Course specification of  
Workshop M160

University: Benha  Faculty: Benha Faculty of Engineering

Programme on which the course is given: All Engineering Programmes
Major or minor element of programme: N.A
Department offering the programme: All Engineering Departments
Department offering the course: Mechanical Engineering
Academic year / level: First year
Date of specification approval: A

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 constrains

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 reports

d3- Sketch process, tools, machines and equipment

3- Contents

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<th>No. Of Hours</th>
<th>Lecture</th>
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<td>Casting workshop</td>
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<td>Wood working workshop</td>
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<td>Filing and fitting workshop</td>
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<td>Welding workshop</td>
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<tr>
<td>Machines shop, Turning and drilling</td>
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<tr>
<td>Machines shop, Milling and shaping</td>
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<td>Total</td>
<td>162</td>
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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
54- 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: