



BENHA UNIVERSITY



FACULTY OF ENGINEERING AT SHOUBRA

**COURSE SPECIFICATIONS (2014-2015)**

**Model No.12**

**Course Specifications: Production Management and Quality Control**

**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:** MDP465

**Course Title:** Production Management and Quality Control

**Specialization:** Mechanical Production Engineering

**Course Type:** Elective

**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 management systems.
2. Understand the concepts and principles of the process plans.
3. Know the different tools of quality control and the different ISO requirements.
4. Enhance practical skills in the fields of production management & Quality control to increase ability for employment.

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

**a. Knowledge and Understanding Skills:** On completing this course, students will acquiring and understanding of :

- a.1) Methodologies of solving engineering problems in the production systems. (A.5)
- a.2) Quality assurance systems (ISO 9001), HSE (Health, Safety, Environmental) requirements in the production systems. (A.6)
- a.3) Business and management principles relevant to the production systems. (A.7)
- a.4) Management and business techniques in the production systems. (A.20)

**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. (B.1)
- b.2) Select appropriate solutions for production problems based on analytical thinking. (B.2)
- b.3) Assess and evaluate the characteristics and performance of components, systems and processes (B.5)

**c. Practical and Professional Skills:** On completing this course, the students are expected to be able to:

- c.1) Use a wide range of analytical tools, techniques, and software packages pertaining to the quality control (C.6)
- c.2) Apply safe systems at work and observe the appropriate steps to manage risks. (C.8)

**d. General and Transferable Skills:** At the end of this course, the students will be able to:

- d.1) Communicate effectively. (D.3)
- d.2) Effectively manage tasks, time, and resources. (D.6)

**COURSE SPECIFICATIONS (2014-2015)****4- Course Contents**

Week no.	Topics
1	Production Management
2	Quality Management
3	Production Planning Tools
4	Quality Control Tools
5	Resource Estimation
6	Control Charts
7	Material Planning
9	ISO 9001:2008
10	Production Schedule
11	Six-Sigma Approach
12	Case Studies-1 (self-study)
13	Case Studies-2 (self-study)

**5- Teaching and Learning Methods**

- 5.1 Lectures
- 5.2 Class activity
- 5.3 Case study
- 5.4 Assignments/ Homework

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

5. Nothing.

**7- Student Assessment****a- Student Assessment Methods**

1. Six assignments to assess knowledge and intellectual skills.
2. Two quizzes to assess knowledge, intellectual and professional skills.
3. Midterm exam to assess knowledge, intellectual, professional and general skills.
4. Final exam to assess knowledge, intellectual, professional and general skills.

**b- Assessment Schedule**

NO.	Assessment	Week
1	Assignments	2, 4, 5, 7, 11, 12
2	Quiz	4, 10
3	Midterm exam	8
4	Final exam	15

**c- Weighting of Assessments**

Assessment	Weight (%)
Midterm Examination	20
Final Term Examination	64
Oral Examination	00
Semester Work	16
Other Types of Assessment	00
<b>Total</b>	<b>100</b>



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## **COURSE SPECIFICATIONS (2014-2015)**

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### **8- List of References**

**a- Course Notes:** Course notes prepared by instructor.

#### **b- Recommended Books**

1. Pande, P, Neuman,R.P., and Cavanagh,R.R., "The Six Sigma Way", New York:McGraw Hill, 2000.
2. Max Kurtz "Hand Book of Engineering Economics", MacGrawHill, 2002.

**Course Coordinator:** 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: Production Management and Quality Control**

**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	Basic Knowledge	Intellectual Skills	Professional Skills	General Skills
1	Production Management	1	a.1,a.2	b.1 , b.2	c.1	
2	Quality Management	2	a.1,a.2	b.1 , b.2	c.1	
3	Production Planning Tools	3	a.1		c.1	d.1
4	Quality Control Tools	4	a.2 , a.4	b.2 , b.3		
5	Resource Estimation	5		b.2 , b.3	c.2	
6	Control Charts	6	a.2			
7	Material Planning	7		b.2 , b.3		d.1
8	Midterm exam	8	a.2	b.2	c.1	
9	ISO 9001:2008	9	a.2 , a.4		c.2	
10	Production Schedule	10		b.2 , b.3	c.2	
11	Six-Sigma Approach	11	a.2 , a.4			d.2
12	Case Studies-1 (self-study)	12	a.4	b.3	c.2	
13	Case Studies-2 (self-study)	13	a.4	b.3	c.2	d.2
14	Final exam	14	a.2, a.4	b.2 , b.3	c.2	d.1

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**COURSE SPECIFICATIONS (2014-2015)**

**Matrix of course aims and ILO's**

**Course Title:** Production Management and Quality Control **Code:** MDP465

**Lecture:** 3 **Tutorial/Practical:** 2 **Total:** 5

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

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

**Department offering the program:** Mechanical Engineering Department

**Department offering the course:** Mechanical Engineering Department

**Academic year / level:** Fourth Year / Second semester

**Date of specifications approval:** 2014

Course aims	Basic Knowledge	Intellectual Skills	professional Skills	General Skills
Identify the different types of production management systems.	a1,a2	b1,b2	c1	d1,d.2
Understand the concepts and principles of the process plans.	a1,a2, a3	b2 b3	c1, c2	d.2
Know the different tools of quality control and the different ISO requirements.	a2, a3	b3	c2	d1,d.2
Enhance practical skills in the fields of production management & Quality control to increase ability for employment.	a3, a4	b2,b3	c1, c2	d.2

**Course Coordinator:** Dr. Attia Hussein Jumaa

**Head of Department:** Prof. Dr. Osama Ezzat Abdelatif