Appendix No. 1.5 to the Resolution No. 61/2025
of the Rector of the University of Rzeszów

SYLLABUS

REGARDING THE QUALIFICATION CYCLE FROM 2026/2027 TO 2027/2028
ACADEMIC YEAR: 2026/2027

1. BASIC COURSE/MODULE INFORMATION

Course/Module title	**Experimental Design in Agriculture**
Course/Module code *	
Faculty (name of the unit offering the field of study)	Faculty of Technology and Natural Sciences
Name of the unit running the course	Institute of Agricultural Sciences, Environmental Protection, and Management; Department of Crop Production
Field of study	Agriculture
Qualification level	Second-cycle studies
Profile	General academic
Study mode	Full-time
Year and semester of studies	Year 1 Semester 1
Course type	Major
Language of instruction	English
Coordinator	prof. dr hab. inż. Ewa Szpunar-Krok
Course instructor	prof. dr hab. inż. Ewa Szpunar-Krok

* - as agreed at the faculty

1.1. Learning format – number of hours and ECTS credits

Semester (no.)	Lectures	Classes	Laboratories	Seminars	Practical classes	Internships	Field classes	**ECTS credits**
1	15		24				4	3

1.2. Course delivery methods
4- conducted in a traditional way
- involving distance education methods and techniques

1.3. Course/Module assessment (exam, pass with a grade, pass without a grade)
Exam

2. PREREQUISITES

Mathematical statistics. Knowledge of the principles of soil and crop management.

3. Objectives, Learning Outcomes, Course Content, and Instructional Methods

3.1. Course/Module objectives

O1	Familiarising students with the basic principles of planning and conducting research, as well as methods for verifying research hypotheses and assumptions in the field of agricultural sciences (agronomy).
O2	Preparing students for research work.

3.2. Course/Module Learning Outcomes

Learning Outcome	The description of the learning outcome defined for the course/module	Relation to the degree programme outcomes
LO_01	has knowledge and understanding of the classification of agricultural experiments.	K_W03
LO_02	has knowledge and understanding of the principles of planning, formulating, and testing hypotheses, conducting agricultural experiments, and analysing and interpreting research results.	K_W03
LO_03	is able to independently plan and carry out simple research tasks.	K_U03
LO_04	is able to correctly analyse and interpret the results of agricultural research.	K_U03, K_U04
LO_05	is prepared to undertake targeted further education and comply with professional ethical principles.	K_K01, K_K04

3.3. Course content

A. Lectures

Content outline
Classification and characteristics of research methods in agricultural sciences. Methods of observation, experimentation, surveys, and interviews. Concepts used in agricultural experimentation.
Specific characteristics of laboratory experiments.
Classification of field experiments.
Experimental designs for single-factor and multifactor experiments.

B. Laboratories, field classes

Content outline
Experimental design (determining the size and shape of experimental plots and the number of replications).
Techniques for establishing and conducting field experiments.
Types of observations and measurements in agricultural research and methods for conducting them.

Principles of sampling in experimental research.

3.4. Methods of Instruction

Lecture: a lecture supported by a multimedia presentation
Laboratories: group work, discussion, experimental design
Field classes: observation and discussion.

4. Assessment techniques and criteria

4.1 Methods of evaluating learning outcomes

Learning outcome	Methods of assessment of learning outcomes (e.g. test, oral exam, written exam, project, report, observation during classes)	Learning format (lectures, classes…)
LO-01	exam	lectures, lab.
LO-02	exam, test, field class report	lectures, lab., field classes
LO-03	project	lectures
LO-04	project	lectures, lab.
LO-05	continuous observation	lab.

4.2 Course assessment criteria

A condition for passing the course is the achievement of all intended learning outcomes. Lectures: written examination. Laboratories: the final grade is based on the grades obtained in individual tests and an independently completed assignment (statistical analysis of experimental results using analysis of variance and interpretation of the results). Field classes: submission of a report. A passing grade for the examination and tests is determined by the number of points obtained, with more than 50% of the maximum number of points required: satisfactory (3.0): 51–60%, satisfactory plus (3.5): 61–70%, good (4.0): 71–80%, good plus (4.5): 81–90%, very good (5.0): 91–100%.

5. Total student workload needed to achieve the intended learning outcomes – number of hours and ECTS credits

Activity	Number of hours
Course hours	**43**
Other contact hours involving the teacher (consultation hours, examinations)	**5**
Non-contact hours - student's own work (preparation for classes or examinations, projects, etc.)	**27**
Total number of hours	**75**
Total number of ECTS credits	**3**

* One ECTS point corresponds to 25-30 hours of total student workload

6. Internships related to the course/module

Number of hours	
Internship regulations and procedures	

7. Instructional materials

Compulsory literature: materials provided by the teacher and online resources on the topics covered
Complementary literature: online resources on the topics covered

Approved by the Head of the Department or an authorised person