

AGRICULTURAL MACHINERY (I st Year of study, I st SEMESTER and half year second semester)

Credit value ECTS 7

Course category

Domain (Imposed)

Course holder:

Lecturer. dr. Dan Cazacu

Discipline objectives (course and practical works)

In the disciplines are presented basic concepts of construction and operation of agricultural equipment, constructive news of tractors and agricultural machinery, technical performance, and the connexion between durable agriculture, etc.

Contents (syllabus)

Course (chapters/subchapters)
The general concept of sustainable development Content, significance, concept and objectives of durable agriculture; Strategies of achieving sustainable development;
Soil 's conservation and regeneration conditions Resistance to soil penetration; Resistance specific soil plowing; The effects of soil compaction and measures to prevent and combat it.
Machinery and equipment for soil cultivation used in the world to ensure its preservation Soil works mechanization technologies used worldwide to achieve sustainable agriculture concept ; Tillage rationalized systems;
New machinery for soil tillage.
The concept of VRT(variable rate of technology) and the agricultural equipment
GPS for tomorrow- implementing of new utilizations on the agricultural equipments

Practical works
Plows, harrows, cultivators, combiners
Mills machines, holes digging, sub soiling processing machines
Seeders, planters
Fertilization equipment
Sprayers
Harvester for cereals and technical plants
Machinery for treaty and conditioning seeds

Bibliography

1. Bill A. Stout 1999 - *CIGRE Handbook Volume III*. Publisher American Society of Agricultural Engineers Texas A & M University, USA Co-Editor: Chez Bernard Ministry of Agriculture, Fisheries and Food, France

2. Drocaș I, and collaborators, 1999 - Setting agricultural machinery for soil, sowing, planting, fertilization and crop protection - Publisher Risoprint, Cluj Napoca. Craiova.
3. Mircea Badescu, Sorin Boruz, 2005 – Agricultural and horticultural machines.Publisher Sitech,
4. Precision farming and variable rate technology A resource guide -First Edition February, Alberta Council, 2010
5. Toma Dragos, Traian Neagu and collab., 1981 - Tractors and machinery for agriculture, vol. II, Didactic and Pedagogical Bucharest.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	oral	60%
Laboratory activity	tests, laboratory activity	40%

Contact

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