



**JORDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY
INDUSTRIAL ENGINEERING DEPARTMENT**



Course Number and Name	IE 333: Metrology Laboratory Second Semester 2013/2014
Course Description	The course covers the Experiments on linear measurement, angular measurements, fixed and deviation types of gauges, optical measurements, temperature measurements, and electrical measurements.
Credits and contact hours	1 Credit hours; 3 hours lab
Pre- or Co-requisites	Co-IE 331:Engineering Metrology
Required/ Elective	Required

Text Book(s)	Metrology for engineers, T.Galyer and Shotbolt, 5/e.
References	Production metrology laboratory sheets.

Course Objectives	<p>Upon completion of this course, the students will</p> <ul style="list-style-type: none"> • Recognizing the role of experimental metrology in many Industrial and non-industrial applications • Become familiar with a wide variety of measuring instruments and systems used in industry. • Understanding the design principles behind some of the most important instruments. • Encourage lifelong learning, foster teamwork and enhance student's communication skills.
Measured Outcomes	ABET-3b , 3g and 3k

Topics	Evaluation	
Measurement with Different Micrometers and Verniers Measuring Instruments	Class Work+ Report	30%
Angular Measurements “ Combination Set and Vernier Bevel Protractor”	Mid Exam	30%
Angular Measurements “Sine bar”	Final Exam	40%
Measuring Tapered Components		
Measuring and Checking Dovetails		
Checking for Taper, Roundness and Concentricity of cylindrical workpieces		
Toolmaker's Microscope		
The Optical Projector		
Machine Tools Metrology I		
Machine Tools Metrology II		
Surface Roughness Measurements		