|  |  |
| --- | --- |
| Course: | *Statistics*  |
| Course id: 3ОАЕ2О07 |
| Number of ECTS: 7 |
| Teacher: | PhD. Beba S. Mutavdžić, Assistant Professor |
| Assistant: | Emilija B. Nikolić-Đorić, MSc.  |
| Course status | Mandatory |
| Number of active teaching classes (weekly) |
| Lectures: 3 | Tutorials: 3 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | A passing grade in mathematics  |
| 1. Educational goal

The curriculum of this course is designed to introduce students with the application of modern statistical methods in solving problems in the field of agricultural sciences and agricultural economics. Students need to comprehend the basic methods of descriptive and inferential statistics. |
| 1. Educational outcomes

During the course, students need to become capable of choosing and applying an adequate statistical method in collecting, presenting and analysing data in the fields of agriculture and agricultural economics. Students will be able to use the acquired skills in other courses during their studies and in their scientific-research work. |
| 1. Course content

*Theoretical Instruction*The fundamentals of statistics. The subject matter and units of observation. Basic set and sample. Observation features. Classification and presentation of statistical data. Analysis of numerical series. Numerical descriptive measures. Theoretical distributions. Discrete and continuous theoretical distributions. Sample. Methods of sample selection. Simple random sample. Statistical inference. Distribution of sample parameters. Principles of parameters estimation. Confidence interval. Hypothesis testing. Testing the hypotheses on arithmetic mean and proportion. Testing the hypothesis in the case of two basic sets. Analysis of variance. Regression and correlation. Choice of regression function. Simple linear regression. Estimation of regression parameters. Linear correlation. Inference on regression and correlation parameters. Coefficient of determination. Index numbers. Individual and group indices. Prices-weighted group indices and weighted group indices of the physical volume of production. Production value index. Time series analysis. Types of times series. Decomposition of times series. Trend: method of moving averages and linear trend method. Seasonal fluctuation analysis. Seasonal indices.*Practical Instruction: Tutorials* The fundamentals of statistics. Analysis of numerical series. Theoretical distributions. Distribution of sample parameters. Statistical inference. Point and interval estimation of arithmetic mean and proportion. Hypothesis testing. Regression and correlation. Index numbers. Time series analysis. |
| 1. Teaching methods

Lectures and tutorials, introduction to statistical software, homework, consultations, tests. |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam  | Mandatory | Points |
| Lecture attendance | Yes/No | 5 | *(Test 1 + Test 2) or written exam* | Yes | 40 |
| Practical work | Yes/No | 5 | *Oral part exam* |  | 50 |
| Test 1 | Yes/No | 20 | ... |  |  |
| Test 2 | Yes/No | 20 | Total |  | 100 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Hadživuković, S.  | Statistički metodi, Drugo prošireno izdanje | Poljoprivredni fakultet, Novi Sad  | 1991 |
|  | Čobanović, K. | Primeri za vežbanje iz Statistike, Treće izdanje | Poljoprivredni fakultet, Novi Sad  | 2003 |
|  | Stanković, J., Ralević, N., LJubanović-Ralević I. | Statistika sa primenama u poljoprivredi | Mladost Biro, Beograd | 2002 |
|  | Maletić, R. | Metodi statističke analize u poljoprivrednim i biološkim istraživanjima | Univerzitet u Beogradu, Poljoprivredni fakultet | 2005 |
|  | Mann, P. S.  | Uvod u Statistiku | Ekonomski fakultet, Beograd | 2009 |