SYLLABUS

Academic year 2024 - 2025

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	**Evolutionism**			Code	FSTI.MFE.BIOEN.L.FO.5.2100.E-3.3
2.2. Course coordinator	Assoc. Prof. Ioan Sîrbu, PhD				
2.3. Practical activity coordinator	Assoc. Prof. Ioan Sîrbu, PhD				
2.4. Year of study[2]	3	2.5. Semester[3]	5	2.6. Type of assessment[4]	C
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 – *number of hours / week*					
3.1.a.Lecture	3.1.b. Seminar	3.1.c. Laboratory	3.1.d. Project	3.1.e Other	Total
2	1	-	-	-	**3**
3.2. Proportion of the discipline within the curriculum – *number of hours / week*					
3.2.a.Lecture	3.2.b. Seminar	3.2.c. Laboratory	3.2.d. Project	3.2.e Other	Total[7]
28	14	-	-	-	**42**

Allocation of time budget for individual study[8]	**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	8
Preparing for the seminar / laboratorires, home assignments, reports, portfolios and essays	7
Tutoring[9]	2
Examinations[10]	4
3.3. Total number of hours for individual study[11] ***(NOSI$_{sem}$)***	**33**
3.4. Total number of hours in the curriculum (*NOAD$_{sem}$*)	**42**
3.5. Total number of hours per semester[12] **(*NOAD$_{sem}$* + *NOSI$_{sem}$*)**	**75**
3.6. No of hours / ECTS	**25**
3.7. Number of credits[13]	**3**

4. Prerequisites (if applicable)

4.1. Prerequisite courses for enrollment to this subject (from the curriculum) [14]	
4.2. Competencies	

5. Requirements (wherever applicable)

5.1. Lecture organization and structure[15]	
5.2. Organization and structure of practical activities (lab/sem/pr/other) [16]	

6. Specific competencies[17]

Number of credits assigned to the discipline[18]		3	Distribution of credits according to competencies[19]
6.1. Professional competencies	CP1	Define the basic concepts, theories and methods in the field of ethology in order to facilitate the connections required in the field of biology	0.5
	CP2	Use of logical connections with other related basic scientific fields	0.5
	CP3	Analyse and communicate scientific information.	0.5
	CP4	Use of specialist language and academic style	0.5
6.2. Transversal competencies	CT1	Implementation of effective and responsible work strategies, punctuality, reliability and personal responsibility, based on principles, norms and values of professional ethics code.	0.25
	CT2	Efficient work in multidisciplinary team on different hierarchical levels	0.25
	CT3	Documentation in English language for professional and personal development through training and effective adaptation to new scientific discoveries	0.5

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

7.1. General objective	Presentation of evolutionist principles and the main stages of Earth and life history
7.2. Specific objectives	Fundamentation of the evolutionism, presentation of evidences, theories and mechanisms of the universe, Earth and life's evolution. Fundamentation of evolutionist approach of ecological systems and processes. Knowledge of the forces driving the evolution of life, the theories on the world's origin and evolution, the diversification of life at a geochronological level, the ways of the humanization and the evolution of hominids.

8. Course description

8.1. Lecture[20]		**Teaching methods[21]**	**No. of hours**

Lecture 1	Introduction to evolutionism	Interactive lecture, explanation, conversation, problematisation	2
Lecture 2	Evidences of evolution	Interactive lecture, explanation, conversation, problematisation	2
Lecture 3	Cosmogony and the evolution of the universe	Interactive lecture, explanation, conversation, problematisation	2
Lecture 4-5	The origin of life	Interactive lecture, explanation, conversation, problematisation	4
Lecture 6-7	Diversification and evolution of life on Earth	Interactive lecture, explanation, conversation, problematisation	4
Lecture 8	Earth and life on geologic time scale	Interactive lecture, explanation, conversation, problematisation	2
Lecture 9	Mechanisms of evolution	Interactive lecture, explanation, conversation, problematisation	2
Lecture 10-11	Natural selection	Interactive lecture, explanation, conversation, problematisation	4
Lecture 12	Adaptation and adaptability	Interactive lecture, explanation, conversation, problematisation	2
Lecture 13	Species and speciation	Interactive lecture, explanation, conversation, problematisation	2
Lecture 14	Supraspecific taxa and phylogenetic reconstruction	Interactive lecture, explanation, conversation, problematisation	2
		Total number of lecture hours:	**28**

8.2. **Practical activities** (8.2.a. Seminar[22])	**Teaching methods**	**No. of hours**
Sem. 1. The origin and evolution of Universe: theories and concepts. Terragenesis and the theories on the origin of life	Interactive lecture with Power Point, explanation, conversation, problematisation, dialogue.	2
Sem. 2. Methods of study and reconstuction of evolution. Micro- and macroevolution. The sources and meanings of variability	Interactive lecture with Power Point, explanation, conversation, problematisation, dialogue.	2
Sem. 3. Earth and life in Archean and Proterozoic	Interactive lecture with Power Point, explanation, conversation, problematisation, dialogue.	2
Sem. 4. Earth and life in Paleozoic	Interactive lecture with Power Point, explanation, conversation, problematisation, dialogue.	2
Sem. 5. Earth and life in Mesozoic	Interactive lecture with Power Point, explanation, conversation, problematisation, dialogue.	2
Sem. 6. Earth and life in Cenozoic	Interactive lecture with Power Point, explanation, conversation, problematisation, dialogue.	2
Sem. 7. The origin and evolution of hominids	Interactive lecture with Power Point, explanation, conversation, problematisation, dialogue	2
	Total number of hours: seminar	**14**

9. Bibliography

9.1. Recommended references	Dawkins, R., 1992 - The Extended Phenotype; the Long Reach of the Gene.Oxford University Press.
	Mithen, S., 2003 - The Prehistory of the Mind; The cognitive origins of Art,Religion and Science. Thames & Hudson Ltd, London.
	Hutchins, M. (Series Editor); Geist, V., Pianka, E.R. (Advisory Editors), 2011 -Grzimek's Animal Life Encyclopedia. Evolution. Gale, Cengage Learning
9.2. Additional references	Ospovat, D., 1995 - The Development of Darwin's Theory. Natural History, Natural Theology and Natural Selection, 1838 - 1859. Cambridge University Press.
	Potts, R., 1996 - Humanity's Descent. The Consequences of Ecological Instability.Wiliam Morrow and Co., Inc., New York.
	Shapiro, J.A., 2011 - Evolution. A view from the 21st Century. FT Press Science,New Jersey
	Smith, J.M., Szathmáry, E., 1999 - The Origins of Life; from the birth of life to the origin of language. Oxford University Press.

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[23]

The course content enables students to obtain skills of understanding and reproduction of the terms, conceptsand principles of evolutionism, gives them the ability to communicate using the specific scientific language and to interpret the proofs of the life's evolution on Earth.

11. Evaluation

Type of activity	11.1 Assessment criteria	11.2 Assessment methods		11.3 Percentage of the final grade	Notes.[24]
11.4a Exam / Coloquium	• Theoretical and practical knowledge (quantity, correctness,accuracy)	Midterm / ongoing assignments[25]:	%	80%	
		Home assignments:	%		
		Other activities[26]:	%		
		Final assessment:	100%		
11.4c Seminar	• Knowledge of equipment, methods of using specific instruments and tools; assessment of tools or achievements, processing and interpretation of results	• Written exam		20%	
11.5 Minimum performance standard[27] -					

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: 15 / 09 / 2024

Date of approval in the Department: 17 / 09 / 2024

	Degree, titlle, first name, surname	**Signature**
Course coordinator	Assoc. Prof. Ioan Sîrbu, PhD	
Study program coordinator	Assoc. Prof. Ana-Maria Benedek-Sîrbu, PhD	
Director 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 alocat 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*

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

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_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] *Competențele din Grilele aferente descrierii programului de studii, adaptate la specificul disciplinei*
[18] *Din planul de învățământ*
[19] *Creditele alocate disciplinei se distribuie pe competențe profesionale și transversale în funcție de specificul disciplinei*
[20] *Titluri de capitole și paragrafe*
[21] *Expunere, prelegere, prezentare la tablă a problematicii studiate, utilizare videoproiector, discuții cu studenții (pentru fiecare capitol, dacă este cazul)*
[22] *Discuții, dezbateri, prezentare și/sau analiză de lucrări, rezolvare de exerciții și probleme etc.*
[23] *Legătura cu alte discipline, utilitatea disciplinei pe piața muncii*
[24] *CPE – condiționează participarea la examen; nCPE – nu condiționează participarea la examen; CEF - condiționează evaluarea finală; N/A – nu se aplică*
[25] *Se va preciza numărul de teste și săptămânile în care vor fi susținute.*
[26] *Cercuri științifice, concursuri profesionale etc.*
[27] *Se particularizează la specificul disciplinei standardul minim de performanță din grila de competențe a programului de studii, dacă este cazul.*