

# **COURSE SPECIFICATIONS**

**University: Benha University**

**Faculty: High Institute of Technology**

## **Course specifications**

### Course Description

- Training exercises based on manufacturing and assembling of multi-part components – Intensive use of machine tools including wood working machines

Programs take this course through their curricula:

- Degree of Engineering and Technology in Mechanical Engineering (Production and Power)

Departments offering these programs are:

- Mechanical Engineering

Academic year / Level

- Second year

Date of specification approval

- 2009 G.

## **A- Basic Information**

Title: Engineering Applications	Code: M 260	
Credit Hours: 4	Lecture: -	
Tutorial: -	Practical: 4	Total: 4

## **B- Professional Information**

### 1 - Overall aims of course

- Use of production facilities to produce a part of mechanical system
- Read and interpret working drawings
- Produce sandwich format report
- Use efficiently workshop tools and machine
- Assemble simple mechanisms and mechanical systems

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

- Use workshop tools
- Use manufacturing machines
- Learn necessary calculations needed for producing components
- Work within a group in a mini-project

#### **a. Knowledge and understanding:**

- a.1 Know the professional use of production machines
- a.2 Formalization with assembly techniques
- a.3 Know and fix faults associated manufacturing and assembly processes

#### **b. Intellectual skills**

- b.1 Composing multi-component parts from simpler components
- b.2 Use fixtures and assembly aides and measuring devices in workshop
- b.3 Conduct check procedure against manufacturing and assembly processes

#### **c- Professional and practical skills**

- c.1 Design simple and efficient methods for assembly purposes

#### **d- General and transferable skills**

- d.1 Gain enough experience to deal with workshop tasks
- d.2 Develop team working skills

### 3- Contents

Topic	No. of Hours	Lecture	Tutorial/Practical
Manufacturing machines	16	-	16
Workshop tools	12	-	12
Assembly processes	16	-	16
Finishing processes	12	-	12
Process and procedure sheets	12	-	12
Mini project	52	-	52

### 4- Teaching and learning methods

- 4.1-Direct instruction
- 4.2-Supervised training
- 4.3-Project advising
- 4.4-Project report

### 5- Student assessment methods

- 5.1 Workshop Grading to assess knowledge and intellectual skills
- 5.2 Quizzes to assess understanding and professional skills
- 5.3 Mid Term to assess intellectual and transferable skills
- 5.4 Project Report to assess intellectual and transferable skills
- 5.5 Final Exam to assess intellectual and transferable skills

### Assessment schedule

- Assessment 1** Workshop **Week** every week
- Assessment 2** Quizzes **Week** five or six times
- Assessment 3** Mid -Term **Week** end of the term
- Assessment 4** Mini project **Week** end of the term
- Assessment 5** Final Exam **Week** end of the term

### Weighting of assessments

- Mid-term examination 10 %

Final-term examination	40 %
Oral examination	30 %
Semester work	10 %
Report	10 %
Total	100 %

## **6- List of references**

- Course notes

### 6.2- Essential books (text books)

- Lecture Notes

### 6.3- Recommended books

- Same books

## **7- Facilities required for teaching and learning**

Possible E-Learning

**Course coordinator: Dr. Ahmed Kassem**

**Head of Department:**

**Date: //**