Course Unit Descriptor

Study Programme: *PRECISION AGRICULTURE*

Course Unit Title: Study and scientific - research work

Course Unit Code: 19.PRP007

Name of Lecturer(s): Full professor Jan Turan, Associate professor Nebojša Dedović

Type and Level of Studies: Master academic studies

Course Status (compulsory/elective): compulsory

Semester (winter/summer): summer

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated: 5

Prerequisites: -

Course Aims:

To train the students to plan the experiments on their own, to learn to present their results and to give the statistical interpretation. Also, they are going to learn to write scientific papers that they will later send to a journal.

Learning Outcomes:

Students will be able to plan the experiments on their own, to learn to present their results and to give the statistical interpretation. Also, they will be able to write scientific papers.

Syllabus:

Theory

Basics of combinatorics, basics of probability theory, random variables, two-dimensional random variable, covariance, correlation coefficient, linear and non-linear regression, basics of statistics, statistical analysis of measurement errors, confidence interval of parameters, statistical hypothesis testing, analysis of correlations, regression analysis, analysis of variance, non-parametric tests, design and analysis of parametric tests, descriptive statistics. Method of writing a scientific research paper, procedure of sending papers to electronic journals.

Practice

Solving the problems rose from the theory.

Required Reading:

1. Paunović, R., Omorjan, R., Basics of engineering statistics, Faculty of Technology, University of Novi Sad, Serbia, 2017.
2. Hadžić, O., Takači, Đ., Mathematics for science students (in Serbian), Faculty of Sciences, University of Novi Sad, Serbia, 1998.
3. Montgomery, D.C., Runger, G.C., Applied Statistics and Probability for Engineers, 5th edition, John Wiley and Sons, 2010.
4. Spiegel, M.R., Schiller, J.J., Srinivasan, R.A., Probability and Statistics, 3rd edition, McGraw-Hill Companies Inc., 2008.

Weekly Contact Hours:	**Lectures:** 2	**Practical work:** 2

Teaching Methods:

Theory and practical classes, consultations if needed.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class participation	10	written exam	
Practical work	40	oral exam	50
Preliminary exam(s)		…….	

Seminar(s)			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			