

Operation of agricultural machinery (IVth Year of study, VIIth Semester)

Credit value (ECTS) 5

Course category

Domain (Imposed)

Discipline code

A.EMIAIA.S.402

Course holder

Vlad Nicolae ARSENOAIA

Discipline objectives (course and practical works)

Within the course and practical works, the aim is for students to acquire the theoretical and practical foundation regarding the operation of agricultural machinery.

Contents (syllabus)

Course (chapters/subchapters)
Operation of plows Operation of subsoilers Operation of disc harrows Operation of combinators Operation of seed drills for cereals Operation of seed drills for row crops Operation of fertilizer application machines Operation of plant protection treatment machines Operation of grain harvesting combines Operation of oilseed harvesting combines Operation of sugar beet harvesting combines Operation of forage choppers Operation of forage crop harvesting machines

Practical works
Formation of agricultural machinery aggregates. Traction resistance Methods to increase tractor stability Available drawbar force of the tractor Methods to reduce excessive soil compaction Reducing conventional fuel consumption for agricultural works Determining traction resistance on different soil types Determining the force required for operating power take-off (PTO)-driven units Determining qualitative work indices for seedbed preparation Determining qualitative work indices for seed drills Determining qualitative work indices for sprayers Determining the optimal working speed based on the executed operation

References

1. Mircea Badescu, Sorin Boruz 2015 - Masini agricole si horticole, Edit. Sitech
2. Arsenoiaia Vlad, 2023 – Masini de recoltat. Editura Ion Ionescu de la Brad, Iași
3. Cazacu Dan, Rosca R., 2015 - Construcția tractoarelor , editia I. Editura Ion Ionescu de la Brad

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Written examination	80%
Appreciation of the activity during the semester	Oral assessment during the semester, verification tests and final laboratory colloquium.	20%

Contact

Nicolae ARSENOAIA

Faculty of Agriculture - USV Iași

Aleea Mihail Sadoveanu nr. 3, Iași, 700490, Romania