



# Philadelphia University

Faculty of Engineering - Department of Mechanical Engineering

## Course Information

**Title:** Engineering Workshops

**Prerequisite:** Engineering drawing

**Credit Hours:** 1 credit hours (10 weeks per semester)

**Description:** The main purpose of this course is to improvement the practical skills of engineering student is introduced by using tools and instrument for each process.

**Instructor:** **Eng. Osamah AlOmoush**

**Office:** Mechanical Engineering building, room E61102 , ext. : 2131

## Course Topics:

Week	Topic
1	Introduction to measurement tools
2,3	<b>Casting Shop:</b> <ul style="list-style-type: none"><li>• Demonstrate the importance of sand casting and types of furnaces</li><li>• preparation silica sand and sand mold making</li><li>• lost foam pattern</li></ul>
4,5	<b>Electric circuit Shop:</b> <ul style="list-style-type: none"><li>• Study of tools and operations to make simple circuit</li><li>• parallel , series and complex connection .</li><li>• Double switch in</li></ul>
5,6	<b>Machining shop :</b> <ul style="list-style-type: none"><li>• Study of tools and machines ( lathe machine, milling machine )</li><li>• Turning ( Plane turning, Step turning, Taper turning )</li><li>• Drilling</li><li>• Milling (Horizontal mill)</li></ul>
7,8	<b>Carpentry Shop:</b> <ul style="list-style-type: none"><li>• Study of tools and operation Simple exercise using saw and files</li><li>• To prepare corner joint ( L – Joint )</li><li>• Simple exercise on woodworking lathe.</li></ul>
9,10	<b>Welding Shop:</b> <ul style="list-style-type: none"><li>• Study of tools and operations simple exercise butt joint.</li><li>• Lap joint , L- Joint.</li><li>• oxyacetylene welding.</li></ul>

11,12	<b>Metal forming shop :</b> <ul style="list-style-type: none"> <li>• Study of tools and operations simple exercise</li> <li>• Internal and external Threading</li> <li>• sheet metal forming</li> </ul>
Final Examination 13	practical and written exam

## Assessment Instruments:

Evaluation of students' performance (final grade) will be based on the following categories:

<b>Exams</b>	one written exam
<b>Quizzes</b>	oral quizzes given in workshops
<b>practical assignments</b>	assignments will prepared during class
<b>reports</b>	technical reports will be prepared during semester
<b>Final Exam:</b>	The final exam will cover all the class material.

## Grading policy:

practical assignments	40%
Quizzes and reports	20%
Final Exam	40%
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Total:	100%

## Attendance policy:

Absence from classes and/or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse, acceptable to and approved by the Dean of the relevant college/faculty, shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.

September , 2018