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| Course: | Experiment оn Engineering |
| Course id: |
| Number of ECTS:5 |
| Teacher: | Prof. dr. Mirko Babić, assistant: Milivoj Radojčin, MSc |
| Course status | Election |
| Number of active teaching classes (weekly) |
| Lectures: 2 | Practical classes: 2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None/navesti ako ima |
| 1. Educational goal

Acquiring knowledge about planning and carrying out the experiment, as well as data processing and synthesis results. |
| 1. Educational outcomes

The student is trained to independently plan, perform and interpret the results of the experiment. |
| 1. Course content

*Theory lessons*Experiment planning. The choice of factors, their levels and results. Analysis of errors. A short overview of methods of measurement basic physical quantities important for engineering. Analysis and design of the measuring system. Measuring units. The accuracy of the measuring system. Specifics of experiments in agricultural engineering. The repeating. Experiment results processing. Analysis of variance (dispersion analysis). One factor experiments. Mathematical models. Multifactor experiments. Treatment results after dispersion analysis (analysis variance). Regression analysis. Statistical computer programs (student is trained to work with one modern statistical program). Creating tasks using statistical softver. Interpretation of results. Interpretation result in publications. Theoretical classes are held using presentations method and other learning tools.*Practical teaching: Exercise, Other modes of teaching, Study research work*Practical classes are conducted in the laboratory and data processing experiment using the computer. Performing seminar paper whose content is factorial experiment in technical disciplines. Writing and publication of the work. |
| 1. Teaching methods

The study subjects are taught through:Lecture with the use of video presentations and simulation;-demonstracione exercises in laboratory and field conditions;- consultation in lectures and exercises |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam | Mandatory | Points |
| Lecture attendance | Yes |  | *Oral part of the exam* | Yes | 40 |
| Test | Yes |  |  |
| Exercise attendance | Yes |  |
|  *Test, Term paper,* | Yes/No | 60 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Holman J.P. | Experimental Method for Engineers | McGraw Hill | 2007 |
|  | Pantelić, I. | Primena statističkih metoda u istraživanjima i procesima proizvodnje | 1. Fakultet tehničkih nauka, Novi Sad
 | 1984 |
|  | Babić, M. | Eksperiment u poljoprivrednoj tehnici, autorizovana predavanja | Univerzitet u Novom Sadu, Poljoprivredni fakultet Novi Sad | 2006 |
|  |  | Posebna literatura iz oblasti seminarskog rada |  |  |

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| Znak univerziteta | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme AccreditationMASTER *AGRICULTURAL ENGINEERING* |
| Table 5.2 Course specification |