

Course name: Farming Systems

ECTS	4
Course status	<i>optional</i>
Course final assessment /evaluation of outcomes	credit for evaluation
Prerequisite	non

Main field of study:

Educational profile	general academic
Code of studies and education level	bachelor
Semester of studies	winter
Language of instruction	English

Course offered by:

Name of faculty offering the course	Faculty of Agriculture and Economics
Name of department offering the course	Agroecology and Plant Production
Course coordinator	Agnieszka Synowiec

Learning outcomes:

Symbol of outcome	Description of the learning outcome	Reference to main field of study outcomes	Area symbol*
KNOWLEDGE – student knows and understands			
FAR_W1	principles of modern agricultural systems and their classification	RO1_W05	RR
SKILLS – student is able to			
FAR_U1	design crop rotations according to the different requirements of the agricultural system and include fertilization and pest control methods	RO1_U20 RO1_U21 RO1_U22	RR
SOCIAL COMPETENCIES – student is ready to:			
FAR_K1	the need for continuous study due to progress in this field of knowledge	RO1_K01	RR

Teaching contents

Lectures	15 hours
Topics	<ol style="list-style-type: none"> 1. Main differences between farming systems 2. Main differences between farming systems 3. Role of crop rotation in different systems 4. Role of crop rotation in different systems 5. Soil cultivation by system (plough, no-till, no-till) 6. Soil cultivation by system (plough, no-till, no-till) 7. Effect of cultivation system on soil properties 8. Use of fertilizers (mineral, organic and natural) 9. Effect of fertilizers on the environment 10. Importance of livestock 11. Pest control in different systems 12. Pest control in different systems 13. Effect of each farming system on the environment 14. Effect of each farming system on the environment 15. Profitability of different farming systems
Accomplished learning outcomes	FAR_W1
Means of verification, rules and criteria of assessment	<i>Lectures: written exam. Grade E (2.0) less than 55%</i>

	Grade D (3.0) 55% Grade C (3.5) 65% Grade B (4.0) 75% Grade B + (4.5) 90% Grade A (5.0) 97-100%
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Classes:		30 hours
Topics	Each student will prepare a crop rotation project for a selected agricultural system, related to the technological card of soil cultivation, fertilization and pathogen control Issues related to agricultural systems, including: main differences between agricultural systems, role of crop rotation in different systems, soil cultivation depending on the system (plough, no-till, no-till), influence of the cultivation system on soil properties, use of fertilizers (mineral, organic and natural), influence of fertilizers on the environment)	
Accomplished learning outcomes	FARI_U1, FAR_K1	
Means of verification, rules and criteria of assessment	Written tasks to solve. Grade E (2.0) less than 55% Grade D (3.0) 55% Grade C (3.5) 65% Grade B (4.0) 75% Grade B + (4.5) 90% Grade A (5.0) 97-100%	

References:

Basic	Darnhofer I., Gibbon D., Dedieu B. (eds) <i>Farming Systems Research into the 21st Century: The New Dynamic</i> . Springer, Dordrecht. https://doi.org/10.1007/978-94-007-4503-2_1 Simmonds, N. W. (1985). <i>Farming systems research: a review</i> (No. 43, pp. xii+-97pp).
Supplementary	Klima, K., Synowiec, A., Puła, J., Chowaniak, M., Pużyńska, K., Gala-Czekaj, D., ... & Lepiarczyk, A. (2020). Long-term productive, competitive, and economic aspects of spring cereal mixtures in integrated and organic crop rotations. <i>Agriculture</i> , 10(6), 231. Pużyńska, K., Synowiec, A., Pużyński, S., Bocianowski, J., Klima, K., & Lepiarczyk, A. (2021). The performance of oat-vetch mixtures in organic and conventional farming systems. <i>Agriculture</i> , 11(4), 332.

Structure of learning outcomes

Area of academic study:	4 ECTS
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Structure of student activity

Contact hours	52	hrs.	2 ECTS**
Including:			
lectures	15	hrs.	
classes and seminars	30	hrs.	
consultations	5	hrs.	
participation in research		hrs.	
obligatory traineeships		hrs.	
participation in examination	2	hrs.	
e-learning		hrs.	ECTS**
student own work	48	hrs.	2 ECTS**

*Areas of academic study in the fields of: H- humanities; S - social studies; P – biological sciences; T – technological sciences; M- medical, sport and health sciences; R – Agricultural, forestry and veterinary sciences; A – the arts

** stated with an accuracy to 0.1 ECTS, where 1 ECTS = 25 - 30 hours of classes