COURSE SYLLABUS

Academic year 2025 - 2026

1. Programme Information

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. Level of study [1]	Bachelor
1.6. Programme of study	Biology (in english)

2. Details about the course

2.1. Name of course	Systematics of cryptogams		Code	FSTI.MFE.BIORO.L.FO.1.2020.E-5.2	
2.2. Course coordinator	Biologist Andrei Buda, PhD				
2.3. Seminar / laboratory coordinator	Biologist Andrei Buda, PhD				
2.4. Year of study[2]	1	**2.5.** Semester[3]	1	**2.6.** Evaluation form [4]	E
2.7. Course type [5]	O	**2.8.** The formative category of the course [6]			F

3. Estimated total time

3.1. Course Extension within the Curriculum – Number of Hours per Week					
3.1.a.Lecture	3.1.b. Seminar	3.1.c. Laboratory	3.1.d. Project	3.1.e Other	Total
2		2			**4**
3.2. Course Extension within the Curriculum – Total Number of Hours within the Curriculum					
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**

Time Distribution for Individual Study [8]	**Hours**
Learning by using course materials, references and personal notes	26
Additional learning by using library facilities, electronic databases and on-site information	16
Preparing seminars / laboratories, homework, portfolios and essays	18
Tutorial activities [9]	7
Exams[10]	2

3.3. Total Individual Study Hours [11] ***(NOSI$_{sem}$)***	**69**
3.4. Total Hours in the Curriculum (*NOAD$_{sem}$*)	**56**
3.5. Total Hours per Semester [12] **(*NOAD$_{sem}$* + *NOSI$_{sem}$*)**	**125**
3.6. No. of hours / ECTS	**25**
3.7. Number of credits[13]	**5**

4. Prerequisites (if needed)

4.1. Courses that must be successfully completed first (from the curriculum) [14]	-
4.2. Competencies	

5. Conditions (wherever applicable)

5.1. For course/lectures [15]	computer and video projector
5.2. For practical activities (lab/sem/pr/other) [16]	computer, video projector, camera, terrain markers

6. Learning outcomes [17]

Number of credits assigned to the discipline: 5				
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 will know, use, exemplify and apply basic and modern experimental techniques in the analysis and characterization of the quality of environmental factors and the effects on living components of the ecosystem, recording and presenting experimental results and explaining the principles of scientific methods.	The student/graduate must be able to use, investigate and critically analyze the principles of operation and use of equipment/instruments, techniques/working methods for investigating the interaction of organisms with environmental factors.	The student/graduate uses modern instruments/equipment and classical laboratory techniques to perform, design experiments, and appropriately record and analyze the results obtained.	2
LO 3	The student/graduate must be aware of the different contexts and opportunities for putting ideas into practice in personal, social and professional activities as well as an understanding of how these may arise.	The student/graduate demonstrates negotiation skills, empathy and assertive communication, leadership, teamwork, conflict management, team management, and public speaking.	The student/graduate must demonstrate initiative and self-control, ability to anticipate and prospectively evaluate, courage and perseverance in achieving goals.	1
LO 4	The student/graduate recognizes, analyzes, and concludes concepts,	The student/graduate must achieve transdisciplinary integration of knowledge in	The student/graduate applies knowledge learned in other courses to explain	1

	theories, and methods from other fields in the field of Environmental Science.	order to evaluate the support capacity of biological systems for socio-economic systems.	the interactions of organisms with the environment.	

7. Course objectives (resulted from developed competencies)

7.1. Main course objective	
7.2. Specific course objectives	

8. Course description

8.1. Lecture[18]		**Teaching methods** [19]	**Hours**
Lecture 1	Classification of the plant kingdom	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
Lecture 2	Phylum Bacteriophyta Phylum Cyanophyta	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
Lecture 3	Phylum Euglenophyta	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
Lecture 4	The phylum Chrysophyta The phylum Pyrrophyta	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
Lecture 5	Phylum Chlorophyta	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
Lecture 6	Phylum Phaeophyta	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
Lecture 7	Phylum Rhodophyta	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
Lecture 8	Phylum Myxophyta	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
Lecture 9	Phylum Mycophyta	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
Lecture 10	Phylum Mycophyta	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
Lecture 11	Phylum Lichenophyta	Interactive lecture, explanation, conversation,	2

		problem-solving, use of video projector	
Lecture 12	Phylum Lichenophyta	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
Lecture 13	Phylum Bryophyta	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
Lecture 14	Phylum Bryophyta	Interactive lecture, explanation, conversation, problem-solving, use of video projector	2
		Total lecture hours:	**28**

8.2. Practical activities

8.2.b. Laboratory		**Teaching methods** [20]	**Hours**
Laboratory 1	Classification of the plant kingdom	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
Laboratory 2	Phylum Bacteriophyta Phylum Cyanophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
Laboratory 3	Phylum Euglenophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
Laboratory 4	The phylum Chrysophyta The phylum Pyrrophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
Laboratory 5	Phylum Chlorophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
Laboratory 6	Phylum Phaeophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
Laboratory 7	Phylum Rhodophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
Laboratory 8	Phylum Myxophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
Laboratory 9	Phylum Mycophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
Laboratory 10	Phylum Mycophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2

Laboratory 11	Phylum Lichenophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
Laboratory 12	Phylum Lichenophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
Laboratory 13	Phylum Bryophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
Laboratory 14	Phylum Bryophyta	explanation, demonstration, interactive dialogue, case study, brainstorming, problematization, debate, use of diagrams	2
		Total laboratory hours	28

9. Bibliography

9.1. Recommended references	Short, E., George, A., 2013 – A premier with botanical latin vocabulary. Cambridge University Press.
	Allaby, M., 2013 - A dictionary of plant sciences. Series Oxford Quick References, Oxford University Press.
	Buczacki S., 2013 - Collins Fungi Guide. Harper Collins, London.
	Læssøe, T., Petersen, j. H., 2019 – Fungi of Temperate Europe V I – Princeton University Press.
	Læssøe, T., Petersen, j. H., 2019 – Fungi of Temperate Europe V II – Princeton University Press.
9.2. Additional references	

10. Conjunction of the discipline's content with the expectations of the epistemic community, professional associations and significant employers of the specific study program [21]

The contents covered cover fundamental and applied themes of the discipline that ensure students' familiarization with the specific issues of the discipline;
• The curriculum of the discipline is designed to facilitate the formation of professional skills (specific to the profession, provided for in the RNCIS documents) and transversal skills;
• The contents covered include current themes (locally, nationally, internationally) that are the subject of interest and/or debates/research conducted by professional associations and/or employers.
• The contents of the discipline and teaching strategies were selected as a result of the collaboration of the teaching staff with other teaching staff from universities in the country and/or abroad, as a result of the collaboration with potential employers.

11. Evaluation

Activity Type	11.1 Evaluation Criteria	11.2 Evaluation Methods		11.3 Percentage in the Final Grade	Notes.[22]
11.4a Exam / Coloquium	• Theoretical and practical knowledge acquired (quantity, correctness, accuracy)	Tests during the semester [23]:	%	75% (minimum 5)	
		Homework:	%		
		Other activities[24]:	%		
		Final evaluation:	75% (min. 5)		

11.4b Seminar	• Frequency/relevance of participation or responses	Evidence of participation, portfolio of papers (reports, scientific summaries)	% (minimum 5)	
11.4c Laboratory	• Knowledge of the equipment, how to use specific tools; evaluation of tools, processing and interpretation of results	• Oral response • Written questionnaire • Laboratory notebook, experimental works, reports, etc. • Practical demonstration	25% (minimum 5)	
11.4d Project	• The quality of the project, the correctness of the project documentation, the appropriate justification of the chosen solutions	• Self-evaluation, project presentation • Critical evaluation of a project	% (minimum 5)	
11.5 Minimum performance standard[25]				

The Course Syllabus will encompass components adapted to persons with special educational needs (SEN – people with disabilities and people with high potential), depending on their type and degree, at the level of all curricular elements (skills, objectives, contents, teaching methods, alternative assessment), in order to ensure fair opportunities in the academic training of all students, paying close attention to individual learning needs.

Filling Date: 10 / 09 / 2025

Department Acceptance Date: 17 / 09 / 2025

	Academic Rank, Title, First Name, Last Name	**Signature**
Course Teacher	Andrei Buda, PhD	
Study Program Coordinator	Assoc. Prof. Ana-Maria Benedek-Sîrbu, PhD	
Head of Department	Lecturer Ioan Tăușan, PhD	

[1] *Bachelor / Master*
[2] *1-4 for bachelor, 1-2 for master*
[3] *1-8 for bachelor, 1-4 for master*
[4] *Exam, colloquium or VP A/R - from the curriculum*
[5] *Course type: R = Compulsory course; E = Elective course; O = Optional course*
[6] *Formative category: S = Specialty; F = Fundamental; C = Complementary; I = Fully assisted; P = Partially assisted; N = Unassisted*
[7] *Equal to 14 weeks x number of hours from point 3.1 (similar to 3.2.a.b.c.)*
[8] *The following lines refer to individual study; the total is completed at point 3.7.*
[9] *Between 7 and 14 hours*
[10] *Between 2 and 6 hours*
[11] *The sum of the values from the previous lines, which refer to individual study.*
[12] *The sum (3.5.) between the number of hours of direct teaching activity (NOAD) and the number of hours of individual study (NOSI) must be equal to the number of credits assigned to the discipline (point 3.7) x no. hours per credit (3.6.)*
[13] *The credit number is computed according to the following formula, being rounded to whole neighbouring values (either by subtraction or addition*

$$No.credits = \frac{NOCpSpD \times C_C + NOApSpD \times C_A}{TOCpSdP \times C_C + TOApSdP \times C_A} \times 30\ credits$$

Where:

- NOCpSpD = Number of lecture hours / week / discipline for which the credits are calculated
- NOApSpD = Number of application hours (sem./lab./pro.) / week / discipline for which the credits are calculated
- TOCpSdP = Total number of course hours / week in the Curriculum
- TOApSdP = Total number of application hours (sem./lab./pro.) / week in the Curriculum
- C_C/C_A = Course coefficients / applications calculated according to the table

Coefficients	**Course**	**Applications (S/L/P)**
Bachelor	2	1
Master	2,5	1,5
Bachelor - foreign language	2,5	1,25

[14] *The courses that should have been previously completed or equivalent will be mentioned*
[15] *Board, video projector, flipchart, specific teaching materials, online platforms, etc.*
[16] *Computing technology, software packages, experimental stands, online platforms, 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] *Chapter and paragraph titles*
[19] *Exposition, lecture, board presentation of the studied topic, use of video projector, discussions with students (for each chapter, if applicable)*
[20] *Practical demonstration, exercise, experiment*
[21] *The relationship with other disciplines, the usefulness of the discipline on the labour market*
[22] *CPE – Conditions Exam Participation; nCPE – Does Not Condition Exam Participation; CEF - Conditions Final Evaluation; N/A – not applicable*
[23] *The number of tests and the weeks in which they will be taken will be specified*
[24] *Scientific circles, professional competitions, etc.*
[25] *The minimum performance standard in the competence grid of the study program is customized to the specifics of the discipline, if applicable*