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| Course: | **Power and ameliorated machines** |
| Course id: 3OUV6I45 |
| Number of ECTS:*6* |
| Teacher: | Lazar Savin, Rajko Bugarin  |
| Course status | Elective |
| Number of active teaching classes (weekly) |
| Lectures: | Practical classes: | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None/navesti ako ima |
| 1. Educational goal

The aim of the course is to familiarize students with IC engines and elektomotorima used in agriculture. Students should be familiar with the construction and operation of, the basic setup and maintenance of the tractor. Also, the goal is to acquire theoretical and practical knowledge concerning the selection and use of land reclamation and agricultural machines. |
| 1. Educational outcomes

After taking the course, students acquire knowledge and skills that enable him to:A thorough understanding some technical basis of IC engines, farm tractors and electric motors,proper selection of IC engine according to the purpose, structure of sowing and conditions of useproper selection and use of land reclamation and agricultural machinery with emphasis on the impact of mechanization on the environment. |
| 1. Course content

Power generating machinery in agriculture, forestry and water management, importance, production, situation and needs. Classification, advantages and disadvantages of IC engines and other structures, basic concepts and operation of diesel and spark ignition engine. The structure of agricultural tractors, construction and principles of operation of the tractor. Energy balance of power machines and tractors. Work principles elektromoora, operation and maintenance.Pumps on melioration and agricultural machinery. The winch. Machines for the systematization of land. Machines for mass earthwork (excavators intermittent and continuous miners, scrapers, graders and dozers). Machines for digging and maintaining channels. Agricultural machinery for primary and tillage equipment and fertilizer. Safety at work. |
| 1. Teaching methods

Introduction to the design of engines and engine combustion and other engines. Construction of tractor, principles of operation, setting and budget basis.Getting to know the purpose of the basic parts, the principle of operation, configuration, maintenance, ongoing operation and protection measures to work with machines and equipment according to the curriculum of lectures.Lectures, Practice/ Practical classes |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam (izabrati) | Mandatory | Points |
| Lecture attendance | Yes/No | 5 | *Theoretical part of the exam/Oral part of the exam/Written part of the exam-tasks and theory* | Yes | 60 |
| Test | Yes/No | 30 |  |
| Exercise attendance | Yes/No | 5 |
| *Ovde se mogu pojaviti i kolokvijumi i seminarski rad (npr. Test, Term paper)* | Yes/No |  |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Nikolić R | Pogonske mašine-konstrukcije i principi rada | Poljoprivredni fakultet, Novi Sad | 2004 |
|  | Nikolić R, Savin L.: | Pogonske mašine – zbirka zadataka | Edicija Univerzitetski udžbenik | 2000 |
|  | Oljača M, Raičević D: | Mehanizacija u melioracijama zemljišta | Poljoprivredni fakultet, Novi Sad | 1998 |
|  | **Vojvodić M i sar.:**  | **Poljoprivredne mašine** | **Nevkoš** | 1998 |
|  | Nikolić R, Savin L, Simikić M:  | Pogonske mašine - Konstrukcije i principi rada II deo | Edicija Univerzitetski udžbenik 184 Univerzitet u Novom Sadu, Novi Sad | 1998 |

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| Znak univerziteta | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme AccreditationUNDERGRADUATE STUDIES Landscaping and use of water |