



Benha University Faculty of Engineering at Shobra Electrical Engineering Department

#### **A-Basic Information**

Course Title: Tests (4) Code: ECE 424

Lecture: Tutorial: Practical: 4 Total: 4

Program on which the course is given: B.Sc. Electrical Engineering (Communications)

Major or minor element of program: Major

Department offering the program:
Department offering the course:

Academic year / level:

Electrical Engineering Department
Electrical Engineering Department
Fourth Year / Second Semester

**Date of specifications approval:** 10/5/2006

### **B- Professional Information**

#### 1- Overall aims of course:

To improve the practical skills to design, analyse and evaluate experiments.- Deep understanding of the role of Electronics in Communication systems.

## 2- Intended learning outcomes of course (ILOs)

By completion of the course, the student should be able to:

## a- Knowledge and Understanding

- a.10) Technical language and report writing.
- a.18) Communication systems

#### **b- Intellectual Skills**

b.14) Plan, conduct and write a report on a project or assignment.







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b.15) Analyze the performance of digital and analog communication, mobile communication, coding and decoding systems.

#### c- Professional and Practical Skills

- c.12) Prepare and present technical reports.
- c.15) Use relevant laboratory equipment and analyze the results correctly.
- c.16) Troubleshoot, maintain and repair almost all types of electronic systems using the standard tools.

#### d- General and Transferable Skills

- d.10) Write technical reports and presentation.
- d.11) Share ideas and communicate with others according to the rules of professional ethics.
- d.12) Develop skills related to creative and critical thinking as well as problem solving.

#### **3- Contents**

No	Topic	No. of	ILOs	Teaching / learning methods	Assessment method
	10	hours	N #7"	and strategies	8
1	Basic Active filters	4	c15	Practical training / laboratory	Assignments, Oral exam
2	Basic Active filters	4	c15	Practical training / laboratory	Assignments, Oral exam
3		4	a10, a18, b14, b15, c12,	Practical training / laboratory	Assignments, Oral exam
	phase locked loop circuits		c15, c16, d10, d11, d12		
4		4	a10, a18, b14, b15, c12,	Practical training / laboratory	Assignments, Oral exam
	phase locked loop circuits		c15, c16, d10, d11, d12	(0)11.5	
5		4	a10, a18, b14, b15, c12,	Practical training / laboratory	Assignments, Oral exam
	frequency synthesizers		c15, c16, d10, d11, d12		







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6		4	a10, a18, b14, b15, c12,	Practical training / laboratory	Assignments, Oral exam			
	frequency synthesizers	- 2	c15, c16, d10, d11, d12					
7	sampling and encryption	4	a10, a18, b14, b15, c12,	Practical training / laboratory	Assignments, Oral exam			
			c15, c16, d10, d11, d12					
8	8 Mid term exam							
9		4	a10, a18, b14, b15,	Practical training / laboratory	Assignments, Oral exam			
	sampling and encryption		c12, c15, c16, d10,		99			
		5 /	d11, d12	10.	64			
10		4	a10, a18, b14, b15,	Practical training / laboratory	Assignments, Oral exam			
	TDMA		c12, c15, c16, d10,					
		TA.	d11, d12	11 1	13/1/			
11		4	a10, a18, b14, b15,	Practical training / laboratory	Assignments, Oral exam			
	TDMA		c12, c15, c16, d10,	A S 1 A S				
			d11, d12		1			
12		4	a10, a18, b14, b15,	Practical training / laboratory	Assignments, Oral exam			
	TDMA		c12, c15, c16, d10,					
			d11, d12	111111				
13	FDMA	4	a10, a18, b14, b15,	Practical training / laboratory	Assignments, Oral exam			
			c12, c15, c16, d10,					







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			d11, d12		
14	FDMA	4	a10, a18, b14, b15, c12, c15, c16, d10, d11, d12	Practical training / laboratory	Assignments, Oral exam
15	1	121			
16		٣,			

## **4- Teaching and Learning Methods**

Practical training / laboratory

Class activity

Assignments / homework

### **5- Student Assessment Methods**

Assignments to assess knowledge and intellectual skills.

Quiz to assess knowledge, intellectual and professional skills.

Mid-term exam to assess knowledge, intellectual, professional and general skills.

Oral exam to assess knowledge and intellectual skills.

Final exam to assess knowledge, intellectual, professional and general skills.

#### **Assessment Schedule**

Assessment 1 on weeks 2, 5, 9, 11

Assessment 2 Quizzes on weeks 4, 6, 10, 12

Assessment 3 Mid-term exam on week 8

Assessment 4 Oral Exam on week 14

Assessment 5 Final exam on week 15





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## **Weighting of Assessments**

05% Home assignments

05% Quizzes

10% Mid-term examination

20% Oral examination

60% Final-term examination

100% Total

#### 6- List of References

Course notes

Course notes prepared by instructor.

Essential books

Recommended books

## 7- Facilities required for teaching and learning

Lecture room equipped with overhead projector Presentation board, computer and data show Laboratory

**Course coordinator:** Dr. Ashraf M. Hafez

**Course instructor:** Dr.

**Head of Department:** Prof. Dr. Mousa Abd-Allah Date: 1/1/2012