



Faculty of  
Engineering at  
Shoubra

## Model No.12

# Course Specifications : PROJECT

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**University :** Benha university

**Faculty :** Faculty of Engineering at Shoubra

**Department :** Electrical Engineering Department

### 1- Course Data

Course Code : ECE 414

Course Title : Project

Study Year : Fourth Year

Specialization :

Teaching Hours:

Lecture :

Tutorial :

Practical : 5

### 2- Course Aim

By the end of the course the students will be able to:

- Provide a broadly based educational experience in which the essential scientific and technical elements of the engineering curriculum are integrated with the humanities and social sciences to prepare students with competencies needed for personal enrichments, career development, and lifelong learning.
- Ensure that the graduates have an understanding of the highest standards of personal and professional integrity, and ethical responsibility in the practice of electronics and communication engineering.
- Ensure that the graduates are well trained in several areas of electronics and communication engineering, and are able to identify, formulate, and solve a wide range of electronics and communication engineering problems using modern engineering tools and techniques.

### 3- Intended Learning Outcomes of Course (ILOS)

#### a- Knowledge and Understanding

On completing this course, students will be able to:

- a.1) Characteristics of engineering materials related to discipline.(a3)
- a.2) Principles of design including elements design, process and/or a system related to specific disciplines.(a4)
- a.3) Methodologies of solving engineering problems, data collection interpretation.(a5)
- a.4) Current engineering technologies as related to disciplines.(a8)
- a.5) Technical language and report writing.(a10)
- a.6) Contemporary engineering topics.(a12)

#### b- Intellectual Skills

At the end of this course, the students will be able to:

- b.1) Select appropriate mathematical and computer-based methods for modeling and analyzing problems.(b1)
- b.2) Select appropriate solutions for engineering problems based on analytical thinking.(b2)
- b.3) Think in a creative and innovative way in problem solving and design.(b3)
- b.4) Assess and evaluate the characteristics and performance of components, systems and processes.(b5)
- b.5) Solve engineering problems, often on the basis of limited and possibly contradicting information.(b7)
- b.6) Develop innovative solutions for the practical industrial problems.(b13)
- b.7) Plan, conduct and write a report on a project or assignment.(b14)
- b.8) Incorporate environmental dimensions and risk managements in system designs. (b11)

**c- Professional Skills**

On completing this course, the students are expected to be able to:

- c.1) Professionally merge the engineering knowledge, understanding, and feedback to improve design, product and/or services.(c1)
- c.2) Create and/or re-design a process, component or system, and carry out specialized engineering designs.(c3)
- c.3) Practice the neatness and aesthetics in design and approach.(c4)
- c.4) Use relevant laboratory equipment and analyze the results correctly.(c15)

**d- General Skills**

At the end of this course, the students will be able to:

- d.1) Collaborate effectively within multidisciplinary team.(d1)
- d.2) Work in stressful environment and within constraints.(d2)
- d.3) Communicate effectively(d3)
- d.4) Lead and motivate individuals.(d5)
- d.5) Effectively manage tasks, time, and resources.(d6)

**4- Course Contents**

No.	Topics	No of hours
1	Project Selection and Specification	10
2	Literature Review and Background Study	20
3	Planning For The Project	10
4	Analysis and Design	20
5	Implementation	20
6	Testing	10
7	Debugging and Finalization	20
8	Documentation	10

**5- Teaching and Learning Methods**

- 5.1-Modified Lectures
- 5.2- Practical training / laboratory
- 5.3- Class activity
- 5.4- Case study
- 5.5- Assignments / homework

**6- Teaching and Learning Methods of Disables**

- 6.1- nothing .

**7- Student Assessment**

**a- Student Assessment Methods**

1	Assignments to assess knowledge, intellectual and general skills.
2	Quiz to assess knowledge, intellectual. General skills
3	Mid-term exam to assess knowledge, intellectual skills.
4	Final exam to assess knowledge, intellectual. General skills

## b- Assessment Schedule

No.	Assessment	Week
1	Presntation I	8
2	Presntation II	15
3	Oral Exam And Discussions	24

## c- Weighting of Assessments

Assessment	Weight
Presntation I	15%
Presntation II	15%
Oral Examination	10 %
Practical Exam. And Discussions	60 %
Total	100 %

## 8- List of References

Course notes

The references are depending on the project topics.

Essential books

The essential books are depending on the project topics.

Recommended books

The recommended books are depending on the project topics.

**- Course Coordinator :**

Prof.Dr.Hala Mansour

**Head of Department : Prof. Dr. Sayed Aboo-Elsood Ward**



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## Model No.11A Course Specifications : PROJECT

**University :** Benha university

**Faculty :** Faculty of Engineering at Shoubra

**Department :** Electrical Engineering Department

### Matrix of Knowledge and Skills of the course

<b>N o.</b>	<b>Topics</b>	<b>week</b>	<b>Basic Knowle dge</b>	<b>Intellect ual Skills</b>	<b>Professi onal Skills</b>	<b>Gen eral Skill s</b>
1	Collecting data	1,2,3,4,5	a1, a2, a3, a4, a5, a6	b1, b2		
2	Planning for the project	6,7,8,9,10,12,13	a1, a3, a3, a4, a5, a6,	b1, b2, b3, b4, b5, b6, b7,	c1, c2, c3, c4, c6,	d1, d2, d3, d4, d5,
3	Implemen tation steps of the project	14,15,16,17,18,19,20, 21,22,23,24	a1, a2, a3, a4, a5, a6,	b1, b2, b3, b4, b5, b6, b7,b8	c1, c2, c3, c4, c6,	d1, d2, d3, d4, d5,

**- Head of Department : Prof. Dr. Sayed Aboo-Elsood Ward**

## Matrix of course content and ILO's

**Course Title:** PROJECT

**Code:** ECE 447

**Lecture:**

**Tutorial:**

**Practical:** -5

**Total:** 5

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

**Major or minor element of program:** Major

**Department offering the program:** Electrical Engineering Department

**Department offering the course:** Electrical Engineering Department

**Academic year / level:**

**Fourth Year / first and second Semester 2014-2015**

**Date of specifications approval:** 20/6/2010

<b>Course content</b>	<b>a1</b>	<b>a2</b>	<b>a3</b>	<b>a4</b>	<b>a5</b>	<b>a6</b>	<b>b1</b>	<b>b2</b>	<b>b3</b>	<b>b4</b>	<b>b5</b>	<b>c1</b>	<b>c2</b>	<b>c3</b>	<b>d1</b>	<b>d2</b>	<b>d3</b>
Collecting data	✓		✓			✓		✓	✓			✓	✓		✓	✓	✓
Planning for the project		✓		✓			✓				✓	✓		✓	✓		
Implementation steps of the project	✓	✓		✓	✓			✓		✓	✓	✓	✓		✓	✓	✓

## Matrix of course aims and ILO's

**Course Title:** PROJECT

**Code:** ECE 447

**Lecture:**

**Tutorial:**

**Practical:** - 5

**Total:**5

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**Major or minor element of program:** Major

**Department offering the program:** Electrical Engineering Department

**Department offering the course:** Electrical Engineering Department

**Academic year / level:** **Fourth** Year / **second** Semester 2014-2015

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Course content	a1	a2	a3	a4	a5	a6	b1	b2	b3	b4	b5	c1	c2	c3	d1	d2	d3
Provide a broadly based educational experience in which the essential scientific and technical elements of the engineering curriculum are integrated with the humanities and social sciences to prepare students with competencies needed for personal enrichments	✓		✓			✓		✓	✓			✓	✓		✓	✓	✓
Ensure that the graduates have an understanding of the highest standards of personal and professional integrity, and ethical responsibility in the practice of electronics and communication engineering.		✓		✓			✓				✓	✓		✓	✓		

**Course coordinator:** Prof.Dr.Hala Mansour

**Head of department:** Prof. Dr. Sayed Ward