SYLLABUS

1. Information regarding the programme

1.1 Higher education institution	**Babeş-Bolyai University**
1.2 Faculty	**Faculty of Biology and Geology**
1.3 Department	**Department of Molecular Biology and Biotechnology**
1.4 Field of study	**Biology**
1.5 Study cycle	**Master**
1.6 Study programme / Qualification	**Bioinformatics applied in life sciences**

2. Information regarding the discipline

2.1 Name of the discipline (en) (ro)	**Individual project in bioinformatics** **Proiect individual în bioinformatică**					
2.2 Course coordinator	**Prof. Banciu Horia Leonard, PhD**					
2.3 Seminar coordinator	**Prof. Banciu Horia Leonard, PhD**					
2.4. Year of study	**2**	2.5 Semester	**4**	2.6. Type of evaluation	**E**	2.7 Type of discipline	**Compulsory**
2.8 Code of the discipline	**BME1142**					

3. Total estimated time (hours/semester of didactic activities)

3.1 Hours per week	5	Of which: 3.2 course	0	3.3 seminar/laboratory	5
3.4 Total hours in the curriculum	70	Of which: 3.5 course	0	3.6 seminar/laboratory	70

Time allotment:	hours
Learning using manual, course support, bibliography, course notes	36
Additional documentation (in libraries, on electronic platforms, field documentation)	36
Preparation for seminars/labs, homework, papers, portfolios and essays	30
Tutorship	20
Evaluations	4
Other activities:	-

3.7 Total individual study hours	126
3.8 Total hours per semester	196
3.9 Number of ECTS credits	8

4. Prerequisites (if necessary)

4.1. curriculum	Algorithms and Programming
4.2. competencies	Knowledge and skills in data analysis.

5. Conditions (if necessary)

5.1. for the course	Not applicable
5.2. for the seminar /lab activities	PC/ notebook with licensed softwares and internet access

6. Specific competencies acquired

Professional competencies	• Analysis and formalization of problems for solving which bioinformatics knowledge is required; • Using bioinformatics applications and strategies to solve problems; • Analysis, design and implementation of biological data analysis programs; • Use of specific methodologies and tools for biological data analysis.
Transversal competencies	• Scientific and professional communication skills; concise written and oral description of scientific and professional results. • • Communicating the results in English.

7. Objectives of the discipline (outcome of the acquired competencies)

7.1 General objective of the discipline	Developing the ability to conceptualize and lead one's own project focused on solving a biological problem by bioinformatic approaches.
7.2 Specific objective of the discipline	Developing the ability to document a specific topic Writing a research report in a language of international circulation (English recommened).

8. Content

8.1 Course	Teaching methods	Remarks
8.2 Seminar / laboratory	Teaching methods	Remarks
1. Endorsing the research topic and defining the problem	Conversation, debate, case studies	
2. Bibliographic documentation	Conversation, debate, case studies	
3. Content of the paper: version 1.0	Conversation, debate, case studies	
4. Establishing the relevance of bibliographic sources for the proposed projectg	Conversation, debate, case studies	
5. Identification of possible original contributions; discussion and decision on experimental modelin	Conversation, debate, case studies	
6. Processing the documentation and writing the first version of the research report	Conversation, debate, case studies	
7. Finishing the research report	Evaluation	
Bibliography 1. References will be provided depending on the chosen research topic. 2. Electronic resources of literature and software, specific online databases for investigating the research topic.		

9. Corroborating the content of the discipline with the expectations of the epistemic community, professional associations and representative employers within the field of the program

• This course exists in the study program of major universities in Romania and abroad • Completion of a master's program requires the existence of the experience necessary to develop a research project

10. Evaluation

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Share in the grade (%)
10.4 Course			
10.5 Seminar/lab activities	Writing the research report and presenting the results obtained	Evaluation of the research report written by the student Evaluation of the presentation of results (oral presentation assisted by audio-video means)	70% 30%
10.6Minimum performance standards			
• For promotion it is necessary to obtain a grade of at least 5 (for both report and presentation evaluations).			

Date	Signature of course coordinator	Signature of seminar coordinator
16.01.2023	**Prof. Horia Banciu, PhD**	**Prof. Horia Banciu, PhD**

Date of approval	Signature of the head of department
20.01.2023	**Assoc. Prof. Beatrice Kelemen**