



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



<b>Course Number and Name</b>	IE 467 Manufacturing Processes Lab.
<b>Course Description</b>	<p>This course is designed to meet the required experience for the industrial engineering's students in the methods, which are commonly used in industry to test and examine materials. Experiments include tensile testing, impact testing, hardness testing, fatigue testing, macro- and micro examination, cold working and annealing of metals, hardening of steel by different quenching media, measure of steel's hardenability, surface hardening of mild steel and non-destructive testing.</p>
<b>Teaching methods</b>	<p>A series of mini lectures before the practical experiment at the workshop utilizing:</p> <ul style="list-style-type: none"><li>• Experiment objectives chalkboard</li><li>• Brainstorming and discussions</li><li>• Software package</li><li>• Conducting experiments at the workshop and CNC</li></ul>
<b>Assessment methods</b>	<p>[<b>ABET 3b</b>]: Reports to measure the student's ability to understand and analyze each experiment done at the workshop. [<b>ABET 3k</b>]: Reports to write G-Code for CNC machine for lathe and milling operations related to industrial applications. The students up-loaded their program to the CNC machine to test and perform the experiment. [<b>IE1</b>]: Test question in the mid-term exam related to safety and safety practice at the workshop during demonstrating the lab experiments. All aspects of personal safety and the use of equipment's in safe manner were monitored and followed up during conducting the experiments at the work shop.</p>