

DESCRIPTION OF THE COURSES

- Course code: ARR3313
- Course title: Statistical analysis of measurement data
- Language of the lecturer: polish

<i>Course form</i>	<i>Lecture</i>	<i>Classes</i>	<i>Laboratory</i>	<i>Project</i>	<i>Seminar</i>
<i>Number of hours/week*</i>	<i>1</i>		<i>1</i>		
<i>Number of hours/semester*</i>	<i>15</i>		<i>15</i>		
<i>Form of the course completion</i>					
<i>ECTS credits</i>					
<i>Total Student's Workload</i>					

- Level of the course (~~basic~~/advanced):
- Prerequisites: Fundaments of electronic, electrical measurement
- Name, first name and degree of the lecturer/supervisor: Krzysztof PODLEJSKI, PhD
- Names, first names and degrees of the team's members: Grzegorz Kosobudzki PhD
- Year:..... Semester: III , 2stage
- Type of the course (~~obligatory~~/optional):
- Aims of the course (effects of the course):
- Form of the teaching (traditional/~~e-learning~~):
- Course description: This course presents a full treatment of basic statistical methods and applications. It focuses on the analysis of variance and covariance, regression, but also describe the Fourier transform, digital filtering, measurement management system and metrological confirmation
- Lecture:

<i>Particular lectures contents</i>	<i>Number of hours</i>
<i>1. Principles of data measurement process</i>	<i>2</i>
<i>2. Statistic methods improvement of measurement data quality</i>	<i>2</i>
<i>3. Data reduction</i>	<i>2</i>
<i>4. The Fourier Transform</i>	<i>2</i>
<i>5. Analysis of repeatability and reproducibility of measurement</i>	<i>2</i>
<i>6. Interlaboratory comparision, Measurement management system.</i>	<i>2</i>
<i>7. Metrological confirmation</i>	<i>2</i>

- Classes – the contents:
- Seminars – the contents:
- Laboratory – the contents: Creating typical Measurement application in GPL, Measuring voltage and current. Statistica and LabView application in digital filtration. Calculating the correlation and approximation. The Fourier Transform. Application of spectrum analyzer.
- Project – the contents:
- Basic literature:
- Janusz Piotrowski, Podstawy miernictwa, WNT, Warszawa, 2002 r.

- Wacława Starzyńska , Statystyka praktyczna, Wydawnictwo Naukowe PWN, Warszawa, 2006 r.

- Henryk Szydłowski, Teoria pomiarów, PWN 1981

- Additional literature:

LabView7 Measurement Manual – National Instrument.

- Conditions of the course acceptance/creditation:

* - depending on a system of studies