

## Course Specifications

Programme(s) on which the course is given    M.Sc. of Computer Science

Major or minor element of programs	Major
Department offering the program	Mathematics
Department offering the course	Mathematics
<b>Academic year / Level</b>	<b>Post-graduate studies</b>
<b>Semester</b>	
Date of specification revision	
Date of specification approval	September 2008

### **A- Basic Information**

Title: Operating Systems	Code: M631
Credit Hours: 4	Total: 4 hr.
Lecture: 4            Tutorial: -	Practical: -            Other: -

### **B- Professional Information**

1 – Overall Aims of Course

- **Design and implementation of operating systems, and functionality of operating systems. Differences between distributed and network operating systems. Understand how processes work and threads. Problems of interprocess communication and deadlock.**

2 – Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

**The student should be able to**

- a1-** define operating systems.
- a2-** define operating systems major activities.
- a3-** distinguish between distributed and network operating systems.
- a4-** understand what is process and thread.

b- Intellectual Skills

- b1-** Understand how operating systems manages a computer.
- b2-** Know the different available operating systems.
- b3-** Understand what is deadlock and how is it solved.

c- Professional and Practical Skills

**c1-** define different operating systems, while discussing the pros and cons.

**c2-** Differentiating between process and thread.

**c3-** Getting to know OS functions and the hardware to be managed.

d- General and Transferable Skills

**d1-** The operating systems functions and hardware technology.

**d2-** The required work of different operating systems.

### 3- Contents

Topics	No. of hours	Lecture
Introduction to Operating systems,	4	2
Operating systems major activities: process management, input/output management, resource management, file management	6	3
Details of process management, dispatcher, and process state	4	2
Details of resource management	4	2
Introduction of distributed and network OS	4	2
Threads and processes	4	2
Deadlock and interprocess communication	2	1

### 4- Teaching and learning methods

4.1- Lectures

4.2- Working on hand in assignments

4.3- Project and report knowledge collection

### 5- Student assessment methods

5.1 Mid term written exam to assess understanding competencies

5.2 Programming Project to assess programming skills

5.3 Oral Exam to assess attendance and interesting.

5.4 Semester hand in assignments to assess understanding professionalism.

5.5 Final term written Exam to assess comprehension.

### Assessment schedule

Assessment 1	Mid term	Week 4 and 7
Assessment 2	semester activities	Week 5 and 8
Assessment 3	Final Project/report	Week 13
Assessment 4	Final term written exam	Week 14

### 6- Weighting of assessments

Mid-Term Examination	20%
Semester Work (homework assignments + quizzes)	10%
Project	10%
Final-term written Examination	60%
Total	100%

### Any formative only assessments

#### 7- List of references

##### 7.1- Course notes

Collected and prepared notes that cover the main topics in the course content

##### 7.2- Essential books (text books)

Elementary text books under the title: *Operating Systems*.

##### 7.3- Recommended books :

##### 7.4- Periodicals, Web sites, ... etc

Non.

#### 8- Facilities required for teaching and learning

Lecture: PC's - packages for ready made scientific programs. - Data Show, instrumentation, and packages.

Names of professors/lecturers contributing to the design and delivery of the course

i Dr. Hani Ibrahim

ii Dr. P El-Kafrawy

Course coordinator:

Head of Department: Mohamed A. Ramadn

Date: / /

