

PRECISION AGRICULTURE EQUIPMENT (IV th Year of study, II nd Semester)

Course category

Domain (optional)

Credit value ECTS 3

Course holder:

Lecturer. Ph.D. Dan Cazacu

Discipline objectives (course and practical works)

The discipline aims to acquire by students the theoretical principles of operation of various special agricultural equipment, within modern technologies and the regulation of this equipment, depending on the specific conditions in the field.

Contents (syllabus)

Course (chapters/subchapters)
General notions about agricultural systems; The concept of precision agriculture
GPS and precision farming
GIS (Geographic information system) and its use in agriculture
VRT (Variable Rate Technology)
Production monitoring, economic aspects related to the use of VRT
Introduction to the use of NIRS technology
Agricultural equipment from the "smart agriculture" category
Practical works
Setting up and using the auto-steering system
Setting up and using an electronic penetrometer
Setting up and using a NIRS device
Adjustment and use of equipment for the determination of hectoliter weight, humidity and of production mounted on straw grain harvesters
Fleet monitoring
Establish optimal travel methods to increase actual work capacity

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. Course support
3. *The Economic Tool for Site-Specific Farming*. Alberta Agriculture and Rural Development. 2001. *MoneyMap*
4. *Global Positioning System Overview* Dana, Peter H. 1994. Department of Geography, The University of Colorado at Boulder.
5. *Hyper spectral satellite data for Precision Farming*. White, H. Peter. 2009. Canada Centre for Remote Sensing.

Evaluation

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

Contact

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