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|  | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 |  |
| Study Programme AccreditationUNDERGRADUATE ACADEMIC STUDIES *AGRINDUSTRIAL ENGINEERING* |
| Table 5.2 Course specification |

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| Course: | **Machines in Organic Agriculture** |
| Course id: |
| Number of ECTS: |
| Teacher: | **Mirko Simikić PhD, Assistant professor** |
| Course status | **Mandatory** |
| Number of active teaching classes (weekly) |
| Lectures: | Practical classes: | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None |
| **Educational goal**Acquiring theoretical and practical knowledge of soil tillage in organic agriculture. Introduction to the basic structures of tractors, mobile systems and machinery used in the production of safe food and its impact on land degradation. |
| **Educational outcomes**Competence to select, plan, manage and exploit modern machinery in organic production, as well as for environmental protection. |
| **Course content***Theoretical lessons*The basics of tractors and mobile systems. Methods of soil tillage in organic agriculture and combine harvesters. Disinfection of soil. Machinery for sowing and planting. Methods and equipment for weed control in organic agriculture. Special machines in organic agriculture. Manipulation with manure and fertilization. The protection of agricultural plots. Harvesting crops in organic agriculture. Soil compaction as a result of poor choices and uncontrolled use of tractors and mobile systems. Precision agriculture and GPS in organic agriculture.*Practical teaching*: Exercises, Other methods of teaching, Research workIntroduction to the structure of tractors and mobile systems. Introduction to the use, basic parts, principle of operation, configuration, maintenance during operation and protective measures when working with machines for standard and conservational tillage, fertilization, seeding and planting, inter-row cultivation, spraying and harvesting crops. Introduction to the equipment for testing soil compaction and testing the soil compaction under field conditions. |
| **Teaching methods**The method of oral presentations and discussions. The method of drawing, presentations, demonstrations, simulations and illustrations on the board and by using video presentations. Consultations and seminar papers. The method of practical work in laboratories and at the Institute. |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam  | Mandatory | Points |
| Lecture attendance | Yes | 5 | Oral part of the exam | Yes | 55 |
| Exercise attendance | Yes | 5 |  |
| Term paper | Yes | 15 |
| Test | Yes | 20 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Meši M. | Agricultural machinery | Faculty of agriculture Novi Sad | 2012 |
|  | Lazić et al. | Organic Agriculture | Institute of Field and Vegetable Crops | 2008 |
|  | Nikolić et al. | Research the causes, consequences and measures for the reduction and control of soil compaction | Faculty of agriculture Novi Sad | 2002 |
|  | Vojvodić M. | Agricultural machinery | Faculty of agriculture Novi Sad | 1994 |