Specification of the course for the Book of courses

Study program		Applied statistics	
Title of the course		Statistical Methods in Biotechnical Sciences	
Teachers (for lectures)		Ivana Ljubanović Ralević	
Teacher/fellow teacher (for exercises)		Mirjana Krivokapić	
ESPB	6	**Status of the course (obligatory (O) /elective (E))**	O

Conditions	
Aim of the course	The aim of the course is to enable student to acquire knowledge in statistical methods necessary to set experiments in agricultural research and perform statistical analysis of obtained data.
Course outcomes	Student will be able to apply statistical methods and use computers to perform statisical analysis and inference based on obtained data.
Content of the course	
Theoretical classes	Principles and methods of statistical analysis in agriculture and food production: basic experiment design (mathematical model of random variable and its components, factor type, homogenuitz of treatment variance). One-way analysis of variance: random design, random block design, Latin square; Multifactorial experiments, two factor experiments, three and more factor experiments, Split plot design, design description and need for such design, mathematical model and analysis of variance; Time series analysis, analysis in seasons and years, Multilocation analysis and long-lasting experiments
Practical classes	Practical classes is held at computer centre where students with guidance solve particular problems.
References	
1	Cox, D. and Read, N. (2000). The theory of the design of experiments. Chapmann and Hall
2	Хаџивуковић С.,(1969):Статистички методи .Пољопривредни факултет, Нови Сад
3	Gomez K.A., Gomez A.A.,(1984):Statistical Procedures for Agricultural Research. John Wiley& Sons
4	Box, G.; Hunter,W.; Hunter, S.: (2005) Statistics for Experimenters Design, Inovation and Discovery, 2nd edition, New York, NY-Wiley-Interscience
5	Klaus Hinkelmann, Oskar Kemphtorne (2007): Design and Analysis of Experiments: Introduction to Experimental Design, Volume 1, Second Edition, Wiley
6	Klaus Hinkelmann, Oskar Kemphtorne (2005): Design and Analysis of Experiments: Advanced Experimental Design, Volume 2
7	Љубановић-Ралевић И.,(?):Планирање експеримента (у припреми)

The number of contact hours per week during the semester / trimester / year

Lectures	Exercises	DON	Research work	Other classes
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Teaching methods	Lectures, exercises and practical work

Evaluation of knowledge (maximum score 100)

Pre exam duties	points	Final exam	points
activity during lectures	5	**written exam**	25
practical work	10	**oral exam**	40
seminar	20		