are, what they do, and how they are evolved, designed, and constructed.
2. To understand the process concept and concurrency as the heart of modern operating systems.
3. To compare and contrast the common CPU scheduling algorithms used for both preemptive and non-preemptive scheduling of tasks in operating systems, such as priority, performance comparison, and fair-share schemes.
4. To understand the concept of process synchronization and to explain the Concept of algorithms used to prevent, avoid, and detect deadlocks.
5. To explain the concept of memory management and how it is realized in hardware and software.
6. To explain the concept of virtual memory.

C- Course Description (Note: General description in the form to be used for the Bulletin or Handbook should be attached)

1. Topics to be Covered		
Topics	**No Of Week**	**Contact hours**
Introduction	1	4
Operating System Structure	1	4
Processes	2	8
Threads	2	8
CPU Scheduling	2	8
Deadlocks	2	8
Memory Management	2	8
Virtual Memory	2	8

2. Course components (total contact hours per semester):				
Lecture: **40**	Tutorial:	Laboratory: **16**	Practical/Field work/Internship	Other:

3. Additional private study/learning hours expected for students per week. (This should be an average: for the semester not a specific requirement in each week)

D- E-Learning Resources.

1.   Required Text(s) :   • **Operating System Concepts ,Siblerschatz and Galvin , Addison Wesley, Inc.,2005,7th edition .**

2. Essential References :
 	
     • **W. S. Davis and T. M. Rajkumar, Operating Systems A Systematic View, 5th Edition, Addison Wesley, 2001.**
 	
     • **S. Tanenbaum, Modern Operating Systems, 2nd Edition, Prentice Hall, 2001.**
 	
     • **H.M. Deitel, An Introduction to Operating Systems, 2nd Edition, Addison-Wesley, Reading, MA 1990.**

3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List)   • **Gary Nutt ,Steven V. Earhart (Editor), UNIX Programmer's Manual, Holt, Rinehart, and Winston, New York, NY 1986.**
4-.Electronic Materials, Web Sites etc   • **http://os-book.com/**
5- Other learning material such as computer-based programs/CD, professional standards/regulations

E- Assessment

Assessment Policy		
Assessment Type	**Week**	**Weight**
First Exam	**6**	**15%**
Second Exam	**12**	**15%**
Quizzes and Home works		**10%**
Final Exam		**60%**
Total		**100%**