



The Haematite University
Faculty of Engineering
Course Syllabus
Department of Applied Engineering Science

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

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:

Topic	# Weeks	# Contact hours*
Industrial Safety	2	6
Measuring and Marking-out	3	9
Engineering Materials and their Properties	3	6
Casting Processes	1	6
Metal Forming Processes	2	9
Metal Machining Processes	4	9
Total	15	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)

Student Outcomes (SO) Addressed by the Course:

#	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	M
(2)	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and	H

