

<b>Subject name</b>	<b>Computer Assisted Analysis of Biological Experiments</b>	
<b>Subject code</b>	<b>E.1z.CAB.SC.ECTIE.O (winter)</b> <b>E.11.CAB.SC.ECTIE.O (summer)</b>	
<b>Department</b>	<b>Department of Genetics, Plant Breeding and Seed Science</b>	
<b>Faculty</b>	<b>Faculty of Biotechnology and Horticulture</b>	
<b>Subject supervisor/Lecturer</b>	<b>Dr. hab. Rafał Barański, prof. UR</b>	
<b>General information</b>	<b>Teaching period</b>	<b>1 semester / winter or summer semester</b>
	<b>ECTS credit</b>	<b>6</b>
	<b>Lectures total</b>	<b>10 h</b>
	<b>Lab classes</b>	<b>20 h</b>
<b>Objective and general description</b>	Students will be acquired with basic statistical approaches to analyse data collected from experiments and how to handle the data using computer software. Student will learn statistical functions built in Excel, various procedures of data management depending on the software used and interpretation of the results.	
<b>Lectures</b> <b>5 x 2 hours</b>	<ol style="list-style-type: none"> <li>1. Principles of data management</li> <li>2. Descriptive statistics</li> <li>3. Experimental design</li> <li>4. Methods of data analysis</li> <li>5. Exploratory techniques</li> </ol>	
<b>Lab classes</b> <b>5 x 4 hours</b>	<ol style="list-style-type: none"> <li>1. Excel use for data management and rules of proper reporting in dissertations and articles using tables and figures</li> <li>2. Use of built-in statistical functions and procedures in Excel for data description and comparison</li> <li>3. Experimental data analysis in Excel</li> <li>4. Data correlation and prediction</li> <li>5. Data exploration using dedicated statistical software</li> </ol>	
<b>Literature</b>	Electronic Statistical Textbook, Statsoft, <a href="http://www.statsoft.com/textbook/">http://www.statsoft.com/textbook/</a> University of Reading Statistical Service Centre, <a href="http://www.reading.ac.uk/ssc">http://www.reading.ac.uk/ssc</a>	