

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	Entomology		Code	FSTI.MFE.BIOEN.L.SO.5.2020.E-4.1	
2.2. Course coordinator	Lecturer Ioan Tăușan, PhD				
2.3. Seminar / laboratory coordinator	Lecturer Ioan Tăușan, PhD				
2.4. Year of study ²	3	2.5. Semester ³	5	2.6. Evaluation form ⁴	E
2.7. Course type ⁵	O	2.8. The formative category of the course ⁶			S

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					
12					
Additional learning by using library facilities, electronic databases and on-site information					
12					
Preparing seminars / laboratories, homework, portfolios and essays					
12					
Tutorial activities ⁹					
4					
Exams ¹⁰					
4					
3.3. Total Individual Study Hours ¹¹ (NOSI _{sem})					
44					
3.4. Total Hours in the Curriculum (NOAD _{sem})					
56					
3.5. Total Hours per Semester ¹² (NOAD _{sem} + NOSI _{sem})					
100					
3.6. No. of hours / ECTS					
25					
3.7. Number of credits ¹³					
4					

4. Prerequisites (if needed)

4.1. Courses that must be successfully completed first (from the curriculum) ¹⁴	Invertebrate zoology
4.2. Competencies	

5. Conditions (wherever applicable)

5.1. For course/lectures ¹⁵	Video-projector
5.2. For practical activities (lab/sem/pr/other) ¹⁶	Microscopes, entomological collections, collecting equipments, mounting equipment

6. Learning outcomes¹⁷

No.	Number of credits assigned to the discipline Entomology: 4			Credit allocation based on learning outcomes
	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 (e.g., evolutionism, general ecology, plant physiology, animal physiology).	The student/graduate applies working methods using modern instruments/equipment and classical laboratory techniques to perform, design experiments, record and analyze appropriately the results obtained.	The student/graduate uses their own knowledge and experience to develop the scientific community and society in general by participating in professional and/or community activities	1.5
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 the 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, making ethical and professional decisions within the scientific process.	1.5
LO 3	The student/graduate defines, explains, and exemplifies basic and modern experimental techniques in the analysis and characterization of biological systems, records and presents experimental	The student/graduate uses, investigates, and critically analyzes the principles of operation and use of equipment/instruments, techniques/working methods for investigating the functioning of biological systems.	The student/graduate applies the knowledge learned in other courses to explain the interactions of organisms with the environment.	1

	results, and explains the principles of scientific methods.			
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7. Course objectives (resulted from developed competencies)

7.1. Main course objective	The course demands a comprehensive understanding of insects, encompassing their morphology (external form and structure), anatomy-physiology (internal systems and functioning), systematics (classification), zoogeography (global distribution), biology (life cycles and behavior), and ecology (environmental interactions). A central goal is to emphasize the significant role and place of insects within ecosystems—such as their functions as pollinators, decomposers, and food sources—while also illuminating the complex, multifaceted relationship between insects and humans, covering both beneficial (e.g., silk production, pest control) and detrimental (e.g., disease vectors, agricultural pests) aspects.
7.2. Specific course objectives	

8. Course description

8.1. Lecture ¹⁸		Teaching methods ¹⁹	Hours
Lecture 1	External morphology	Interactive lecture, explanation, conversation, problematisation	2
Lecture 2	Internal anatomy	Interactive lecture, explanation, conversation, problematisation	2
Lecture 3	Development and mating	Interactive lecture, explanation, conversation, problematisation	2
Lecture 4	Systematics - Coleoptera	Interactive lecture, explanation, conversation, problematisation	2
Lecture 5	Systematics – Lepidoptera	Interactive lecture, explanation, conversation, problematisation	2
Lecture 6	Systematics – Diptera	Interactive lecture, explanation, conversation, problematisation	2
Lecture 7	Systematics – Hymenoptera	Interactive lecture, explanation, conversation, problematisation	2
Lecture 8	Systematics – Dictyoptera	Interactive lecture, explanation, conversation, problematisation	2
Lecture 9	Systematics – Orthoptera & Dermaptera	Interactive lecture, explanation, conversation, problematisation	2

Lecture 10	Systematics – Hemiptera	Interactive lecture, explanation, conversation, problematisation	2
Lecture 11	Systematics - Odonata, Ephemeroptera	Interactive lecture, explanation, conversation, problematisation	2
Lecture 12	Systematics – Trichoptera, Plecoptera	Interactive lecture, explanation, conversation, problematisation	2
Lecture 13	Systematics – Other groups	Interactive lecture, explanation, conversation, problematisation	2
Lecture 14	Conservation issues in entomology	Interactive lecture, explanation, conversation, problematisation	2
Total lecture hours:			28

8.2. Practical activities

8.2.b. Laborator		Teaching methods ²⁰	Hours
Laboratory 1	Sampling techniques – field practice	Explanation of working methods, material examination, discussion	2
Laboratory 2	External morphology	Explanation of working methods, material examination, discussion	2
Laboratory 3	Internal anatomy	Explanation of working methods, material examination, discussion	2
Laboratory 4	Systematics - Coleoptera	Explanation of working methods, material examination, discussion	2
Laboratory 5	Systematics – Lepidoptera	Explanation of working methods, material examination, discussion	2
Laboratory 6	Systematics – Diptera	Explanation of working methods, material examination, discussion	2
Laboratory 7	Systematics – Hymenoptera	Explanation of working methods, material examination, discussion	2
Laboratory 8	Systematics – Dictyoptera	Explanation of working methods, material examination, discussion	2
Laboratory 9	Systematics – Orthoptera & Dermaptera	Explanation of working methods, material examination, discussion	2
Laboratory 10	Systematics – Hemiptera	Explanation of working methods, material examination, discussion	2
Laboratory 11	Systematics - Odonata, Ephemeroptera	Explanation of working methods, material examination, discussion	2

Laboratory 12	Systematics – Trichoptera, Plecoptera	Explanation of working methods, material examination, discussion	2
Laboratory 13	Insect collections	Explanation of working methods, material examination, discussion	2
Laboratory 14	Colloquium	Material examination, discussion	2
Total laboratory hours			28

9. Bibliography

9.1. Recommended references	Gillott, C., Entomology. Third Edition, Springer, 2005
	Triplehorn, C., Johnson, N., Borror and DeLong's Introduction to the Study of Insects, Thomson, Brooks/Cole, 2005.
	Southwood, T.R.E., Henderson, P.A., Ecological Methods with Particular Reference to the Study of Insect Populations, Chapman and Hall, London, 1978.
	Gullan, J., Cranston, P.S., The study of insects – An outline of entomology, Wiley-Blackwell, 2014., 5th edition.
	Grimaldi, D., & Engel, M. S. (2005). <i>Evolution of the Insects</i> . Cambridge University Press.
	Belayeva, N. V., Blagoderov, V. A., Dmitriev, V. Y., Eskov, K. Y., Gorokhov, A. V., Ivanov, V. D., ... & Zherikhin, V. V. (2002). <i>History of insects</i> . Dordrecht: Springer Netherlands.
	Snodgrass, R. E. (2018). <i>Principles of insect morphology</i> . Cornell University Press.

10. Conjunction of the discipline's content with the expectations of the epistemic community, professional associations and significant employers of the specific study program²¹

The goal of the course is achieved through **periodic contact** with the students/stakeholders in order to **analyze the problems** (or topics) and ensure relevance. Furthermore, the discipline's curriculum is **consistent with what is taught** in other major university centers, both **nationally and internationally**, ensuring the quality and academic rigor of the information provided.

11. Evaluation

Activity Type	11.1 Evaluation Criteria	11.2 Evaluation Methods	11.3 Percentage in the Final Grade	Notes. ²²
11.4a Exam / Colloquium	• Theoretical and practical knowledge acquired (quantity, correctness, accuracy)	Tests during the semester ²³ : Homework: Other activities ²⁴ : Final evaluation: 100% (min. 5)	50 % (minimum 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	30 % (minimum 5)	
11.4d Project	• The quality of the project, the correctness of the project documentation, the appropriate	• Self-evaluation, project presentation • Critical evaluation of a project	20 % (minimum 5)	

	justification of the chosen solutions			
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: 1_1_7_ / 0_9_ / 2_0_2_5_

Department Acceptance Date: 1_1_7_ / 0_9_ / 2_0_2_5_

	Academic Rank, Title, First Name, Last Name	Signature
Course Teacher	Lecturer Ioan Tăușan, 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)

$$\text{No. credits} = \frac{NO CpSpD \times C_C + NO ApSpD \times C_A}{TO CpSdP \times C_C + TO ApSdP \times C_A} \times 30 \text{ credits}$$

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
- Cc/Ca = 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