

Course code: .....

Plan position: .....

### A. INFORMATION ABOUT THE COURSE

#### B. Basic information

Name of course	Crop production, medicinal plants and experimental methodology
Field of studies	Agriculture
Level of studies	First cycle
Profile of studies	Academic
Form of studies	Erasmus +
Specialty	All specialties
Unit responsible for the field of studies	Faculty of Agriculture and Biotechnology
Name and academic degree of teacher(s)	Jadwiga Andrzejewska, prof. dr hab. inż., Lech Gałęzewski, dr hab. inż., Mariusz Piekarczyk, dr hab. inż., Edward Wilczewski, dr hab. inż.
Introductory courses	Botany, plant physiology, soil science
Introductory requirements	Basic knowledge in the field of plant physiology as well as on the climate and soil factors.

#### C. Semester/week schedule of classes

Semester	Lectures (W)	Auditorium classes (Ć)	Laboratory classes (L)	Project classes (P)	Seminar (S)	Field classes (T)	Number of ECTS points
V	20		15				7

### 2. LEARNING OUTCOME

No.	Learning outcomes description	The reference to the learning outcomes of specific field of study	The reference to the learning outcomes for the area
<b>KNOWLEDGE</b>			
W1	has a basic knowledge of the nature and types of plant production	K_W08	P6S_WG
W2	have basic knowledge about the biology of agriculture and properties of medicinal plants, and technology components of crop production	K_W09	P6S_WG
W3	has a basic knowledge of basic statistic and experimental methodology		
<b>SKILLS</b>			
U1	can identify main agriculture and medicinal plants and analyze its state	K_U06	P6S_UW

U2	has the ability to design elements and entire cultivation technologies of main agriculture plants	K_U08	P6S_UW
U3	is able to determine the scope and conditions of medicinal plants application		
U4	is able to plan and perform simple agricultural experiments and analyze the results obtained		
<b>SOCIAL COMPETENCES</b>			
K1	is convinced of the need and role of agricultural activity, understands the simultaneous need to produce and shape the environment, is ready to take on new tasks, is persistent and diligent in action	K_K03	R1A_K04
K2	is aware of the risks and dangers of running any activity, including agriculture, for people, livestock and the environment, is guided by ethical principles in business	K_K04	P6S_KR P6S_KO

### 3. TEACHING METHODS

#### A. Traditional methods used \*\*\*

multimedia lecture, laboratory exercises, demonstration, discussion

#### B. Distance learning methods used \*\*\*

**Synchronous method** (classes conducted in a way that ensures direct interaction between the student and the teacher in real time, enabling immediate flow of information, the method can be used only if it is provided for in the study plan for a given cycle of education):

There are no plans for remote forms of conducting classes

**Asynchronous method** used as an auxiliary (a method that does not ensure direct interaction between the student and the teacher in real time, used only as an auxiliary / complementary method):

There are no plans for remote forms of conducting classes

### 4. METHODS OF EXAMINATION

Written test

### 5. SCOPE

Lectures	Soil tillage technologies. Agrotechnics of cereals. Agrotechnics of winter oilseed rape. Agrotechnics of potato. Agrotechnics of legumes. Medicinal plants: species overview, active substances and importance in the economy. Sources of herbal raw materials. Principles of cultivation of medicinal plants. Basic of methodology and statistics. Planning factorial experiments.
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Laboratories	<p>Assessment of the plants vigour.</p> <p>Assessment of the value of cereal cultivars.</p> <p>Assessment of the value of winter oilseed rape cultivars.</p> <p>Assessment of the value of potato cultivars.</p> <p>Assessment of the value of legumes cultivars.</p> <p>Identification of herbal raw materials.</p> <p>Medicinal uses of herbs.</p> <p>Culinary uses of herbs.</p> <p>Cosmetic uses of herbs.</p> <p>Basic statistical measures, estimation of general population parameters, correlation and regression analysis, analysis of variance</p>
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## 6. METHODS OF VERIFICATION OF LEARNING OUTCOMES

LEARNING OUTCOME	Form of assessment					
	Oral examination	Written exam	Colloquium	Project	Presentation	.....
W1		x				
W2		x				
U1		x				
U2		x				
K1		x				
K2		x				

## 7. LITERATURE

Basic literature	<p>Principles of Agronomy for Sustainable Agriculture. Villalobos Francisco J., Fereres Elias (Eds.), 555 pp., Publisher: Springer International Publishing, 2016, DOI: 10.1007/978-3-319-46116-8.</p> <p>Medicinal Plants in the World. B-E van Wyk &amp; M. Wink, 520 pp., Publisher: CABI, 2019.</p> <p>Gomez K.A., Gomez A.A. Statistical procedures for agricultural research. an international rice research institute book. John Wiley and sons</p>
Supplementary literature	<p>Modeling Crop Production Systems: Principles and Application. Phool Singh, 510 pp. Publisher: CRC Press, 2008</p> <p>Adaptogens. J. Andrzejewska, E. Pisulewska. 129 pp., Publisher: Bydgoszcz University of Science and Technology, 2022.</p>

## 8. TOTAL STUDENT WORKLOAD REQUIRED TO ACHIEVE EXPECTED LEARNING OUTCOMES EXPRESSED IN TIME AND ECTS CREDITS

Student's activity		Student workload– number of hours
Classes conducted under a direct supervision of an academic teacher or other persons responsible for classes	Participation in classes indicated in point 1B	35
	Supervision hours	-
Student's own work	Preparation for classes	50
	Reading assignments	50

	Other (preparation for exams, tests, carrying out a project etc)	40
Total student workload		175
Number of ECTS points		7