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|  | UNIVERSITY OF NOVI SAD  FACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 |  |
| Study Programme Accreditation  MASTER STUDIES *AGRINDUSTRIAL ENGINEERING* |
| Table 5.2 Course specification | | |

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| Course: | | **Development and use of single axle tractors and motor implements** | | | | | | | | |
| Course id: | |
| Number of ECTS: | |
| Teacher: | | **Mirko Simikić PhD, Assistant professor** | | | | | | | | |
| Course status | | **Elective** | | | | | | | | |
| Number of active teaching classes (weekly) | | | | | | | | | | |
| Lectures: | | Practical classes: | | | Other teaching types: | | Study research work: | | Other classes: | |
| Precondition courses | | None | | | | | | | | |
| **Educational goal**  The objective of the course is to familiarize students with the development and more efficient use of single-axle tractors and power tools. Also, students should be familiar with the structures, functioning, the basic setup, maintenance and safety precautions when working with single-axle tractors and power tools. | | | | | | | | | | |
| **Educational outcomes**  Upon passing the exam the student acquires the knowledge and skills which provide him with essential understanding of the technical basis of single-axle tractors and power tools. Knowledge acquired through this course will serve as a base for the correct choice, rational and safe usage of small machinery with the aim of improving agricultural production, especially on small farms, yards and in mountainous areas. | | | | | | | | | | |
| **Course content**  *Theoretical lessons*. Classification of single-axle tractors and power tools. Theory of movement of single-axle tractors – soil characteristics, the characteristics of the tires, the structure of the systems. Tendencies in the development of single-axle tractors. Development of power tools. The development of engine for single-axle tractors and power tools. The development of implements for single-axle tractors and power tools. Maintenance and care of single-axle tractors and power tools. Possible injuries, consequences and preventive measures when working with single-axle tractors and power tools. Standards and testing single-axle tractors and power tools.  *Practical teaching: Exercises, Other methods of teaching, Research work*  Introduction to the structure, operating principle and settings of single-axle tractors and power tools. Basics of calculation for stability of single-axle tractors and power tools – longitudinal stability, lateral stability and stability in a curve. Traction and energy balance of single-axle tractors at work with a variety of power tools – basics of calculation. Introduction to the hazardous parts of single-axle tractors and power tools and regulations for safe handling. | | | | | | | | | | |
| **Teaching methods**  The method of oral presentations and discussions. Methods of presentation, demonstration, simulation, drawing and illustration. 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 | | 60 |
|  | | | | |
| Exercise attendance | | | Yes | 5 | |
| Term paper | | | Yes | 30 | |
| Literature | | | | | | | | | | |
| Ord. | Author | | Title | | | Publisher | | | | Year |
|  | Nikolić et al | | Development and use of single axle tractors and motor implements | | | Faculty of agriculture Novi Sad | | | | 2011 |
|  | Nikolić R, Savin L,  Simikić M. | | Power machines | | | Faculty of agriculture Novi Sad | | | | 2008 |
|  | Nikolić R, Savin L,  Simikić M. | | Tractors - testing | | | Faculty of agriculture Novi Sad | | | | 2007 |