

Course code																																	
Type and description	EC - elective subjects from the discipline of Nutrition and food technology																																
ECTS credit	1																																
Course name	Statistics in Applications II																																
Course name in Polish	Statystyka w zastosowaniach II																																
Language of instruction	English																																
Course level	8 PRK																																
Course coordinator	dr inż. Katarzyna Dems-Rudnicka																																
Course instructors	dr inż. Katarzyna Dems-Rudnicka																																
Delivery methods and course duration	<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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Assessment criteria (weightage)	0	0	0	100%	0	0	100%																										
Course objective	The aim of the course is to provide knowledge and skills in advanced statistical methods used in natural and technical sciences																																
Learning outcomes	After completing the course the PhD student is able to: <ol style="list-style-type: none"> 1. use the method of Analysis of One- and Multi-factor Variance together with post-hoc tests, 2. use the method of Principal Components Analysis, 3. use methods of correlation analysis and multiple regression, 4. perform classification under supervision for experimental data, 5. use tools supporting statistical analysis included in the R program, 6. explain the concepts and statistical procedures used in the analysis of the problems 																																
Assessment methods	Assessment methods: Learning outcome 1-6: assessment of the correctness and quality of the solution of the project task and the project report Learning outcome 5-6: additionally, presentation and discussion The final grade consists of: Realisation of project task using the known methods - 60% written report (paper or electronic) - 20% solution presentation and discussion - 20%																																
Prerequisites	Knowledge of descriptive and mathematical statistics lectured at 1st and 2nd degree studies and content of the course "Statistics in applications I".																																
Course content with delivery methods	Analysis of One-factor and Multifactorial Variance together with post-hoc tests, Multiple Correlation and Regression Analysis, Principal Components Analysis, Supervised Classification for experimental data, use of tools supporting basic statistical analysis contained in the R program																																
Basic reference materials	<ol style="list-style-type: none"> 1. A. Stanisław, Przystępny kurs statystyki, t. 1-3, wyd. StatSoft, Kraków 2006, 2007 2. P. Biecek, Przewodnik po pakiecie R, Oficyna Wydawnicza GiS, Wrocław 2017 3. Materials prepared by the course instructor 																																
Other reference materials	<ol style="list-style-type: none"> 1. J. Ćwik, J. Mielniczuk, Statystyczne systemy uczące się, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2009, 2. E. Paradis, R for Beginners, https://cran.r-project.org/doc/contrib/Paradis-rdebuts_en.pdf 3. J. Koronacki, J. Mielniczuk, Statystyka dla studentów kierunków technicznych i przyrodniczych, WNT, Warszawa 2001 																																
Average student workload outside classroom	25h+5h=30h																																
Comments	The course is carried out in the computer lab																																

Last update

July 2020