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| Course: | | **Mathematics 2** | | | | | | | | |
| Course id:  3OPT2I38;  3ОУВ2О06;  3ОАИ2О06; | |
| Number of ECTS: 6; 6; 6 | |
| Teacher: | | **Snežana J. Matić-Kekić, Nebojša M. Dedović** | | | | | | | | |
| Course status | | Elective; Mandatory ; Mandatory | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: 2 | | Practical classes: 2 | | | Other teaching types: | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | |
| 1. Educational goal   Mastering the skills and knowledge of subject content, which provides the basis for mathematical modeling of agro-economic phenomena and their exploitation in practice. | | | | | | | | | | |
| 1. Educational outcomes   Student qualifies for mathematical modeling of agro-economic phenomena and actively pursuing them. | | | | | | | | | | |
| 1. Course content   Financial mathematics: percentage and promil calculus, compounded interest rate, fixed-term and continuous savings, loans payment. Matrix calculus: operations on matrices, determinant of matrices, elementary transformation, regular matrices. Gaussian elimination method, Cramér's theorem, inverse matrix. Formulation and solution of mathematical models. Geometric transformation in space: translation, rotation and scaling. Vectors: inner, vector and mixed product, collinearity, orthogonality, coplanarity. Analytic geometry: algebraic and vector equations of line and plane, mutual relation. | | | | | | | | | | |
| 1. Teaching methods: Lectures | | | | | | | | | | |
| Knowledge evaluation (maximum 100 points) | | | | | | | | | | |
| Pre-examination obligations | | | Mandatory | Points | | Final exam (izabrati) | | Mandatory | | Points |
| Lecture attendance | | | Yes | 5 | | *Oral part of the exam* | | Yes | | 45 |
| Test | | | Yes | 45 | |  | | | | |
| Exercise attendance | | | Yes | 5 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Konjik S., Dedović N. | | Mathematics - a collection of tasks for the students of Faculty of Agriculture (in Serbian) | | | Faculty of Agriculture, University of Novi Sad | | | | 2011. |
|  | Hadzić O., Takači Đ. | | Mathematics for students of natural sciences (in Serbian) | | | University of Novi Sad,  university textbooks - Edition 76 | | | | 1998. |
|  | Matić-Kekić S. | | Economic mathematics for students of biological sciences (in Serbian) | | | Faculty of Agriculture, University of Novi Sad | | | | 2006. |

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| Znak univerziteta | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme Accreditation  UNDERGRADUATE ACADEMIC STUDIES: *AGROINDUSTRIAL ENGINEERING; WATER MANAGEMENT AND WATER USE; AGRICULTURAL ENGINEERING* |
| Table 5.2 Course specification | | |