

## COURSE SYLLABUS

### 1. Data about the program

1.1 Higher education institution	Babeş-Bolyai University
1.2 Faculty	Faculty of Biology and Geology
1.3 Doctoral school	Integrative Biology
1.4 Field of study	Biology
1.5 Study cycle	Doctorate
1.6 Study program / Qualification	Doctoral training / PhD in Biology

### 2. Course data

2.1 Name of discipline	<b>Research practices and ethics</b>						
2.2 Teacher responsible for lectures	Dr. Eszter Ruprecht associate professor						
2.3 Teacher responsible for seminars	Dr. Eszter Ruprecht associate professor						
2.4 Year of study	1	2.5 Semester	1	2.6. Type of evaluation	E	2.7 Course framework	M

*E - Exam; M – Mandatory discipline.*

### 3. Estimated total time of teaching activities (hours per semester)

3.1 Hours per week	4	Out of which: 3.2 Lectures	2	3.3 Seminars / Laboratory classes	2
3.4 Total hours in the curriculum	48	Out of which: 3.5 Lectures	24	3.6 Seminars / Laboratory classes	24
Allocation of study time:					
Study supported by textbooks, other course materials, recommended bibliography and personal student notes					30
Additional learning activities in the library, on specialized online platforms and in the field					24
Preparation of seminars / laboratory classes, topics, papers, portfolios and essays					24
Tutoring					16
Examinations					4
Other activities: -					
3.7 Individual study (total hours)					98
3.8 Total hours per semester					146
3.9 Number of credits					20

### 4. Preconditions (where applicable)

4.1 Curriculum	<ul style="list-style-type: none"> <li>No preconditions.</li> </ul>
4.2 Competences	<ul style="list-style-type: none"> <li>Using Ms Word</li> <li>Speaking and writing skills in English</li> </ul>

### 5. Conditions (where applicable)

5.1 Conducting lectures	<ul style="list-style-type: none"> <li>Lecture room with projector, Power Point softwear</li> </ul>
5.2 Conducting seminars / laboratory classes	<ul style="list-style-type: none"> <li>Lecture room with projector, Power Point softwear, internet access</li> </ul>

### 6. Specific competences acquired

<b>Professional competences</b>	<ul style="list-style-type: none"> <li>• Learning how to plan and accomplish research projects;</li> <li>• Learning the ethical standards of scientific research and publication;</li> <li>• Developing skills for scientific writing in Biology and Ecology.</li> </ul>
<b>Transversal competences</b>	<ul style="list-style-type: none"> <li>• Developing the critical thinking, which is a very important component of the whole scientific process: planning and conducting research projects and publishing results;</li> <li>• Involving and using the theoretical background of research practices and ethics for solving practical problems.</li> </ul>

### 7. Course objectives (based on the acquired competencies grid)

7.1 The general objective of the course	<ul style="list-style-type: none"> <li>• Developing skills for scientific research and publishing.</li> </ul>
7.2 Specific objectives	<ul style="list-style-type: none"> <li>• Learning general skills for conducting scientific research projects and the application of ethical considerations during the whole scientific process;</li> <li>• Developing critical thinking;</li> <li>• Developing skills in scientific writing (e.g. writing research articles or the Ph.D. thesis).</li> </ul>

### 8. Content

8.1 Lectures	Teaching methods	Comments
Introducing the basics of methods in scientific research.	Presentation, discussion, case studies, exercises	2 hours
Research and publication ethics		2 hours
Research article structure; The Introduction		2 hours
Material and methods section		2 hours
Results section		2 hours
Designing figures and tables		2 hours
The Discussion and Conclusions sections		2 hours
The Abstract and the title		2 hours
References: editing the list of references and searching for scientific literature		2 hours
The publication process: selecting the target journal, submitting a manuscript, the peer-review process, roles or persons during the review process		2 hours
Corresponding with the editor and the reviewers		2 hours
Developing publication skills		2 hours
8.2 Seminars / laboratory classes		Teaching methods
Analysing research articles published in high impact international journals in biology and ecology. Solving exercises. Writing tasks: writing certain parts of a research article by the Ph.D. students.	Presentation, exercises, discussion	24 hours in total
Bibliography:		

Cargill, M. & O'Connor, P. (2009). *Writing scientific research articles: Strategy and steps*. 1st edition, Blackwell Publishing.

Loehle, C. (2010). *Becoming a successful scientist. Strategic thinking for scientific discovery*. Cambridge University Press, New York.

Fraser, H., Parker, T., Nakagawa, S., Barnett, A. & Fidler, F. (2018). Questionable research practices in ecology and evolution. *PLoS ONE* 13(7): e0200303.

Matthews, J.R. & Matthews, R.W. (2012). *Successful scientific writing. A step-by-step guide for biological and medical sciences*. 3rd edition, Cambridge University Press.

**9. Aligning the contents of the discipline with the expectations of the epistemic community representatives, professional associations and standard employers operating in the program field**

- The courses have a similar content with courses at other European universities, and it takes into account the abilities of Ph.D. students;
- This discipline is fundamental for the implementation of scientific research activities, respecting ethical standards and developing skills in scientific writing (e.g. writing research articles or the Ph.D. thesis).

**10. Examination**

Activity type	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Weight in the final grade
10.4 Lectures	Assessment of knowledge	Ongoing tests	50%
10.5 Seminars/laboratory classes	Activity during seminars	Exercises, writing tasks, discussions, answers to questions	50%
10.6 Minimum performance standard			
<ul style="list-style-type: none"> <li>• Knowledge of 50% of the content presented during the courses;</li> <li>• Fulfilling 50% of the exercises and writing tasks during the seminars.</li> </ul>			

Date of issue

Signature of the teacher responsible for lectures

Signature of the teacher responsible for seminars

20.01.2021

Conf. Dr. RUPRECHT Eszter

Conf. Dr. RUPRECHT Eszter

Date of approval by the doctoral school council

Signature of the doctoral school director