

Machinery maintenance and repair technology (IVth Year of study, VIIth Semester)

Credit value (ECTS) 5

Course category
Domain (Imposed)

Discipline code
A.EMIAIA.S.404

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 machinery maintenance and repair technology.

Contents (syllabus)

Course (chapters/subchapters)
Basic concepts of repair and reliability of agricultural machinery Structure of the maintenance, inspection, and repair system Friction Lubricants Criteria for determining wear limits Wear and clearance limits in bearings under constant load Study of wear on working parts of agricultural machinery Restoring parts to their original dimensions Reconditioning by replacing a portion of the part Methods for restoring fits in joints Objectives of technical diagnostics for tractors Technical diagnostics of tractor engines Diagnostics and maintenance of mechanisms
Practical works

General concepts regarding the proper functioning of agricultural machinery and food industry equipment
 Study on disassembly, reconditioning, and reassembly of the engine mechanism
 Study on maintenance and repair operations for tractors
 Study on maintaining the distribution system
 Study on maintaining the injection system
 Using computing technology for tractor diagnostics
 Study on maintaining the steering and running systems of tractors
 Study on maintaining the hydraulic system of tractors and combines
 Study on maintaining the electrical system of tractors
 Study on maintenance and repair operations for grain harvesting combines
 Study on maintenance and repair operations for technical crop harvesting combines

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

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