

SYLLABUS

Academic year 2025 - 2026

1. Details about the program

1.1. Higher Education Institution	„Lucian Blaga” University of Sibiu
1.2. Faculty	Faculty of Sciences
1.3. Department	Environmental Sciences, Physics, Physical Education and Sports
1.4. Field of study	Biology
1.5. Study cycle ¹	Bachelor
1.6. Specialization	Biology

2. Details about the course

2.1. Course name	SYSTEMATICS OF PHANEROGAMS			Code	FSTI.MFE.BIOEN.L.FO.2.2020.E-4.1	
2.2. Course coordinator	Associate professor. Alexandra Zamfir Ph.D					
2.3. Practical activity coordinator	Asistant lecturer. Mihai-Tudor Crăciunaș Ph.D					
2.4. Year of study ²	I	2.5. Semester ³			2.6. Type of assessment ⁴	E
2.7. Type of discipline ⁵		O	2.8. Formative category of the discipline ⁶			F

3. Estimated total time

3.1. Proportion of the discipline within the curriculum – <i>number of hours / week</i>					
3.1.a.Lecture	3.1.b. Seminar	3.1.c. Laboratory	3.1.d. Project	3.1.e Other	Total
2	-	1	-	-	4
3.2. Proportion of the discipline within the curriculum – <i>number of hours / week</i>					
3.2.a.Lecture	3.2.b. Seminar	3.2.c. Laboratory	3.2.d. Project	3.2.e Other	Total ⁷
28	-	28	-	-	56
Allocation of time budget for individual study⁸					No. hours
Study based on textbook, lecture notes, bibliography and course notes					12
Additional research: library, specialized electronic platforms and field or on-site investigation and documentation					10
Preparing for the seminar / laboratorires, home assignments, reports, portfolios and essays					10
Tutoring ⁹					6
Examinations ¹⁰					6
3.3. Total number of hours for individual study¹¹ (NOSI_{sem})					44
3.4. Total number of hours in the curriculum (NOAD_{sem})					56
3.5. Total number of hours per semester¹² (NOAD_{sem} + NOSI_{sem})					100
3.6. No of hours / ECTS					25
3.7. Number of credits¹³					4

4. Prerequisites (if applicable)

4.1. Prerequisite courses for enrollment to this subject (from the curriculum) ¹⁴	Plant cytology, anatomy and morphology
4.2. Competencies	-

5. Requirements (wherever applicable)

5.1. Lecture organization and structure ¹⁵	Computer, projector
5.2. Organization and structure of practical activities (lab/sem/pr/other) ¹⁶	Botany laboratory (microscope, photo-video camera, projector, computer, reagents, specific laboratory utensils, fresh and preserved biological material, plates, determiner

6. Learning outcomes¹⁷

Number of credits assigned to the discipline: 4				
Learning outcomes				Credit allocation based on learning outcomes
No.	Knowledge	Aptitudes	Responsibility and autonomy	
LO 1	The student/graduate describes, defines and discusses fundamental principles in the field of Biology, as well as interdisciplinary aspects (for example: Evolutionism, General Ecology, Plant Physiology, Animal Physiology).	The student/graduate applies working methods using modern instruments/equipment and classic laboratory techniques to perform, design experiments, record and appropriately analyze the results obtained.	The student/graduate uses his/her own knowledge and experiences to develop the scientific community and society in general by participating in professional and/or community activities	1
LO 2	The student/graduate correctly uses and explains the specific terminology used in the field of Biology, the main concepts and laws, the characteristics of biological systems from the perspective of the principles of organization and functioning of living matter.	The student/graduate defines, describes, discusses/presents major concepts in the field of Biology	The student/graduate demonstrates responsibility and autonomy in the use of scientific knowledge in the field of Biology, by conducting research, developing or improving concepts, theories, operational methods or biotechnological products, assuming ethical and professional decisions within the scientific process.	1
LO 3	The student/graduate defines, explains and exemplifies	The student/graduate uses, investigates and critically analyzes the principles of operation	The student/graduate applies knowledge learned in other courses to explain the	1

	basic and modern experimental techniques in the analysis and characterisation of biological systems, records and presents experimental results and explains the principles of scientific methods.	and use of equipment/instruments, techniques/working methods for investigating the functioning of biological systems	interactions of organisms with the environment	
LO 4	The student/graduate analyzes, evaluates and uses concepts, theories and methods from other fields in the field of Biology	The student/graduate achieves transdisciplinary integration of knowledge in order to evaluate the support capacity of biological systems for socio-economic systems	The student/graduate demonstrates initiative and self-control, capacity for anticipation and prospective evaluation, courage and perseverance in achieving objectives.	1

7. Course objectives (reflected by the framework of specific competencies)

7.1. General objective	- Students' knowledge and understanding of the terms, notions, concepts and principles specific to botany - Development of communication skills using the language specific to biological sciences/botany.
7.2. Specific objectives	- Developing the ability to explore/investigate the plant world and to use the appropriate means and methods for exploring the living world/plants. - Recognition of different plant species.

8. Course description

8.1. Lecture ¹⁸	Teaching methods ¹⁹	No. of hours
Lecture 1 Kingdom Plantae. General characters Cormobionta	Interactive lecture, explanation, conversation, problem solving	2
Lecture 2 The phylum Bryophyta	Interactive lecture, explanation, conversation, problem solving	2
Lecture 3 The phylum Pteridophyta	Interactive lecture, explanation, conversation, problem solving	2
Lecture 4 The phylum Pinophyta (Gymnospermatophyta)	Interactive lecture, explanation, conversation, problem solving	2
Lecture 5 The phylum Magnoliophyta (Angiospermatophyta), general characteristics.	Interactive lecture, explanation, conversation, problem solving	2
Lecture 6-12 The class Magnoliatae (description of the main species by families)	Interactive lecture, explanation, conversation, problem solving	14
Lecture 13-14 The class Liliatae (description of the main species by family)	Interactive lecture, explanation, conversation, problem solving	4
Total number of lecture hours:		28

8.2. Practical activities (8.2.a. Seminar ²⁰ / 8.2.b. Laboratory ²¹ / 8.2.c. Project ²² / 8.2.d. Other practical activities ²³)	Teaching methods	No. of hours
Act.1 Kingdom Plantae. The study of the general characters of the various phylum plants	Practical demonstration, exercise, experiment	2
Act.2 The phylum Bryophyta	Practical demonstration, exercise, experiment	2
Act.3 The phylum Pteridophyta	Practical demonstration, exercise, experiment	2
Act.4 The phylum Pinophyta (study of the main species by family)	Practical demonstration, exercise, experiment	2
Act.5-12 The phylum Magnoliophyta (Angiospermatophyta). Class Magnoliatae (study of the main species by family)	Practical demonstration, exercise, experiment	16
Act.13-14 The phylum Magnoliophyta (Angiospermatophyta). Class Liliatae (study of the main species by family)	Practical demonstration, exercise, experiment	4
Total number of hours: seminar/laboratory		28

9. Bibliography

9.1. Recommended references	1. Drăgulescu, C., 2009, <i>Morfologie și sistematică vegetală</i> , Edit. Universității “Lucian Blaga”, Sibiu
	2. Anastase Paulina, 2008, <i>Taxonomie vegetală</i> , Edit. Universității din București, București
9.2. Additional references	1. Crișan Gianina, și colab., 2013, <i>Botanica farmaceutică: Identificarea micro- și macroscopică a speciilor vegetale</i> , Ed. Medicală Universitară “Iuliu Hațieganu”, Cluj-Napoca

10. Correlating the course description with the expectations and requirements of representatives of the epistemic community, professional associations and significant employers and stakeholders related to the study program and the specific area²⁴

It is carried out through periodic contacts with them in order to analyze the problem.

The choice of principles and the establishment of scientific and experimental methods suitable for solving problems related to Ecology and Environmental Protection.

Choosing the appropriate notions and tools from related disciplines to support the appropriate resolution of a given situation for Ecology and Environmental Protection.

Realization of work methodologies that allow to go through all the stages necessary for a complete investigation process (realization of measurements/calculations, data processing, interpretation).

Critical and constructive evaluation of the research approach specific to the Biology study program.

11. Evaluation

Type of activity	11.1 Assessment criteria	11.2 Assessment methods		11.3 Percentage of the final grade	Notes. ²⁵
11.4a Exam / Coloquium	• Theoretical and practical knowledge (quantity, correctness, accuracy)	Midterm / ongoing assignments ²⁶ :	25 %	75 %	
		Home assignments:	%		
		Other activities ²⁷ :	%		
		Final assessment:	50 %		

11.4b Seminar	• Frequency/relevance of contributions or answers	Proof of contributions, portfolio (scientific papers, syntheses)	-	
11.4c Laboratory	• Knowledge of equipment, methods of using specific instruments and tools; assessment of tools or achievements, processing and interpretation of results	• Written questionnaire • Oral examination • Laboratory notebook, experimental work, scientific papers, etc. • Practical demonstrations	25 %	
11.4d Project	• Quality of achieved project, accuracy of project documentation, rationale and evidence of selected solutions	• Self-assessment, project submission and/or defense • Critical assessment of a project	-	
11.5 Minimum performance standard ²⁸				

The course description includes components adapted to SEN (Special Educational Needs) persons, according to their type and degree, at all curricular elements and dimensions (competencies, objectives, course description, teaching methods, alternative assessment), in view of providing and ensuring equitable and fair opportunities to academic education for all students, with special attention to special educational needs.

Date of submission: 07 / 09 / 2025

Date of approval in the Department: 17 / 09 / 2025

	Degree, title, first name, surname	Signature
Course coordinator	Associate professor. Alexandra Zamfir Ph.D Assistant lecturer Mihai-Tudor Crăciunaș Ph.D	
Study program coordinator	Associate professor Ana-Maria Benedek-Sîrbu, PhD	
Head of Department	Lecturer Ioan Tăușan, PhD	

¹ Licență / Master

² 1-4 pentru licență, 1-2 pentru master

³ 1-8 pentru licență, 1-3 pentru master

⁴ Examen, colocviu sau VP A/R – din planul de învățământ

⁵ Regim disciplină: O=Disciplină obligatorie; A=Disciplină opțională; U=Facultativă

⁶ Categoria formativă: S=Specialitate; F=Fundamentală; C=Complementară; I=Asistată integral; P=Asistată parțial; N=Neasistată

⁷ Este egal cu 14 săptămâni x numărul de ore de la punctul 3.1 (similar pentru 3.2.a.b.c.d.e.)

⁸ Liniile de mai jos se referă la studiul individual; totalul se completează la punctul 3.37.

⁹ Între 7 și 14 ore

¹⁰ Între 2 și 6 ore

¹¹ Suma valorilor de pe liniile anterioare, care se referă la studiul individual.

¹² Suma (3.5.) dintre numărul de ore de activitate didactică directă (NOAD) și numărul de ore de studiu individual (NOSI) trebuie să fie egală cu numărul de credite alocate disciplinei (punctul 3.7) x nr. ore pe credit (3.6.)

¹³ Numărul de credit se calculează după formula următoare și se rotunjește la valori vecine întregi (fie prin micșorare fie prin majorare)

$$\text{Nr. credite} = \frac{\text{NOCpSpD} \times C_C + \text{NOApSpD} \times C_A}{\text{TOCpSpD} \times C_C + \text{TOApSpD} \times C_A} \times 30 \text{ credite}$$

Unde:

- NOCpSpD = Număr ore curs/săptămână/disciplina pentru care se calculează creditele
- NOApSpD = Număr ore aplicații (sem./lab./pro.)/săptămână/disciplina pentru care se calculează creditele
- TOCpSpD = Număr total ore curs/săptămână din plan
- TOApSpD = Număr total ore aplicații (sem./lab./pro.)/săptămână din plan
- C_C/C_A = Coeficienți curs/aplicații calculate conform tabelului

Coeficienți	Curs	Aplicații (S/L/P)
Licență	2	1
Master	2,5	1,5
Licență lb. străină	2,5	1,25

¹⁴ Se menționează disciplinele obligatoriu a fi promovate anterior sau echivalente

¹⁵ Tablă, videoproiector, flipchart, materiale didactice specifice, platforme on-line etc.

¹⁶ Tehnică de calcul, pachete software, standuri experimentale, platforme on-line etc.

¹⁷ The learning outcomes will be stated in accordance with the specific standards of the ARACIS expert commissions (<https://www.aracis.ro/ghiduri/>)

¹⁸ Titluri de capitole și paragrafe

¹⁹ Expunere, prelegere, prezentare la tablă a problematicei studiate, utilizare videoproiector, discuții cu studenții (pentru fiecare capitol, dacă este cazul)

²⁰ Discuții, dezbateri, prezentare și/sau analiză de lucrări, rezolvare de exerciții și probleme etc.

²¹ Demonstrație practică, exercițiu, experiment etc.

²² Studiu de caz, demonstrație, exercițiu, analiza erorilor etc.

²³ Alte tipuri de activități practice specifice

²⁴ Legătura cu alte discipline, utilitatea disciplinei pe piața muncii

²⁵ CPE – condiționează participarea la examen; nCPE – nu condiționează participarea la examen; CEF - condiționează evaluarea finală; N/A – nu se aplică

²⁶ Se va preciza numărul de teste și săptămânile în care vor fi susținute.

²⁷ Cercuri științifice, concursuri profesionale etc.

²⁸ Se particularizează la specificul disciplinei standardul minim de performanță din grila de competențe a programului de studii, dacă este cazul.