



BENHA UNIVERSITY



FACULTY OF ENGINEERING AT SHOUBRA

COURSE SPECIFICATIONS (2014-2015)

Model No.12

Course Specifications: Design of Materials Handling Equipment

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: MDP366

Course Title: Design of materials handling equipment

Specialization: Mechanical Production Engineering

Course Type: Elective

Study Year: Third Year

Teaching Hours: Lecture: 4 Tutorial:2

Practical: 0

Total: 6

2- Course Aim

For students undertaking this course, the aims are to:

1. Recognize the several materials handling equipment.
2. Have the ability to design simple materials handling equipment in several industrial fields such as mining industry and automobile industry ...etc.

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) Characteristics of engineering materials related to Design of materials handling equipment. (A3)
- a- 2) Methodologies of material handling systems and facilities design. (A5)
- a- 3) Types of material handling equipment and techniques.(A13)

b. Intellectual Skills: At the end of this course, the students will be able to:

- b- 1) make engineering calculations in order to design facilities layout. (B2)
- b- 2) design and analyze different material handling systems. (B11)
- b- 3) Evaluate and appraise designs of material handling equipment. (B15)
- b- 4) Select appropriate manufacturing method considering design requirements. (B18)

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

- c- 1) design and manufacture a sample of material handling equipment. (C3)
- c- 2) Use a wide range of analytical tools, techniques, and software packages in planning of facility layout .(C6)
- c- 3) Use basic workshop equipment safely. (C15)

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

- d- 1) Effectively manage tasks, time, and resources. (D6)
- d- 2) Search for information and engage in life-long self-learning Design of materials handling equipment. (D7)
- d- 3) Refer to relevant literatures. (D9)



BENHA UNIVERSITY



بنها جامعة



FACULTY OF ENGINEERING AT SHOUBRA

COURSE SPECIFICATIONS (2014-2015)

4- Course Contents

Week no.	Topics
1	Introduction to material handling equipment
2	Facility Layout-1
3	Facility Layout-2
4	Detail Design-1
5	Detail Design-2
6	Detail Design-3
7	Conveyor Systems Design
9	Material Handling Systems Design-1
10	Material Handling Systems Design-2
11	Material Handling Systems Design-3
12	Material Handling Systems Design-4
13	Material Handling Equipment Evaluation-1
14	Material Handling Equipment Evaluation-2

5- Teaching and Learning Methods

- 5.1 Lectures
- 5.2 Tutorial
- 5.3 Class activity
- 5.4 Case study
- 5.5 Seminar / workshop

6- Teaching and Learning Methods of Disables

3. Nothing.

7- Student Assessment

a- Student Assessment Methods

- 1. Five 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	3, 5, 7, 10, 11
2	Quiz	4, 9
3	Midterm exam	8
4	Oral exam	-
5	Final exam	15

c- Weighting of Assessments

Assessment	Weight (%)
Midterm Examination	20
Final Term Examination	67
Oral Examination	00
Semester Work	8
Other Types of Assessment	5
Total	100



BENHA UNIVERSITY



FACULTY OF ENGINEERING AT SHOUBRA

COURSE SPECIFICATIONS (2014-2015)

8- List of References

a- Course Notes: Course notes prepared by instructor.

b- Recommended Books

1. Manufacturing Facilities Design and Material Handling 4 th edition by Matthew P. Stephens, Fred E. Meyers 2005
2. Material Handling Systems: Designing for Safety and Health by Charles Reese 2000.

Course Coordinator: Prof. Dr. Raouf Tawfik Fahmy Gabriel

Head of Department: Prof. Dr. Osama Ezzat Abdelatif



BENHA UNIVERSITY



FACULTY OF ENGINEERING AT SHOUBRA

COURSE SPECIFICATIONS (2014-2015)

Model No.11A

Course Specifications: Design of Materials Handling Equipment

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	Introduction to material handling equipment	1	a1	b2		d1
2	Facility Layout-1	2	a1	b2	c1	
3	Facility Layout-2	3	a2	b1	c1	
4	Detail Design-1	4	a2	b1		d1
5	Detail Design-2	5	a2	b3		d2
6	Detail Design-3	6	a3	b3	c3	
7	Conveyor Systems Design	7	a3	b1	c2	
8	Midterm Exam	8				
9	Material Handling Systems Design-1	9	a1	b1		d3
10	Material Handling Systems Design-2	10	a2	b4	c1	
11	Material Handling Systems Design-3	11	a2	b2	c3	
12	Material Handling Systems Design-4	12	a3	b2		d2
13	Material Handling Equipment Evaluation-1	13	a2	b4		d2
14	Material Handling Equipment Evaluation-2	14				
15	Final Exam	15				

Course Coordinator: Prof. Dr. Raouf Tawfik Fahmy Gabriel

Head of Department: Prof. Dr. Osama Ezzat Abdelatif



BENHA UNIVERSITY



FACULTY OF ENGINEERING AT SHOUBRA

COURSE SPECIFICATIONS (2014-2015)

Matrix of Course Aims and ILO's

Course Title: Design of Materials Handling Equipment

Course Code: MDP366

Teaching Hours: Lecture: 4 Tutorial: 2 Total: 6

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

Department offering the course: Mechanical Engineering Department

Academic year / level: 2014-2015 Third Year / Second semester

Date of specifications approval: 2014

Course aims	Basic Knowledge	Intellectual Skills	Professional Skills	General Skills
1. Recognize the several materials handling equipment.	a1, a2	b1, b3, b4	c3	d3
2. Have the ability to design simple materials handling equipment in several industrial fields such as mining industry and automobile industry ...etc.	a1, a3	b2	c1, c2	d1, d2

Course Coordinator: Prof. Dr. Raouf Tawfik Fahmy Gabriel

Head of Department: Prof. Dr. Osama Ezzat Abdelatif