

## SYLLABUS

Academic year 2023 - 2024

### 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 <sup>1</sup>	Bachelor
1.6. Specialization	Biology

### 2. Details about the course

2.1. Course name	<b>SYSTEMATICS OF PHANEROGAMS</b>			Code	FSTI.MFE.BIOEN.L.FO.2.2020 E-4.1	
2.2. Course coordinator	Professor Ph.D. Constantin Drăgulescu					
2.3. Practical activity coordinator	Asistent lecturer Ph.D. Mihai Crăciunaș					
2.4. Year of study <sup>2</sup>	I	2.5. Semester <sup>3</sup>	II	2.6. Type of assessment <sup>4</sup>	E	
2.7. Type of discipline <sup>5</sup>	O	2.8. Formative category of the discipline <sup>6</sup>	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	-	2	-	-	<b>4</b>
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 <sup>7</sup>
28	-	28	-	-	<b>56</b>
<b>Allocation of time budget for individual study<sup>8</sup></b>					<b>No. hours</b>
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 <sup>9</sup>					6
Examinations <sup>10</sup>					6
<b>3.3. Total number of hours for individual study<sup>11</sup> (NOI<sub>sem</sub>)</b>					<b>44</b>
<b>3.4. Total number of hours in the curriculum (NOAD<sub>sem</sub>)</b>					<b>56</b>
<b>3.5. Total number of hours per semester<sup>12</sup> (NOAD<sub>sem</sub> + NOI<sub>sem</sub>)</b>					<b>100</b>
<b>3.6. No of hours / ECTS</b>					<b>25</b>
<b>3.7. Number of credits<sup>13</sup></b>					<b>4</b>

#### 4. Prerequisites (if applicable)

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

#### 5. Requirements (wherever applicable)

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

#### 6. Specific competencies<sup>17</sup>

Number of credits assigned to the discipline <sup>18</sup>			4	Distribution of credits according to competencies <sup>19</sup>
<b>6.1. Professional competencies</b>	CP1	Definition of basic concepts, theories and methods from complementary fields (physics, geology, geography, biology, chemistry, mathematics) to facilitate making the necessary connections in Botany.		1
	CP2	Identifying the procedures, concepts and phenomena that are the basis of the methods used in Botany		1
	CP3	The competence to communicate using the specific language of botany, to explain the organization/structure of plants, plant-environment interactions, adaptations to the environment.		0.5
<b>6.2. Transversal competencies</b>	CT1	The application of efficient and responsible work strategies, of punctuality, seriousness and personal responsibility, based on the principles, norms and values of the code of professional ethics.		0.5
	CT2	The application of effective work techniques in a multidisciplinary team, on various hierarchical levels.		0.5
	CT3	Documentation for professional and personal development, through continuous training and effective adaptation to new scientific discoveries. Progress in the field.		0.5

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

7.1. General objective	<ul style="list-style-type: none"> <li>- Students' knowledge and understanding of the terms, notions, concepts and principles specific to botany</li> <li>- Development of communication skills using the language specific to biological sciences/botany.</li> </ul>
7.2. Specific objectives	<ul style="list-style-type: none"> <li>- Developing the ability to explore/investigate the plant world and to use the appropriate means and methods for exploring the living world/plants.</li> <li>- Recognition of different plant species.</li> </ul>

#### 8. Course description

8.1. Lecture <sup>20</sup>	Teaching methods <sup>21</sup>	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
<b>Total number of lecture hours:</b>		<b>28</b>

<b>8.2. Practical activities</b> (8.2.a. Seminar <sup>22</sup> / 8.2.b. Laboratory <sup>23</sup> / 8.2.c. Project <sup>24</sup> / 8.2.d. Other practical activities <sup>25</sup> )	<b>Teaching methods</b>	<b>No. of hours</b>
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
<b>Total number of hours: seminar/laboratory</b>		<b>28</b>

## 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 area<sup>26</sup>

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. Evaluate

Type of activity	11.1 Assessment criteria	11.2 Assessment methods		11.3 Percentage of the final grade	Notes. <sup>27</sup>
11.4a Exam / Colloquium	<ul style="list-style-type: none"> <li>Theoretical and practical knowledge (quantity, correctness, accuracy)</li> </ul>	Midterm / ongoing assignments <sup>28</sup> :	25 %	75 %	
		Home assignments:	%		
		Other activities <sup>29</sup> :	%		
		Final assessment:	50 %		
11.4b Seminar	<ul style="list-style-type: none"> <li>Frequency/relevance of contributions or answers</li> </ul>	Proof of contributions, portfolio (scientific papers, syntheses)		-	
11.4c Laboratory	<ul style="list-style-type: none"> <li>Knowledge of equipment, methods of using specific instruments and tools; assessment of tools or achievements, processing and interpretation of results</li> </ul>	<ul style="list-style-type: none"> <li>Oral examination</li> <li>Written questionnaire</li> <li>Laboratory notebook, experimental work, scientific papers, etc.</li> <li>Practical demonstrations</li> </ul>		25 %	
11.4d Project	<ul style="list-style-type: none"> <li>Quality of achieved project, accuracy of project documentation, rationale and evidence of selected solutions</li> </ul>	<ul style="list-style-type: none"> <li>Self-assessment, project submission and/or defense</li> <li>Critical assessment of a project</li> </ul>		-	
11.5 Minimum performance standard <sup>30</sup>					

*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 / 2023

Date of approval in the Department: 19 / 10 / 2023

	Degree, title, first name, surname	Signature
<b>Course coordinator</b>	Professor Ph.D Constantin DRĂGULESCU Asistant lecturer Ph.D Mihai-Tudor CRĂCIUNAȘ	
<b>Study program coordinator</b>	Assoc. Prof. Ana-Maria Benedek-Sîrbu, PhD	
<b>Director Department</b>	Lecturer Ph.D. Voichița GHEOCA	

<sup>1</sup> Licență / Master

<sup>2</sup> 1-4 pentru licență, 1-2 pentru master

<sup>3</sup> 1-8 pentru licență, 1-3 pentru master

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

<sup>5</sup> Regim disciplină: O=Disciplină obligatorie; A=Disciplină opțională; U=Facultativă

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

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

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

<sup>9</sup> Între 7 și 14 ore

<sup>10</sup> Între 2 și 6 ore

<sup>11</sup> Suma valorilor de pe liniile anterioare, care se referă la studiul individual.

<sup>12</sup> 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.)

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

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

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
- TOCpSdP = Număr total ore curs/săptămână din plan
- TOApSdP = Număr total ore aplicații (sem./lab./pro.)/săptămână din plan
- C<sub>C</sub>/C<sub>A</sub> = 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

<sup>14</sup> Se menționează disciplinele obligatoriu a fi promovate anterior sau echivalente

<sup>15</sup> Tablă, videoprojector, flipchart, materiale didactice specifice, platforme on-line etc.

<sup>16</sup> Tehnică de calcul, pachete software, standuri experimentale, platforme on-line etc.

<sup>17</sup> Competențele din Grilele aferente descrierii programului de studii, adaptate la specificul disciplinei

<sup>18</sup> Din planul de învățământ

<sup>19</sup> Creditele alocate disciplinei se distribuie pe competențe profesionale și transversale în funcție de specificul disciplinei

<sup>20</sup> Titluri de capitole și paragrafe

<sup>21</sup> Expunere, prelegere, prezentare la tablă a problematicii studiate, utilizare videoprojector, discuții cu studenții (pentru fiecare capitol, dacă este cazul)

<sup>22</sup> Discuții, dezbateri, prezentare și/sau analiză de lucrări, rezolvare de exerciții și probleme etc.

<sup>23</sup> Demonstrație practică, exercițiu, experiment etc.

<sup>24</sup> Studiu de caz, demonstrație, exercițiu, analiza erorilor etc.

<sup>25</sup> Alte tipuri de activități practice specifice

<sup>26</sup> Legătura cu alte discipline, utilitatea disciplinei pe piața muncii

<sup>27</sup> CPE – condiționează participarea la examen; nCPE – nu condiționează participarea la examen; CEF - condiționează evaluarea finală; N/A – nu se aplică

<sup>28</sup> Se va preciza numărul de teste și săptămânile în care vor fi susținute.

<sup>29</sup> Cercuri științifice, concursuri profesionale etc.

<sup>30</sup> Se particularizează la specificul disciplinei standardul minim de performanță din grila de competențe a programului de studii, dacă este cazul.