



BENHA UNIVERSITY



FACULTY OF ENGINEERING AT SHOUBRA

COURSE SPECIFICATIONS (2014-2015)

Model No.12

Course Specifications: Industrial Organization

University: Benha University

Faculty: Faculty of Engineering at Shoubra

Department offering the program: Mechanical Engineering Department

Department offering the course: Mechanical Engineering Department

1- Course Data

Course Code: MDP412

Course Title: Industrial Organization

Specialization: production Mechanical Engineering department

Course Type: Compulsory **Study Year:** Fourth Year

Teaching Hours: Lecture: 3 Tutorial: 2 Practical: 0 Total: 5

2- Course Aim

For students undertaking this course, the aims are to:

1. Identify the different types of production systems and organization structures.
2. Identify the different types of cost elements in the manufacturing systems.
3. List the concepts and principles of the cost estimation and analysis.
4. Define the basic principles of the supply chain management.

3- Intended Learning Outcomes of Course (ILO's)

- a. **Knowledge and Understanding Skills:** On completing this course, students will be able to demonstrate the knowledge and understanding of:
 - a.1) Methodologies of solving engineering problems in the production systems (A5).
 - a.2) Quality assurance systems, HSE (Health, Safety, Environmental) requirements in the production systems (A6).
 - a.3) Business and management principles relevant to the production systems (A7).
 - a.4) Management and business techniques in the production systems (A2).
- 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 the production problems (B1).
 - b.2) Select appropriate solutions for production problems based on analytical thinking (B2).
 - b.3) Assess and evaluate the characteristics and performance of components, systems and processes (B5).
 - b.4) Solve engineering problems, often on the basis of limited and possibly contradicting information (B7).
- c. **Practical and Professional Skills:** On completing this course, the students are expected to be able to:
 - c.1) Apply knowledge of mathematics and engineering practice to solve engineering problems (C1).
 - c.2) Use a wide range of analytical tools, techniques, and software packages pertaining to the industrial organization (C6).
 - c.3) Apply safe systems at work and observe the appropriate steps to manage risks (C8).



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- d. General and Transferable 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).

4- Course Contents

Week no.	Topics
1	Production Management
2	Process Management
3	Supply Chain Management
4	Cost Estimation
5	Cost Analysis
6	Production Planning
7	Strategic Planning
8	Midterm exam
9	Feasibility Study
10	Value Analysis
11	Performance Evaluation
12	Case Studies-1 (self-study)
13	Case Studies-2 (self-study)
14	Oral Exam
15	Final exam

5- Teaching and Learning Methods of Disables

- Lectures
- Seminar/Workshop/Site visit
- Class activity.
- Case study.
- Assignments / homework.

6- Teaching and Learning Methods of Disables

- Nothing

7- Student Assessment

a- Student Assessment Methods

1. Three assignments to assess the training skills.
2. Four quiz to assess the sheet solving.
3. Mid-term exam to assess the course understanding.
4. Oral exam to assess the Presentation skills.
5. Final exam to assess the course understanding.
6. Other: site visit to assess the best practice

b- Assessment Schedule

NO.	Assessment	Week
1	Assignments	2,4,6
2	Quizzes	5, 7, 10, 11
3	Mid-term exam	8
4	Oral Exam	14
5	Final exam	15



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c- Weighting of Assessments

Assessment	Weight (%)
Mid-Term Examination	18 %
Final-Term Examination	64 %
Practical Examination	5 %
Semester work	3 %
Other types of assessment	10 %
Total	100

8- List of References

a- Course Notes:

- 1- Course notes prepared by instructor (Power Point & Case Studies)

b- Books

1. B. Kumar, "Industrial Engineering & Management", Khana Pub., 2004.

c- Recommended Books

2. Max Kurtz "Hand Book of Engineering Economics", Mc-Graw Hill, 1984.

d- Web Sites

- Periodicals Web sites, etc

Course Coordinator: Prof. Dr. Attia Hussein Jumaa

Head of Department: Prof. Dr. Osama Ezzat Abdelatif



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FACULTY OF ENGINEERING AT SHOUBRA

COURSE SPECIFICATIONS (2014-2015)

Model No.11A

Course Specifications: Industrial Organization

University: Benha University

Faculty: Faculty of Engineering at Shoubra

Department offering the program: Mechanical Engineering Department

Department offering the course: Mechanical Engineering Department

Matrix of Knowledge and Skills of the Course

no.	Topics	Week no.	Knowledge and Understanding Skills	Intellectual Skills	Practical and Professional Skills	General and Transferable Skills
1	Production Management	1	a4, a1	b1, b2	c1	d1
2	Process Management	2	a4, a2	b3, b4	c2	d2
3	Supply Chain Management	3	a2, a3	b1, b4	c3	d3
4	Cost Estimation	4	a4, a3	b2, b3	c2	d2
5	Cost Analysis	5	a1, a3	b1, b3	c3	d3
6	Production Planning	6	a4, a1	b3, b4	c1	d1
7	Strategic Planning	7	a2, a4	b1, b2	c3	d1
8	Midterm exam					
9	Feasibility Study	9	a1, a2	b2, b3	c2	d3
10	Value Analysis	10	a4, a2	b2, b4	c1	d2
11	Performance Evaluation	11	a2, a3	b1, b4	c2	d2
12	Case Studies-1 (self-study)	12	a4	b2	c1, c3	d1, d3
13	Case Studies-2 (self-study)	13	a3	b3	c1, c2	d2, d3
14	Oral Exam	14				
15	Final exam					

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Matrix of Course Aims and ILO's

Course Title: Industrial Organization

Course Code: MDP412

Teaching Hours: Lecture: 3 Tutorial: 2 Total: 5

Major or minor element of program: Major

Program on which the course is given: B.Sc. Mechanical production Engineering

Department offering the program: Mechanical Engineering Department

Academic year / level: 2014-2015 Fourth Year / First Semester

Date of specifications approval: 2014

Course aims	Basic Knowledge	Intellectual Skills	professional Skills	General Skills
1- Identify the different types of production systems and organization structures.	a1,a2	b1	c1	d1
2- Identify the different types of cost elements in the manufacturing systems.	a2,a3	b3,b4	c3	d1
3- List the concepts and principles of the cost estimation and analysis.	a3	b2	c2	d2
4- Define the basic principles of the supply chain management.	a4	b1,b4	c2	d3

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