

<b>Course title:</b> <i>Fisical –technical measurements</i>				
<b>Course code</b>	<b>Course status</b>	<b>Semester</b>	<b>Number of ECTS credits</b>	<b>Lecture hours</b>
<i>PA1102</i>	<b>Mandatory</b>	<i>I</i>	<b>7</b>	<b>3P+1V+1L</b>

<b>Study program:</b> Graduate academic studies, ELECTRICAL ENGINEERING, study program: Electronics, Telecommunications and Computer engineering (studies last for 4 semesters, 120 ECTS credits).	
<b>Prerequisites:</b> Electrical measurements and measurements in electronics	
<b>Course aims:</b> Measurements of non-electrical quantities using electrical measuring instruments.	
<b>Teacher(s) and assistant(s) first and last names:</b> <i>Prof. Dr Rada Dragović - Ivanović</i>	
<b>Studying method:</b> Lectures, exercises, individual work on practical tasks, consultations.	
<b>Course synopsis:</b>	
Preliminary week I week II week III week IV week V week VI week VII week VIII week IX week X week XI week XII week XIII week XIV week XV week XVI week Final week XVIII-XXI week	Preparation and semester enrolment.  Introduction Dinamic characteristics of converters and mesuring instruments. Circuits for measuremenets. Capacitive measurments converter for measuring movements, level, angular velocity and vibrations. Resistance mesuring konverter. Measurements stripes. Inductive measurements konverters for mesuring power, linear and angular motions, angular velocities. <b>Free week</b> <i>I colloquium.</i> Termoresistance mesurments konverters for temperature measurements. Termic vacuum-meters. Anemometers – mesurments of the fluids velocity. Piezoelectric converters for mesuring power, acceleration and pressure. Inductive konverters. Termoelectrical konverters. <i>II colloquium.</i> Spectral pirometers. Fotoresistors, fotodiodes. <i>Final exam</i>  Administrative procedures. Additional lessons, correction of the final exam and administrative procedures.
<b>OPTEREĆENJE STUDENATA</b>	
<u>per week</u>	<u>per semester</u>
<b>7 credits x 40/30 = 9 h i 20 min</b> <b>Structure:</b> 3 h lectures 1 h exercises 1 h laboratory exercises 4 h i 10 min individual work, including consultations	<b>Teaching and the final exam:</b> (9h 20 min) x 16 = 49 h and 20 min. <b>Necessary preparation</b> (before semester): 2 x (9 h and 20 min) = 18 h and 40 min. <b>Total work hours for the course:</b> 210 h <b>Additional hours</b> for preparing correction of the final exam, including the exam taking: up to 42hours. <b>Work hours structure:</b> 149 h 20 min (lectures) + 18 h 40 min (preparation) + 42 h (additional work)
Lessons attendance is mandatory for students, as well as doing home and laboratory exercises and both colloquiums.	
<b>Literature:</b> D. Stanković, Fisical Technical Measurements - Senzori, Belgrade, 1997. D. Stanković, Fisical Technical Measurements – solved problems, Belgrade, 1997. Script: Laboratory exercises.	
<b>The forms of knowledge testing and grading:</b> - 4 homeworks - 4 points, - Laboratory exercises - 4 points, - I colloquium - 20 points, - II colloquium - 22 points, - Final exam - 50 poena. Student gets the passing grade by collecting <b>51</b> points at least.	
<b>Special remarks for the course :</b>	
<b>Teacher(s) who provided the information:</b> <i>Prof. dr Rada Dragović- Ivanović</i>	