

*Course specification of*

**Workshop M160**

**University: Benha**

**Faculty:** Benha Faculty of Engineering

**Programme on which the course is given**  
**Major or minor element of programme**  
**Department offering the programme**  
**Department offering the course**  
**Academic year / level**  
**Date of specification approval**

All Engineering Programmes  
N.A  
All Engineering Departments  
Mechanical Engineering  
First year

**A- Basic Information**

**Title:** Workshop

**Code:** M 160

**Credit Hours:** N.A

**Lecture:** 0

**Tutorial:** 0

**Practical:** 6

**Total:** 6

**B- Professional Information**

**1- Overall aims of course**

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

- Demonstrate knowledge and understanding the job of the basic mechanical workshops
- Consider the necessary safety measures and tools
- Differentiate between hand- and machine-tools of the basic mechanical workshops
- Differentiate between the materials normally used in each workshop
- Use of the basic hand- and machine-tools and equipment to execute simple exercises in each workshop
- Use of basic measuring tools and instruments to insure adequate dimensions of the product
- Know and understand the basic manufacturing processes

**2- Intended Learning outcomes of course (ILOs)**

**a- Knowledge and understanding**

- a1- Know and understand the activities of each mechanical workshop
- a2- Classify the working and production materials normally used in each workshop
- a3- Know and understand the basic use of hand-and machine-tools
- a4- know the safety measures and tools needed for each workshop
- a5- Draw and execute drawn exercises or parts

### **b- Intellectual skills**

- b1- Differentiate between different activities in mechanical workshops
- b2- Assign proper materials and tools for certain product
- b3- Suggest a suitable manufacturing process to produce certain product
- b4- Suggest alternative processes according to different constraints

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

- c1- Identify and practice each workshop activity
- c2- Select the proper process to finish certain product
- c3- Identify and practice each manufacturing process type
- c4- Identify quality levels of each process

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

- d1- Present the technical report in oral seminar
- d2- Present the manufacturing process in a written report
- d3- Sketch process, tools, machines and equipment

## **3- Contents**

Topic	No. Of Hours	Lecture	Tutorial Practical
Measurements lab	18		18
Casting workshop	18		18
Wood working workshop	18		18
Metal forming workshop	18		18
Sheet metal forming	18		18
Filing and fitting workshop	18		18
Welding workshop	18		18
Machines shop , Turning and drilling	18		18
Machines shop , Milling and shaping	18		18
Total	162		162

## **4- Teaching and learning methods**

- 41- Workshop
- 42- Measurements Lab

## **5- Student assessment methods**

- 51- Practical final exam
- 52- Oral final exam
- 53- Written final exam
- 53- Tools , machines and equipment sketching for each workshop
- 55- Continuous training assessment along the whole year

## Assessment schedule

Assessment 1	Continuous training assessment	Weekly
Assessment 2	Workshop sketching	every 3 weeks
Final exam	Practical	Week 29
Final exam	Oral	Week 29
Final exam	Written	Week 29

## Weighting of assessments

Continuous training assessment	50	%
Workshop sketching	10	%
Final exam Practical	20	%
Final exam Oral	10	%
Final exam Written	10	%
Total	100	%

## 6- List of references

### 6.1 Course Notes

Elhakeem A. ; Production Engineering , 1990  
Kasem A. ; Production Engineering , 1998

6.2 Essential books (Text books) Institute Bibliotheca

6.3 Recommended books Institute Bibliotheca

6.4 Periodicals, Web sites,...etc Computer facilities

## 7- Facilities required for teaching and learning

- Mechanical Workshops
- Measurements lab

Course Coordinator:

Prof. Dr. Abdelmoty M. Elhakeem

Head of Department:

Dr. Sameh A. Nada

Date: