

<b>Course title: Measurement Systems</b>	<b>Neptun code: GEVAU407-a</b>
<b>Course coordinator: Rabab Benotsmane, Assistant Professor, PhD</b>	
type and number of lesson: lecture/seminar/practical lesson/consultation ...2 / week or semester	
method of accountability: practical mark	
curriculum location of the subject: spring	
pre-study conditions: MSc	
<b>The task and purpose of the subject:</b>	
<p><b>Course description:</b> The course content will help the student to get familiar with the structure of measurement system device, starting from the basic aspects as calibration and measurement uncertainty, introducing the conversion of information from the physical world around us to a usable electrical output signal, and errors that can occur in this conversion, explaining sensor readout and signal conditioning, data analysis, also including NI data acquisition hardware and software platform, MATLAB Simulink platform.</p> <p>In addition to these core topics, the course could also include coverage of specific types of measurement systems, such as: Temperature measurement systems - Pressure measurement systems - Flow measurement systems - Force measurement systems - Displacement measurement systems - Electrical measurement systems</p>	
<b>Required literature:</b>	
<ol style="list-style-type: none"> <li>1. B. Lipták: Process Measurement and Analysis (Chilton Book Company I Randor, Pennsylvania, 1995.)</li> <li>2. Ernest O. Doebelin: Measurement Systems Applications and Design (McGRAW-HILL International Editions, 1990, ISBN 0-07-017338-9).</li> <li>3. John P. Bentley: Principles of Measurement Systems, Longman Scientific &amp; Technical, 1995, ISBN 0-582-23779-3.</li> <li>4. Waldemar Nawrocki. Measurement Systems and Sensors, 2005, ISBN 1-58053-945-9.</li> <li>5. Robert B. Northrop. Introduction to Second Edition INSTRUMENTATION AND MEASUREMENTS. 2005, ISBN -13: 978-1-4200-5785-0.</li> </ol>	
<b>Recommended literature:</b>	
<ol style="list-style-type: none"> <li>6. NI hardware and software System</li> <li>7. MATLAB Simulink software</li> </ol>	