

Course Title:	Engineering Workshop	Course Number:	110400101
Designation:	Compulsory	Prerequisite(s):	-
Instructor:		Instructor's e-mail:	
<b>Office Hours:</b>			

### **Course Description (catalog):**

This course is designed to provide engineering students with fundamentals of engineering materials and their properties, manufacturing processes and industrial safety. It also exposes the student to practical training in different workshops in order to gain basic skills

### **Textbook(s) and/or Other Supplementary Materials:**

Lecturer note and lab manual

#### **References:**

James H. Earle, "Engineering Design Graphics, with AutoCAD 2000", Addison Wesley **Major Topics Covered:** 

Торіс		# Contact
	Weeks	hours*
Industrial Safety		6
Measuring and Marking-out	3	9
Engineering Materials and their Properties	3	6
Casting Processes	1	6
Metal Forming Processes		9
Metal Machining Processes	4	9
Total		45

\*Contact hours include lectures, quizzes and exams

# **Specific Outcomes of Instruction (Course Learning Outcomes):**

After completing the course, the student will:

- **CLO1**: Understand the basic safety instructions which should be followed in the engineering workshops (1)
- CLO2: Realize the basic measuring devices and tools and learn how to use them (2).
- **CLO3**: Understand the engineering materials basic structure and the formation of grains and grain boundaries (2,6).
- **CLO4**: Understand the stress-strain behavior of metals and the principle mechanical properties related to it.(2,6)

#	Outcome Description	Contribution	
General Engineering Student Outcomes			
(1)	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	М	
(2)	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and	Н	

# **Student Outcomes (SO) Addressed by the Course:**

	welfare, as well as global, cultural, social, environmental, and economic factors	
(3)	an ability to communicate effectively with a range of audiences	
(4)	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	
(5)	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	L
(6)	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	М
(7)	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	
H=High, $M$ = Medium, $L$ =Low		

Grading	Plan:
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Course work Final exam

60 Points 40 Points