

<b>Course code</b>																																	
<b>Type and description</b>	EC - elective subjects from the discipline of Nutrition and food technology																																
<b>ECTS credit</b>	1																																
<b>Course name</b>	Statistics in Applications I																																
<b>Course name in Polish</b>	Statystyka w zastosowaniach I																																
<b>Language of instruction</b>	English																																
<b>Course level</b>	8 PRK																																
<b>Course coordinator</b>	dr inż. Katarzyna Dems-Rudnicka																																
<b>Course instructors</b>	dr inż. Katarzyna Dems-Rudnicka																																
<b>Delivery methods and course duration</b>	<table border="1"> <thead> <tr> <th></th> <th>Lecture</th> <th>Tutorials</th> <th>Laboratory</th> <th>Project</th> <th>Seminar</th> <th>Other</th> <th>Total of teaching hours during semester</th> </tr> </thead> <tbody> <tr> <td>Contact hours</td> <td>0</td> <td>0</td> <td>0</td> <td>5</td> <td>0</td> <td>0</td> <td>5</td> </tr> <tr> <td>E-learning</td> <td>no</td> <td>no</td> <td>no</td> <td>no</td> <td>no</td> <td>no</td> <td>no</td> </tr> <tr> <td>Assessment criteria (weightage)</td> <td>0</td> <td>0</td> <td>0</td> <td>100%</td> <td>0</td> <td>0</td> <td>100%</td> </tr> </tbody> </table>		Lecture	Tutorials	Laboratory	Project	Seminar	Other	Total of teaching hours during semester	Contact hours	0	0	0	5	0	0	5	E-learning	no	no	no	no	no	no	no	Assessment criteria (weightage)	0	0	0	100%	0	0	100%
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<b>Course objective</b>	The aim of the course is to provide knowledge and skills in basic statistical methods used in natural and technical sciences																																
<b>Learning outcomes</b>	After completing the course the PhD student is able to: <ol style="list-style-type: none"> <li>1. present and visualize experimental data,</li> <li>2. apply methods of mathematical statistics (estimation, testing of parametric and non-parametric hypotheses),</li> <li>3. use methods of correlation and regression analysis of one variable,</li> <li>4. use tools supporting statistical analysis included in the R program,</li> <li>5. explain the concepts and statistical procedures used in the analysis of the problems.</li> </ol>																																
<b>Assessment methods</b>	<p>Assessment methods:</p> <p>Learning outcome 1-5: assessment of the correctness and quality of the solution of the project task and the project report</p> <p>Learning outcome 4-5: additionally, presentation and discussion</p> <p>The final grade consists of:</p> <p>Realisation of project task using the known methods - 60%</p> <p>written report (paper or electronic) - 20%</p> <p>solution presentation and discussion - 20%</p>																																
<b>Prerequisites</b>	Knowledge of descriptive and mathematical statistics lectured at first and second degree studies																																
<b>Course content with delivery methods</b>	Descriptive statistics methods (data presentation and visualization), methods of mathematical statistics (estimation of population parameters, testing of parametric hypotheses regarding population parameters, testing of nonparametric hypotheses regarding the distribution of features in the population), correlation and regression analysis of one variable, use of tools supporting basic analysis statistical data included in the R program.																																
<b>Basic reference materials</b>	<ol style="list-style-type: none"> <li>1. R. Kala, Statystyka dla przyrodników. Wyd. Uniwersytetu Przyrodniczego w Poznaniu, 2009</li> <li>2. J. Koronacki, J. Mielniczuk, Statystyka dla studentów kierunków technicznych i przyrodniczych, WNT, Warszawa 2001</li> <li>3. P. Biecek, Przewodnik po pakiecie R, Oficyna Wydawnicza GiS, Wrocław 2017</li> <li>4. Materials prepared by the course instructor</li> </ol>																																

<b>Other reference materials</b>	1. A. Stanis, Przystępny kurs statystyki, t. 1-3, wyd. StatSoft, Kraków 2006, 2007 2. E. Paradis, R for Beginners, <a href="https://cran.r-project.org/doc/contrib/Paradis-rdebuts_en.pdf">https://cran.r-project.org/doc/contrib/Paradis-rdebuts_en.pdf</a>
<b>Average student workload outside classroom</b>	25h+5h=30h
<b>Comments</b>	The course is carried out in a computer lab
<b>Last update</b>	July 2020