

Doc. 300.1.2

Date: Date.

## Higher Education Institution's Response

- **Higher Education Institution:**  
University of Cyprus

- **Town:** Nicosia

- **Programme of study**  
**Name (Duration, ECTS, Cycle)**

**In Greek:**

ΜΑΣΤΕΡ ΣΤΗ ΒΙΟΠΟΙΚΙΛΟΤΗΤΑ ΚΑΙ ΟΙΚΟΛΟΓΙΑ

**In English:**

MASTER IN BIODIVERSITY AND ECOLOGY

- **Language(s) of instruction:** ENGLISH

- **Programme's status:** Currently Operating

- **Concentrations (if any):**

**In Greek:** Concentrations

**In English:** Concentrations



The present document has been prepared within the framework of the authority and competencies of the Cyprus Agency of Quality Assurance and Accreditation in Higher Education, according to the provisions of the “Quality Assurance and Accreditation of Higher Education and the Establishment and Operation of an Agency on Related Matters Laws” of 2015 to 2021 [[L.136\(I\)/2015](#) – [L.132\(I\)/2021](#)].

## A. Guidelines on content and structure of the report

- *The Higher Education Institution (HEI) based on the External Evaluation Committee's (EEC's) evaluation report (Doc.300.1.1 or 300.1.1/1 or 300.1.1/2 or 300.1.1/3 or 300.1.1/4) must justify whether actions have been taken in improving the quality of the programme of study in each assessment area. The answers' documentation should be brief and accurate and supported by the relevant documentation. Referral to annexes should be made only when necessary.*
- *In particular, under each assessment area and by using the 2<sup>nd</sup> column of each table, the HEI must respond on the following:*
  - *the areas of improvement and recommendations of the EEC*
  - *the conclusions and final remarks noted by the EEC*
- *The institution should respond to the EEC comments, in the designated area next each comment. The comments of the EEC should be copied from the EEC report **without any interference** in the content.*
- *In case of annexes, those should be attached and sent on separate document(s). Each document should be in \*.pdf format and named as annex1, annex2, etc.*

## 1. Study programme and study programme's design and development (ESG 1.1, 1.2, 1.7, 1.8, 1.9)

Areas of improvement and recommendations by EEC	Actions Taken by the Institution	For Official Use ONLY
Limitations in terms of core staff support apply as in the BSc programme	We are expecting the hiring of an additional staff member in the field of plant ecology to start within 2025. We will then request additional positions until we reach full capacity at the highest speed allowed by internal University regulations.	Choose level of compliance:
Current student intake insufficient to guarantee a sustainable MSc programme. Master programme is not competitive internationally and has failed to attract meaningful numbers of international students.	We agree and we appreciate the feedback of the committee. We have followed the advice of the committee to revise substantially the title and the contents of the MSc programme, with the aim to make it more attractive and competitive both nationally and internationally. See more details below. Importantly, once we finalize the updates of our postgraduate programmes, we will also update the mission statement of the department on our website (planned for March 2025) to reflect our strengths and the importance of all our programmes of study. Further, for the updated biodiversity-related MSc programme, we will ensure that the strengths of the programme will be clearly visible to all visitors of the programme's website. Efforts to increase the programme's visibility with paid advertisement in social media and the press will also be made.	Choose level of compliance:
Content of the master programme needs to be rethought to make it more competitive: several options are possible, such as making the programme more specialised/unique (e.g., focussing on ecology and evolution of island	We have substantially revised the master programme based on the committee's suggestions, after conducting a review of other programme offerings in the region and consulting international peers, students and alumni (see relevant points below). The revised	Choose level of compliance:

or mediterranean biodiversity) or making it more applied and focussed on global change and conservation, including transdisciplinary aspects related to sustainability, ecological economics etc. We suggest that the department conduct a review of ecology and evolution master programmes in the region and more widely in Europe to determine how to make theirs more competitive.	programme will be entitled “MSc in Biodiversity Conservation” and will contain three new compulsory courses and seven new elective courses, while only two of the existing elective courses will be maintained. Although the title of the programme will be broad, the programme description and the course contents will reflect the department’s expertise and focus on insular and/or Mediterranean biodiversity. For details on the programme structure, titles of courses and ECTS distribution please see Annex I.	
Fundamental elements such as bioethics, scientific best practise and data management skills are not transparently positioned in the curriculum	We have introduced a new course entitled “Soft skills” which will include elements of bioethics, good scientific practice, data management skills, as well as other related topics such as data interpretation, search and management of bibliographic sources, efficient scientific communication, time management. For the bioethics component, we will invite members of the Cyprus National Bioethics Committee to deliver relevant lectures to our postgraduate students. Furthermore, our students can take an online course on bioethics (3 ECTS) offered by the University of Antwerp through the BioYUFE virtual campus, as part of their elective courses.	Choose level of compliance:
Suggestion to present the revised/new MSc programme in all details to international peers for critical review and feedback prior to re-submission for accreditation. This could include the formation of an informal, international steering committee to advise on the revised contents. Suggestion to include representatives from the student bodies (BSc, MSc, PhD) and alumni	We followed the committee’s suggestions to contact international peers, as well as current students and alumni for feedback. Specifically, we compiled two alternative programme proposals, the first entitled ‘MSc in Island Biodiversity Conservation’ and the second ‘MSc in Mediterranean Biodiversity Conservation’ with their respective course lists and we sent them for feedback to (a)	Choose level of compliance:

<p>into the conception and planning to work out structural problems in the current programme. A wider survey of current/former students on what they would like to see in a master programme might also be beneficial</p>	<p>approximately 60 international peers, i.e. colleagues with expertise in ecology, biodiversity and conservation from across Europe (b) to our current undergraduate and postgraduate students and (c) to our alumni mailing list. We received signed responses from 21 international peers (from 12 European countries, plus from Israel and South Africa) as well as anonymous responses from 35 current students and 53 alumni. The results of those questionnaires were inconclusive in respect to which of the two alternative programmes would be preferable, as the two options received approximately equal number of votes, while several responses suggested that we should rather combine the two options as both foci would be interesting and would attract different types of students. This is why the department decided (on 11/12/2024) to proceed with the broader title “MSc in Biodiversity Conservation”, but with a clear focus within the programme description and course contents, on insular and Mediterranean biodiversity. We also received several specific comments from the international peers on the programme contents, which we considered when formulating the final list of courses (see Annex I).</p>	
<p>Academic leadership needs to ensure that planning (and potentially provision) of programme contents sufficiently includes local peers, but without compromising the vision to develop a programme of excellence. Academic staff is highly motivated to revise the programme and local capacities to deliver are already in place or will become available, which should boost confidence to advertise the</p>	<p>We ensure the committee that excellence is the department’s top priority, and we will not compromise our vision to develop a competitive programme because we are limited by our department’s small size. The planning of the new programme contents and courses involved thorough discussion among all faculty members, and especially among those teaching in the specific programme, and the postgraduate committee members.</p>	<p>Click or tap here to enter text.</p>

<p>new programme as a flagship MSc in the chosen area.</p>	<p>As explained above, we also received valuable feedback from 21 international peers, which was taken very seriously into consideration and helped us greatly to design the new programme contents.</p> <p>Members of the department with expertise in the field of biodiversity will offer relevant courses in the new programme. In addition, we expect one new hire with expertise in plants and global change, who will also contribute to the programme (starting 2025). Further, some course offerings (e.g., Geographical Information Systems and Remote Sensing in Ecology and Conservation policy and management) will be taught by special scientists with relevant expertise, while others (bioethics component of Soft Skills course and Conservation in practice course) will benefit from specialized seminars from external experts in the respective fields.</p>	
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## 2. Student – centred learning, teaching and assessment (ESG 1.3)

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
The requirement of finding a lab for the master thesis before the start of the study for a research-oriented thesis severely limits the possibility to recruit foreign students. We suggest allowing the students to begin their studies and then find a supervisor. If they fail to find a supervisor the option of the literature based thesis could still be offered, if this is seen as a significant risk.	The department has decided to change the application procedure for the MSc students and allow the candidates to register and begin their studies without the requirement to find thesis in advance a laboratory to host them for their research-oriented thesis. The candidates will have the opportunity to secure a position in a laboratory until the end of the second semester of their studies. If they cannot find a host laboratory/ research supervisor, they will have the option to conduct a literature-based thesis.	Choose level of compliance:
We recommend that a bioethics course is created to clearly emphasize the societal and ethical challenges that biology brings. This could be a course (e.g. 3 ECTS) in common with the other master in biology.	As explained above, we will include some seminars on bioethics in the context of the newly introduced “Soft skills” course, which will be offered as compulsory to all postgraduate students of the department. In the context of this course, departmental faculty will emphasize ethical challenges of biology research, and we will also invite members of the Cyprus National Bioethics Committee to deliver relevant lectures.	Choose level of compliance:
Consider how to encourage/facilitate more students to do a research based master project, as only a research based masters is likely to be recognised internationally.	The department will encourage and facilitate collaborations with potential supervisors from other institutions and with NGOs involved in biodiversity conservation, with the aim to increase the available positions for research-based co-supervised MSc projects. The revised programme will also contain an optional course entitled “Work placement in Biodiversity Conservation” which will enable students to network and connect with future employers and learn professional skills that are likely to	Choose level of compliance:





	benefit them when applying for jobs in the field of conservation after graduation.	
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### 3. Teaching staff (ESG 1.5)

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
Ideally expand the number of professors involved to allow more options for projects, in particular the inclusion of plant ecology and experimental ecology would expand the range of topics for projects	We are currently expecting the hiring of a new staff member in the field of “plant ecology and climate change” to start within 2025. The new faculty member is expected to be actively involved in the MSc programme, by offering courses related to global change biology and research projects in the field of plant biodiversity and conservation. Additionally, the department will encourage and facilitate collaborations with potential supervisors from other institutions and with NGOs involved in biodiversity conservation on the island, with the aim to increase the available positions for research-based MSc projects. Furthermore, the department has planned to revise its strategic plan soon (May 2025) and this will also involve discussions on how to prioritise the allocations of new positions of the department.	Choose level of compliance:
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#### 4. Student admission, progression, recognition and certification (ESG 1.4)

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
If the selection of students applying for the programme becomes too heavy a task because number of applications increase substantially, a small application fee could be requested to restrict applications to students really motivated to join UCY.	Until now, this has not been an issue. If it ever becomes a big issue, we will consider the committee's advice.	Choose level of compliance:
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## 5. Learning resources and student support (ESG 1.6)

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
The new building should provide more space for master students to be seated within groups whilst working on their project. This will facilitate their integration into the group and will allow them to get additional support from PhD students and postdocs in the group.	Indeed, the new building will provide much more space for each research group and, thus, it will allow the master students to be better integrated and supported by PhD students and postdocs within the group.	Choose level of compliance:
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## 6. Additional for doctoral programmes (ALL ESG)

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
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## 7. Eligibility (Joint programme) (ALL ESG)

Areas of improvement and recommendations <b>by EEC</b>	Actions Taken by the Institution	For Official Use ONLY
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## B. Conclusions and final remarks

Conclusions and final remarks by EEC	Actions Taken by the Institution	For Official Use ONLY
The MSc programme addresses critical national and international needs, yet it must evolve to attract a more substantial cohort of national and international students. In its current form it does not seem viable and accreditation should be contingent on major changes and a clear strategy for a better developed program. A thorough review of regional MSc programmes could provide insights into how to differentiate and enhance the MSc offerings, such as focusing on applied ecology or integrating transdisciplinary themes.	We have substantially revised the MSc programme based on the committee's suggestions, by changing its title to "MSc in Biodiversity Conservation" and introducing three new compulsory and seven new elective courses (see Annex I). The three new compulsory courses (Soft skills, Biological Data Analysis, Conservation in practice) will provide essential practical transferable skills to all MSc students, while the elective courses will help them to develop the necessary theoretical background and critical thinking for a career in the field of biodiversity conservation. The course contents will provide broad theoretical foundation, but they will also cover special aspects of biodiversity conservation in insular and/or Mediterranean ecosystems. We believe that the revised programme will be more attractive than before to both national and international students, due to its more applied focus and regional interest.	Choose level of compliance:
Introducing core components like bioethics and improving the transparency of the curriculum will further strengthen the programme.	We have introduced bioethics within the context of the new compulsory course "Soft skills", which will also cover other related topics such as good scientific practice, data management and data interpretation, search and management of bibliographic sources, efficient scientific communication, time management. The other two compulsory courses introduced ("Biological Data Analysis" and "Conservation in practice") will also provide	Choose level of compliance:

	important practical transferable skills to all MSc students. Importantly, all the content of the updated MSc programme will be uploaded in the department's website, so that it is readily accessible to the students and potential candidates. We will also ensure that the programme's website will be maintained regularly and will include all necessary information for the students. This will improve the transparency of the curriculum.	
Engaging student bodies and alumni in the planning process can ensure that a revised programme aligns with the expectations and aspirations of prospective students.	We have involved current students and alumni in the process of revising the programme through the completion of an anonymous questionnaire, which received 88 responses in total (from 35 current students and 53 alumni). The comments received from both students and alumni were discussed thoroughly by the faculty members and were taken very seriously into account during the revision of the programme and the development of the new courses.	Choose level of compliance:
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## ANNEX I

### STRUCTURE OF THE PROGRAMME OF STUDY - 'M.Sc. in Biodiversity Conservation'

PROGRAMME REQUIREMENTS	<u>OPTION I: RESEARCH-BASED DISSERTATION</u>	<u>OPTION II: LITERATURE-BASED DISSERTATION</u>
	ECTS	ECTS
Compulsory courses	15	15
Compulsory seminars	0	0
Postgraduate Assignment (Master Thesis)	30	15
Restricted elective courses	45	60
<b>Total ECTS</b>	<b>90</b>	<b>90</b>

### LIST OF COMPULSORY AND ELECTIVE COURSES - 'M.Sc. in Biodiversity Conservation'

#### Compulsory courses (option I)

			ECTS
1.	BIO 616	Biological Data Analysis	10
2.	BIO 800	Postgraduate Seminar Series I	0
3.	BIO 801	Postgraduate Seminar Series II	0
4.	BIO 615	Soft Skills	2.5
5.	BIO XXX	Conservation in practice	2.5
6.	BIO 831	Master Research Dissertation in Biodiversity Conservation	30

### Compulsory courses (option II)

			ECTS
1.	BIO 616	Biological Data Analysis	10
2.	BIO 800	Postgraduate Seminar Series I	0
3.	BIO 801	Postgraduate Seminar Series II	0
4.	BIO 615	Soft Skills	2.5
5.	BIO XXX	Conservation in practice	2.5
6.	BIO 681	Scientific Methodology in Biodiversity and Ecology	15

### Restricted Elective courses

			ECTS
1.	BIO XXX	Island Biogeography and Conservation	7.5
2.	BIO XXX	Marine Ecology and Conservation	7.5
3.	BIO XXX	Alien species and Conservation	7.5
4.	BIO XXX	Conservation Genetics	7.5
5.	BIO XXX	Behavioural Ecology and Conservation	7.5
6.	BIO 868	Field Biology	7.5
7.	BIO XXX	Conservation policy and management	7.5
8.	BIO 865	Geographical Information Systems and Remote Sensing in Ecology	7.5
9.	BIO XXX	Global Change Biology	7.5
10.	BIO 898	Work placement	10 (over and above)

## PROPOSED DISTRIBUTION OF COURSES PER SEMESTER

Semester 1:

Course	ECTS
Biological Data Analysis	10
Soft Skills	2.5
Postgraduate Seminar Series I	0
Conservation in practice	2.5
Elective course	7.5
Elective course	7.5
<b>Total ECTS</b>	<b>30</b>

Semester 2:

Course	ECTS
Postgraduate Seminar Series II	0
Elective course	7.5
Elective course	7.5
Elective course	7.5
Elective course	7.5
<b>Total ECTS</b>	<b>30</b>

Semester 3 (option I):

Course	ECTS
Research-Based thesis	30
<b>Total ECTS</b>	<b>30</b>

Semester 3 (option II):

Course	ECTS
Literature-based thesis	15
Elective course	7.5
Elective course	7.5
<b>Total ECTS</b>	<b>30</b>



## ANNEX II - 'M.Sc. in Biodiversity Conservation' - COURSE DESCRIPTIONS

Course title	Biological Data Analysis				
Course code	BIO 616				
Course type	Compulsory				
Level	Postgraduate				
Year / Semester	Fall Semester				
Instructor's name	Faculty BIO				
ECTS	10	Lectures / week	1 (2hr lecture)	Laboratories / week	1 (2 hr workshop)
Course purpose and objectives	To equip students with the skills necessary to analyze biological data effectively and introduce them to the R programming language and related tools.				
Learning outcomes	<ul style="list-style-type: none"><li>- to <u>formulate</u> hypotheses based on biological questions.</li><li>- to <u>learn</u> how to collect and organize data.</li><li>- to <u>perform</u> exploratory data analysis.</li><li>- to <u>conduct</u> standard statistical operations.</li><li>- to <u>interpret</u> analytical results.</li><li>- to <u>understand</u> concepts in unsupervised/unsupervised machine learning</li><li>- to <u>create</u> publication-quality visualizations.</li><li>- to <u>report</u> results accurately and clearly.</li><li>- to <u>evaluate</u> experimental design and data analysis in published works.</li><li>- to <u>develop</u> programs in R and utilize relevant packages.</li></ul>				
Prerequisites	NA		Required	NA	
Course content	<p>Lectures cover the following material:</p> <p>Overview of Important Probability Distributions/Data Types and Descriptive Statistics/Scientific Method and Experimental Design/Hypothesis Testing and Statistical Significance/Sampling Methods and Randomization Techniques/Advanced Statistical Methods for Biological Data/Non-Parametric and Categorical Data Analysis/Advanced Data Visualization Techniques/Time Series Analysis in Biology/Multivariate Analysis Techniques/Reproducible Research Practices in Data Analysis/Ethical Considerations in Biological Data Analysis/Review and Advanced Topics</p> <p>Practicals include the following topics:</p> <p>Introduction to the R Computing Environment/Basic R Programming/R Markdown Overview/Collecting and Organizing Data/Importing and Exporting Data/Descriptive Statistics/Graphics and Data Visualization/Example Applications of Machine Learning Methods/Cluster Analysis/The BioConductor Package/NGS, RNA-seq Analysis Basics/Functional Enrichment Analysis/Advanced R Programming/Handling Big Data in R/Interactive Applications with R Shiny/Bioinformatics Tools and Workflows</p>				
Teaching methodology	Lectures and practical workshops				
Bibliography	<p>Suggested reading</p> <p>The R Book (3rd Edition). Elinor Jones, Simon Harden, Michael J. Crawley, 2022. ISBN: 978-1-119-63432-4</p> <p>Biostatistics: A Foundation for Analysis in the Health Sciences, (11th Edition). Chad L. Cross, Wayne W. Daniel, 2018. ISBN: 978-1-119-49657-1</p> <p>Fundamentals of Data Visualization. Claus O. Wilke, 2019. ISBN: 9781492031086</p>				

	A practical handbook and online resources. Research papers - variable
<b>Assessment</b>	Assignments: 30% Practical exercises: 30% Final project: 40% The course is graded arithmetically 0-10.
<b>Language</b>	English

Course Title	Postgraduate Seminar Series I, II				
Course Code	BIO 800, BIO 801				
Course Type	Compulsory				
Level	Postgraduate				
Year / Semester	1st year/ Winter and Spring semester				
Teacher’s Name	Local or International Speakers invited by Departmental Faculty Members Course Coordinator and Speaker: Niki Chartosia & Anna Charalambous, Special Teaching Staff				
ECTS	0	Lectures / week	1 hour / week	Laboratories / week	0
Course Purpose and Objectives	The students are expected to attend a series of lectures, at which invited speakers from Cyprus or abroad present research work or related topics in the field of Biological Sciences.				
Learning Outcomes	These weekly, seminars are designed to give our graduate students the opportunity to familiarize themselves with the research work of distinguished scientists in the field of Biological Sciences.				
Prerequisites	N/A		Required	N/A	
Course Content	Varies, depending on the speakers’ fields for expertise, which vary each semester				
Teaching Methodology	The seminars are given in English and usually last 45 minutes with an additional 15 minutes allocated to questions and scientific discussion.				
Bibliography	-				
Assessment	Pass/Fail based on student attendance, which is mandatory for all seminar sessions				
Language	English				

<b>Course title</b>	<b>Soft Skills</b>				
<b>Course code</b>	<b>BIO 615</b>				
<b>Course type</b>	Compulsory				
<b>Level</b>	Postgraduate				
<b>Year / Semester</b>	Fall Semester				
<b>Instructor's name</b>	Faculty BIO/Special Teaching Staff BIO				
<b>ECTS</b>	2.5	<b>Lectures / week</b>	1 (2hr lecture)	<b>Laboratories / week</b>	
<b>Course purpose and objectives</b>	To provide the students transferable soft skills necessary for their studies, their research thesis and the job market.				
<b>Learning outcomes</b>	<ul style="list-style-type: none"> <li>- to acquire Health &amp; Safety laboratory skills</li> <li>- to identify and comprehend traditional and current issues in bioethics</li> <li>- to search and manage bibliographic sources</li> <li>- to communicate effectively (email, face-to-face, CV)</li> <li>- to summarize primary literature (reading comprehension, data interpretation)</li> <li>- to prepare a presentation/poster (science communication, collaboration)</li> <li>- to write a thesis/research proposal (time management, ethics)</li> </ul>				
<b>Prerequisites</b>		<b>Required</b>			
<b>Course content</b>	<p>The course offers training on different transferable soft skills that will allow the students to smoothly undertake their researcher role. Students will acquire Health and Safety training necessary for work in laboratory environments. In addition, they will acquire skills necessary for their studies, such as bibliography search and citation management, effective basic communication (written, oral), scientific communication (how to prepare CV, oral or poster presentations, thesis and proposal writing) and science ethics (research originality and plagiarism). They will also learn to manage their time and collaborate with peers. For the bioethics component, guest speakers from the Cyprus National Bioethics Committee will deliver relevant lectures.</p>				
<b>Teaching methodology</b>	Lectures and practical tutorials				
<b>Bibliography</b>	Online information, papers				
<b>Assessment</b>	<p>Test, paper summaries, presentation (50%) Final exam (poster or proposal) (50%) The course is graded arithmetically 0-10.</p>				
<b>Language</b>	English				



<b>Course Title:</b>	<b>Conservation in Practice</b>			
<b>Course Code:</b>	BIO XXX			
<b>Course Type:</b>	Compulsory			
<b>Level of Course:</b>	Postgraduate			
<b>Year / Semester</b>	Any year / Fall Semester			
<b>Teacher's Name:</b>	Various faculty members and guest speakers			
<b>ECTS:</b>	2.5	<b>Lectures week:</b>	/ 1	<b>Laboratories week:</b> / One or more fieldtrips
<b>Course Purpose and Objectives:</b>	This course aims to equip students with transferable skills that are vital for careers in biodiversity conservation. Specifically, the course will: a) Provide students with a deep understanding of the practical application of conservation theories. b) Facilitate engagement with a diverse range of stakeholders involved in biodiversity conservation. c) Enhance students' ability to critically evaluate and apply conservation strategies in real-world contexts. d) Develop practical skills for the implementation of conservation projects, including research design and fieldwork. e) Foster the ability to synthesize information and communicate conservation issues effectively to various audiences.			
<b>Learning Outcomes:</b>	<p>By the end of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate a comprehensive understanding of how conservation theories are applied in real-world contexts to protect species, habitats, and ecosystems.</li> <li>• Effectively interact with and understand the roles of various stakeholders, including governmental departments, NGOs, and local communities, in biodiversity conservation.</li> <li>• Assess and critique conservation approaches, policies, and practices based on practical examples and case studies.</li> <li>• Acquire hands-on experience in the implementation of conservation projects through fieldwork and interaction with conservation professionals.</li> <li>• Plan and propose research projects that address practical conservation challenges, incorporating critical evaluation and innovative approaches.</li> </ul>			
<b>Prerequisites:</b>	N/A		<b>Required:</b>	N/A
<b>Course Content:</b>	Throughout the course, students will participate in debates, discussions, and interactive sessions with environmental officers from governmental departments and practitioners from local NGOs. Guest speakers will provide first-hand insights into the challenges and successes of conservation efforts on the island. The course will include field trips to key protected areas in Cyprus, such as the Akamas Peninsula or Cedar Valley, where students will engage directly with conservation officers and practitioners on-site.			
<b>Teaching Methodology:</b>	Lectures, group discussions, student projects and presentations.			
<b>Bibliography:</b>	Sutherland, W., 2022. <i>Transforming conservation: A practical guide to evidence and decision making</i> (p. 430). Open Book Publishers.			
<b>Assessment:</b>	Oral presentation (40%) and written assignment (60%).			
<b>Language:</b>	English			

Course Title:	Island Biogeography and Conservation				
Course Code:	BIO XXX				
Course Type:	Restricted Elective				
Level of Course:	Postgraduate				
Year / Semester	Any year / Fall Semester				
Teacher’s Name:	Spyros Sfenthourakis, Professor				
ECTS:	7.5	Lectures week:	/ 3	Laboratories week	/ N.A.
Course Purpose and Objectives:	To give student basic knowledge on the theory of island biogeography and to bring them in contact with the main biogeographic principles, concepts, and theories. To familiarize them with basic methods of biogeographic pattern analysis and give them the tools that will make them able to examine important biological questions as pertinent to insular systems. To show how island biogeography informs conservation theory and practice and how it can be used to improve conservation of species and habitats.				
Learning Outcomes:	Upon successful completion of the course, students will learn: <ul style="list-style-type: none"><li>• What kind of phenomena are examined by biogeography</li><li>• What are the main categories of geographical and habitat islands</li><li>• Why insular systems play an important role in ecology and conservation biology</li><li>• What are the main principles of island biogeography theory</li><li>• How we examine the relationship of species richness and island area</li><li>• How fragmented habitats relate to islands</li><li>• How to analyze data on species distribution within and among archipelagos</li><li>• How is biogeography related to biodiversity conservation and the protection of the natural environment</li><li>• How to apply methods and concepts of island biogeography to species and habitats’ conservation efforts</li></ul>				
Prerequisites:	N/A		Required:	N/A	
Course Content:	Introduction. The science of biogeography. Basic principles and a brief review of the history of biogeography. Basic concepts and major processes determining spatial distribution of organisms with emphasis on islands. Island categories, island formation, and the life-time of oceanic islands. The basic principles of ecological biogeography. Theories and methods of island biogeography. The importance of the MacArthur-Wilson’s island biogeography paradigm. The significance, interpretation, and many forms of the species-area curve. The General Dynamic Model for oceanic islands. Assembly rules of island communities. Species cooccurrence, community nestedness, and methods for analyzing them. Phylogeography in insular systems. Main principles and concepts of conservation biology. Island biogeography and conservation practice. The design of protected areas.				

<b>Teaching Methodology:</b>	Lectures and discussion of seminal scientific papers. Assignments of homework (scientific papers' analysis and presentation) to students. Presentations of assignments by students.
<b>Bibliography:</b>	Whittaker R.J., Fernández-Palacios J.M. & Matthews T.J. 2023. <i>Island Biogeography. Geo-environmental Dynamics, Ecology, Evolution, Human Impact, and Conservation</i> . Oxford University Press (ISBN: 9780198868576)  Lomolino M.V., Riddle B.R. & Whittaker R.J. 2016. <i>Biogeography. Biological diversity across space and time</i> . Edition 5. Sinauer Associates (ISBN: 9781605354729)  Ladle R.J. & Whittaker R.J. (eds) 2010. <i>Conservation Biogeography</i> . Wiley-Blackwell (ISBN: 9781444390025)
<b>Assessment:</b>	Mid-term exam: 30% Assignments: 30% Final exam: 40%
<b>Language:</b>	English

Course Title	Marine Ecology and Conservation				
Course Code	BIO XXX				
Course Type	Restricted Elective				
Level	Postgraduate				
Year / Semester	Any year/ Spring Semester				
Teacher's Name	Niki Chartosia, Special Teaching Staff				
ECTS	7.5	Lectures / week	3	Laboratories / week	
Course Purpose and Objectives	To introduce students to biological oceanography, to learn about structures and patterns of ocean productivity, the various processes taking place in the marine environment, the different marine systems from coral reefs to polar systems with a special focus on the Mediterranean system and especially the Levantine Basin. Further, the major disturbances of the oceans will be discussed (e.g., climate change). Finally, emphasis will be given in marine conservation and topics like measures of protection, the science of conservation and habitat restoration will be discussed.				
Learning Outcomes	Students should: i) understand biological interactions and the dynamics within marine ecosystems, ii) develop the ability to understand and identify key ecological processes and patterns that drive productivity and system functions in diverse marine environments, iii) compare different marine systems to identify unique characteristics and common threats across global marine environments and iv) identify and analyse the major anthropogenic impacts on marine ecosystems, focusing on large-scale disturbances. Finally, they should be able to explore and identify effective conservation measures, understanding the scientific and practical aspects of marine conservation including habitat restoration and the establishment of Marine Protected Areas (MPAs).				
Prerequisites	N/A		Required	N/A	
Course Content	• Introduction to the marine environment				

	<ul style="list-style-type: none"> <li>• History of life in the oceans</li> <li>• Marine productivity</li> <li>• Biological interactions</li> <li>• Global marine systems (emphasis on the Mediterranean system)</li> <li>• Anthropogenic impacts on marine ecosystems</li> <li>• Marine conservation aspects</li> </ul>
<b>Teaching Methodology</b>	Lectures, in-class exercises, oral presentations of research articles, group discussions, field trip
<b>Bibliography</b>	Kaiser MJ., Attrill MJ., Jennings S., Thomas D. (Eds), 2020. <i>Marine Ecology: Processes, Systems, and Impacts</i> , pp. 608, Oxford University Press. Probert K., 2017. <i>Marine Conservation</i> , pp. 498, Cambridge University Press
<b>Assessment</b>	Assignments, oral presentations, independent project, final exam.
<b>Language</b>	English

Course Title	Alien species and Conservation				
Course Code	BIO XXX				
Course Type	Restricted Elective				
Level	Postgraduate				
Year / Semester	Any year/ Fall Semester				
Teacher's Name	Niki Chartosia, Special Teaching Staff				
ECTS	7.5	Lectures / week	3	Laboratories / week	NA
Course Purpose and Objectives	Students will learn to evaluate one of the major threats to biodiversity loss, i.e., invasive alien species, establishing the main lines of action to manage them and conserve local biodiversity.				
Learning Outcomes	Students will get familiarised with biodiversity terms, the importance of maintaining biodiversity, biodiversity hot-spots and the changes that present an unprecedented challenge to global and local biodiversity. Emphasis will be given in alien species. Major characteristics of these species, ways of introduction and expansion will be further discussed. Examples of alien species will be given from all systems (terrestrial and marine). Further, the most effective ways to prevent their introduction and spread will be discussed using specific examples of successful stories. Finally, European and local legislation regarding alien species will be discussed.				
Prerequisites	N/A		Required	N/A	
Course Content	<ul style="list-style-type: none"><li>• Biodiversity (meaning, types, importance)</li><li>• Biodiversity hotspots</li><li>• Biodiversity loss</li><li>• Introduction in Alien Species</li><li>• Threats of alien species</li><li>• Measures for prevention of alien species</li><li>• The main European directives in the field of biodiversity conservation</li></ul>				
Teaching Methodology	Lectures, in-class exercises, oral presentations of research articles, group discussions				
Bibliography	Cox GW., 2004. <i>Alien Species and Evolution: The Evolutionary Ecology of Exotic Plants, Animals, Microbes, and Interacting Native Species</i> , pp. 400, Island Press.  Pullaiah T., Ielmini MR. (eds), 2021. <i>Invasive Alien Species: Observations and Issues from Around the World</i> , 4 volumes, pp. 1488, Wiley-Blackwell.				

	DOI:10.1002/9781119607045 (*special emphasis in Vol. 3: Issues and Invasions in Europe, pp. 326).
<b>Assessment</b>	Assignments, oral presentations, independent project, final exam.
<b>Language</b>	English

<b>Course Title:</b>	<b>Conservation Genetics</b>			
<b>Course Code:</b>	BIO XXX			
<b>Course Type:</b>	Restricted Elective			
<b>Level of Course:</b>	Postgraduate			
<b>Year / Semester</b>	Any year / Fall Semester			
<b>Teacher's Name:</b>	Anna Papadopoulou, Associate Professor			
<b>ECTS:</b>	7.5	<b>Lectures week:</b>	/ 3	<b>Laboratories week:</b> / 1
<b>Course Purpose and Objectives:</b>	The purpose of this course is to equip students with a comprehensive understanding of genetic principles and their application in the conservation of biodiversity. By integrating theoretical knowledge with practical skills, the course aims to prepare students to address genetic challenges in wildlife conservation and management.			
<b>Learning Outcomes:</b>	<p>By the end of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Interpret genetic data to estimate variability and understand evolutionary processes affecting natural populations.</li> <li>• Assess the genetic impacts of small population sizes, including bottlenecks, drift, and inbreeding, and propose management strategies.</li> <li>• Distinguish between natural and anthropogenic hybridization and evaluate their implications for conservation.</li> <li>• Formulate genetic management plans for wild and captive populations.</li> <li>• Use taxonomic and systematic principles to define and manage species, subspecies, and conservation units.</li> <li>• Conduct data analysis using population genetic software to inform conservation decisions.</li> <li>• Explore the transition from Conservation Genetics to Genomics and apply advanced genomic techniques in conservation research.</li> </ul>			
<b>Prerequisites:</b>	N/A		<b>Required:</b>	N/A
<b>Course Content:</b>	<p>Molecular markers used in Conservation Genetics.  Estimating genetic variability in natural populations.  Basic principles of population genetics.  Evolutionary impacts of mutation and migration, and their interactions with selection in large populations. Genetic consequences of small population sizes.  Genetics and Extinction: loss of genetic diversity, bottleneck, drift, inbreeding.  Inbreeding depression. Outbreeding depression.  Natural and anthropogenic hybridization.  Genetic management of wild and captive populations.  Genetic issues in introduced and invasive species.  Systematics and taxonomy in wildlife conservation: definitions of species, subspecies and management units.</p>			

	From Conservation Genetics to Conservation Genomics. Practical applications: exercises with different datasets and population genetic software.
<b>Teaching Methodology:</b>	Lectures, group discussions, student presentations, hands-on exercises and computer practicals.
<b>Bibliography:</b>	<i>Introduction to conservation genetics</i> . R Franckham, GD Ballou, DA Briscoe. Cambridge UP 2010  <i>Population Genomics: Concepts, Approaches and Applications</i> . Om P. Rajora (Editor). Springer Nature Switzerland AG. (2019) First edition.
<b>Assessment:</b>	Mid-term oral presentation: 20% Final oral presentation: 20% Written assignments: 20% Final exam: 40%
<b>Language:</b>	English

Course Title	Behavioural Ecology and Conservation				
Course Code	BIO XXX				
Course Type	Restricted Elective				
Level	Postgraduate				
Year / Semester	Any year/ Fall Semester				
Teacher's Name	Alexander Kirschel, Associate Professor				
ECTS	7.5	Lectures / week	2	Laboratories / week	Several field trips
Course Purpose and Objectives	To introduce students to Behavioural Ecology and how environmental change and anthropogenic disturbance affects the behaviour of animals and their conservation.				
Learning Outcomes	To learn about the behaviour of animals in a variety of habitats, how the environment and disturbances influence behaviour and how an understanding of animal behaviour can contribute to their conservation and management.				
Prerequisites	N/A		Required	N/A	
Course Content	An introduction to behavioural ecology focusing on how animal behaviour is shaped by the environment and climate. The course comprises some lectures and field trips to observe behaviour in the wild. Students will read and present on the latest research published in the field of conservation behaviour. Specific topics will include direct effects of disturbance on behaviour, such as flight initiation distance in vertebrates and invertebrates in rural and urban environments, and traffic noise on the timing and phonology of acoustic				



	communication signals. Field trips will include learning some survey techniques and implementing approaches to monitor behaviour in the field in relation to environment change and anthropogenic disturbance. The course involves an independent research project on a conservation behaviour-related study.
<b>Teaching Methodology</b>	Lectures, oral presentations and discussion of research articles, field trips.
<b>Bibliography</b>	Recommended reading: Berger-Tal, O. and Saltz, D. 2016. Conservation Behavior. Applying Behavioral Ecology to Wildlife Conservation and Management. Cambridge: Cambridge University Press.
<b>Assessment</b>	Oral presentations, class and field trip participation, independent project report.
<b>Language</b>	English

Course Title	Field Biology				
Course Code	BIO 868				
Course Type	Restricted Elective				
Level	Postgraduate				
Year / Semester	Any year/ Spring Semester				
Teacher's Name	Alexander Kirschel, Associate Professor				
ECTS	7.5	Lectures / week	Intensive course. Series of meetings over two weeks, followed by 7-10 days in the field, followed by two further lectures and a presentations day.	Laboratories / week	Approx. 10 hours per day for 9 days on field expedition
Course Purpose and Objectives	Students will undertake a fieldwork project, during which they will apply the methods and techniques they have learnt in their classes, in order to execute a short but complete research project. They will apply sampling techniques, either individually or in small groups; they will analyse their findings; and they will present their results to the other students during a special one-day workshop. They will also write up their findings in a report.				
Learning Outcomes	<ul style="list-style-type: none"><li>- Learn how to perform fieldwork in Ecology and Biodiversity</li><li>- Learn fieldwork techniques relevant to students' research projects</li><li>- Learn how to analyse data</li><li>- Learn about differences between field sites in Cyprus</li><li>- Learn how to prepare a scientific report</li></ul>				
Prerequisites	N/A		Required	N/A	
Course Content	Introductory Lectures Initial Presentations Field trips Statistics and report writing lectures Final presentations				
Teaching Methodology	Lectures, Presentations, Field project implementation Field trips with demonstrations Fieldwork guidance Statistics and report writing * The course involves an intensive two weeks of daily lectures and presentations followed				

	by 7-10 days in the field. There are subsequently lectures on data analysis and report writing and then a day of presentation.
<b>Bibliography</b>	--
<b>Assessment</b>	Fieldwork 40% Presentations 20% Report 40%
<b>Language</b>	English

<b>Course Title:</b>	<b>Conservation Policy and Management</b>			
<b>Course Code:</b>	BIO XXX			
<b>Course Type:</b>	Restricted Elective			
<b>Level of Course:</b>	Postgraduate			
<b>Year / Semester</b>	Any year / Spring Semester			
<b>Teacher's Name:</b>	Visiting Faculty or Special Scientist			
<b>ECTS:</b>	7.5	<b>Lectures week:</b>	/ 3	<b>Laboratories week</b> / 1
<b>Course Purpose and Objectives:</b>	This course aims to provide a comprehensive overview of the legislative, regulatory, and policy frameworks that underpin biodiversity conservation at multiple governance levels, with a focus on Cyprus and the European Union. Through a combination of lectures, case studies, and discussions, students will explore the key international agreements, EU directives, and national laws that shape conservation efforts in the region. A significant component of the course will focus on the management of protected areas, with particular emphasis on the Natura 2000 network.			
<b>Learning Outcomes:</b>	<p>By the end of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate a thorough understanding of the key international, EU, and national policies and legislation related to biodiversity conservation.</li> <li>• Apply knowledge of the management and monitoring of protected areas, particularly within the Natura 2000 network, to real-world conservation challenges.</li> <li>• Assess the effectiveness of conservation strategies and policies in achieving biodiversity protection goals.</li> <li>• Integrate knowledge from various sources to propose informed conservation strategies that align with legal and policy frameworks.</li> <li>• Articulate conservation policy issues and management strategies clearly to a range of audiences, including policymakers and the public.</li> </ul>			
<b>Prerequisites:</b>	N/A		<b>Required:</b>	N/A



<b>Course Content:</b>	Introduction to Conservation Policy and Management International Agreements, Convention on Biological Diversity IUCN Red List of Threatened Species EU Conservation Directives and Strategies National Conservation Legislation in Cyprus, Implementation of EU directives in Cyprus Stakeholder roles in conservation policy Protected Areas Management Natura 2000 network Challenges in conservation management Case Studies in Conservation Policy and Management
<b>Teaching Methodology:</b>	Lectures, group discussions, student projects and presentations.
<b>Bibliography:</b>	Sutherland, W.J., 2008. <i>The conservation handbook: research, management and policy</i> . John Wiley & Sons. Kothari, A., Lockwood, M., Worboys, G.L. (eds) (2006) <i>Managing protected areas: a global guide</i> . Routledge
<b>Assessment:</b>	Oral presentation, written assignment and final exam.
<b>Language:</b>	English

Course Title	Geographical Information Systems and Remote Sensing in Ecology				
Course Code	BIO 865				
Course Type	Restricted Elective				
Level	Postgraduate				
Year / Semester	Any year/ Spring Semester				
Teacher's Name	Visiting Faculty or Special Scientist				
ECTS	7.5	Lectures / week	3	Laboratories / week	1
Course Purpose and Objectives	To introduce students to Geographic Information Systems (GIS) and remote sensing, with an emphasis on their applications in ecology and conservation.				
Learning Outcomes	To learn the fundamentals of Geographic Information Systems (GIS) including how to obtain maps and other geographic data from a variety of sources, extract and process data from environmental layers, perform spatial analysis, and produce maps and figures.				
Prerequisites	N/A		Required	N/A	
Course Content	An introduction to Geographic Information Systems (GIS) and remote sensing, with an emphasis on their applications in ecology. The course comprises a series of lectures and in-class computer-based practical sessions using ArcGIS Pro. Students will learn the basic principles and applications of GIS, including how to obtain, manage, and analyze geographic data acquired from remote sensing and other sources, such as topographic, vegetational and climatic data, and prepare results for presentation of research findings. The course involves an independent research project applying these spatial methods to an ecological study.				
Teaching Methodology	Lectures, in-class exercises, oral presentations of research articles, group discussions.				

<b>Bibliography</b>	<p>Recommended reading:</p> <ul style="list-style-type: none"> <li>- Chang, Kang-tsung. 2018. Introduction to Geographic Information Systems. 9th edition. New York: McGraw Hill.</li> <li>- Heywood, Ian, Sarah Cornelius, and Steve Carver. 2012. An Introduction to Geographical Information Systems. 4th edition. Harlow, England; Toronto: Pearson.</li> <li>- Law, Michael, and Amy Collins. 2021. Getting to Know ArcGIS Pro 2.8. 4th edition. Redlands, California: Esri Press.</li> <li>- Gorr, Wilpen L., and Kristen S. Kurland. 2021. GIS Tutorial for ArcGIS Pro 2.8. 4th edition. Redlands, California: Esri Press.</li> </ul>
<b>Assessment</b>	Assignments, oral presentations, independent project, final exam.
<b>Language</b>	English

<b>Course Title:</b>	<b>Global Change Biology</b>		
<b>Course Code:</b>	BIO XXX		
<b>Course Type:</b>	Restricted Elective		
<b>Level of Course:</b>	Postgraduate		
<b>Year / Semester</b>	Any year / Spring semester		
<b>Teacher's Name:</b>	New faculty member to be hired soon with focus on "Plant Ecology and Climate Change"		
<b>ECTS:</b>	7.5	<b>Lectures week:</b> / 3	<b>Laboratories week:</b> / 1
<b>Course Purpose and Objectives:</b>	The purpose of this course is to provide students with a deep understanding of the biological responses to global environmental changes and the implications for biodiversity conservation. The course aims to prepare students to critically analyze and address the complex challenges posed by global change pressures.		
<b>Learning Outcomes:</b>	<p>By the end of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Interpret the historical and current impacts of global environmental changes on biodiversity.</li> <li>• Explain how organisms and ecosystems respond to global change stressors, including movement, phenotypic plasticity, adaptation, and extinction.</li> <li>• Describe the various ways humans are altering Earth's atmosphere, land, and water.</li> <li>• Understand how global change is fundamentally altering the way species interact with their environments.</li> <li>• Evaluate the effects of global changes on biological interactions, community structure, and ecosystem functions.</li> <li>• Understand, summarize, and critically evaluate primary scientific literature on global change biology, including how scientists use gradients, experiments, and models to investigate global change.</li> <li>• Articulate the pros and cons of potential solutions to global change issues and defend their position on potential solutions.</li> </ul>		
<b>Prerequisites:</b>	N/A	<b>Required:</b>	N/A

<b>Course Content:</b>	Introduction to Global Change Biology and key concepts. Brief History of Life on Earth. The Anthropocene. Historical and Contemporary Climate Change. Climate Change in the Mediterranean. Other environmental stressors: habitat loss and fragmentation, pollution etc. Species responses to global change stressors: move, adjust, adapt, die. Community-level responses to global change stressors. Ecosystem-level responses to global change stressors. Conservation in an Era of Global Change. Aligning the Interests of Biodiversity and Human Society.
<b>Teaching Methodology:</b>	Lectures, group discussions, student presentations.
<b>Bibliography:</b>	<i>Rosenblum, E.B. 2021. Global Change Biology: The Study of Life on a Rapidly Changing Planet. Oxford University Press. Oxford, UK.</i>
<b>Assessment:</b>	Midterm exam: 30% Assignments: 30% Final exam: 40%
<b>Language:</b>	English

Course title	Work Placement				
Course code	BIO 898				
Course type	Optional course that does not fulfill requirements of the program of study				
Level	Postgraduate				
Year / Semester	Summer, Fall or Spring Semester				
Instructors names	Anna Papadopoulou, Associate Professor				
ECTS	10 ECTS	Lectures / week		Laboratories / week	Total 240 hours /semester
Course purpose and objectives	Enables students to network and connect with future employers and learn valuable job-related skills.				
Learning outcomes	Advances student’s soft skills and expands research capacity outside of UCY academic environment.				
Prerequisites	MSc students can register for this course after successful completion of 30 ECTS.	Required		Students must have a short description of the proposed project approved by the course instructor and the placement supervisor.  PhD candidates should receive approval from their research supervisor.	
Course content	The course entails a 240-hour work placement outside UCY. A flexible work plan can be created to meet student and placement supervisor needs. Students must provide a				

	brief description of the proposed work plan to be undertaken during the placement for approval by the course instructor and the placement supervisor. Students must spend 240 hrs during the placement as either part-time or full-time (40 hrs/week is considered full-time). During their placement, the students are expected to report their activities weekly by completing an electronic logbook. Following the completion of the work placement, students must submit a final report to the course instructor and present a brief summary (powerpoint presentation) of the conducted work and the learning outcomes to both the course instructor and a second evaluator.
<b>Teaching methodology</b>	Student assignments/reporting, work in a non-academic environment.
<b>Bibliography</b>	On a case-by-case basis
<b>Assessment</b>	Final course assessment is based on: Placement supervisor assessment (40%), work placement report (30%) and oral presentation (30%). The course is graded as “Pass” or “Fail”.
<b>Language</b>	English

Course Title	Scientific Methodology in Biodiversity and Ecology				
Course Code	BIO 681				
Course Type	Compulsory for Option II (literature-based dissertation)				
Level	Postgraduate				
Year / Semester	2 <sup>nd</sup> / Fall and Spring Semester (After completion of 60 ECTS from other courses)				
Teacher's Name	Papadopoulou Anna, Assoc. Prof. or Sfenthourakis Spyros, Prof or Kirschel, Alex, Assoc. Prof. (Fall and Spring Semester respectively)				
ECTS	15	Lectures / week	NA	Laboratories / week	NA
Course Purpose and Objectives	This course is actually a literature-based thesis for students not offered a position in a lab for a research-based thesis. So, its purpose is to assess their potential for a M.Sc. title. The students have to prove whether they can produce a scientific review of a subject assigned by the instructor, after scrutiny of the relevant literature.				
Learning Outcomes	Students are expected to have understood most important current issues in population, community and ecosystem ecology. They should be able to present clearly and evaluate questions, methods and results of characteristic and important recent publications in ecology. In addition, they should have consolidated most basic methods of ecological sampling and analysis of ecological data, and have understood basic principles of applied ecology, especially concerning biodiversity conservation. Finally, they should be able to design a meaningful experiment in ecological research.				
Prerequisites	Basic knowledge of ecology		Required	N/A	
Course Content	This diploma thesis includes analysis and evaluation of current, broad ranged, issues in theoretical and laboratory research on ecology and biodiversity. Students will learn how to critically evaluate and analyse scientific publications, and how to prepare and present a literature review. They will become familiar with the process of writing a scientific paper, the structure of publications, references, statistical analyses and preparation of tables and figures. Within the frames of this thesis, they will prepare a literature-based study on a subject within the fields of biodiversity and ecology, chosen by one of the program's course supervisors ('supervisor'). The progress of the study will				

	<p>be monitored via reports and questions posed by the student to the supervisor. The thesis will be concluded after a public oral presentation, and an evaluation of the written report of each student by the supervisor. The assessment of the oral presentation will be made by two course supervisors of the program (the supervisor being the one of them).</p> <p>All student assignments are written, presented and evaluated in English.</p>
<b>Teaching Methodology</b>	Short instruction on the expected structure of the thesis and a short guidance on the assigned subject. Responses to students' questions during preparation of the thesis.
<b>Bibliography</b>	Literature on the assigned subject
<b>Assessment</b>	Evaluation of the written thesis and its presentation, by the instructors.
<b>Language</b>	English

<b>Course Title</b>	<b>Master Research Dissertation in Biodiversity and Ecology</b>			
<b>Course Code</b>	<b>BIO 831</b>			
<b>Course Type</b>	Compulsory for Option I (research-based dissertation)			
<b>Level</b>	Postgraduate			
<b>Year / Semester</b>	1st year/ Fall and Spring Semester			
<b>Teacher's Name</b>	Departmental Faculty			
<b>ECTS</b>	30	<b>Lectures / week</b>	-	<b>Laboratories / week</b> / -
<b>Course Purpose and Objectives</b>	<p>This course provides an in-depth discussion of bioinformatics methods and algorithms routinely used in fields such as Molecular Biology, Genetics and Genomics. The main objective of the course is that postgraduate students become aware of the principles on which commonly used bioinformatics tools are based, instead of using applications in a 'black box' fashion. This approach is of utmost importance, both for the rational usage and for the correct assessment of the results obtained by such methods. This is achieved through a series of lectures and discussion sessions. Students will give oral presentations of selected research papers where usage of Bioinformatics methods has provided significant input to wet-laboratory biological research.</p>			
<b>Learning Outcomes</b>	<p>Students should be able to:</p> <ul style="list-style-type: none"> <li>- Recognize the importance of different bioinformatics approaches in modern Molecular Biology, Genetics and Genomics</li> <li>- Apprehend fundamental bioinformatics methods (e.g. sequence comparison, comparative genomics, network analysis)</li> <li>- Identify the bioinformatics methods used in different original research papers.</li> <li>- Understand the data types associated with different types of analyses.</li> <li>- Assess the reproducibility of bioinformatics methods reported in the literature based on the reported protocols and data identifiers.</li> <li>- Perform effective literature and reverse citation search to quickly collect information about a scientific field of interest.</li> <li>- Reproduce results from select original publications based on similar data and methods.</li> </ul>			
<b>Prerequisites</b>	Students must complete the majority of the other academic courses before signing up for a thesis project	<b>Required</b>	N/A	

<b>Course Content</b>	<p>The thesis project must be carried out in a laboratory. Students, who choose to carry out their thesis in a laboratory, must secure a position in one of the available laboratories, in consultation with their academic advisor.</p> <p>Laboratory-based or field-based research dissertation for students who are pursuing the Master's Degree in Biomedical Sciences or in Biodiversity and Ecology. The project duration is at least one semester and carries 30 ECTS. If the thesis is not presented in the given semester students must enroll in BIO 600 Continuation of Master Thesis in Biomedical Sciences or BIO 601 Continuation of Master Thesis in Biodiversity and Ecology according to the program of study, for all additional semesters, as needed. Upon completion of the research, the dissertation includes a written assignment, and an oral presentation and examination in the form of an open seminar, which will be evaluated by a three-member Examination Committee. The examination material will consist mainly of the content and context of the research dissertation and secondarily on other coursework taught during as part of the requirements for this degree.</p> <p>All student assignments are written, presented and evaluated in English.</p> <p>A course flowchart summarizing the timeline of procedures for the course is available on the Departmental website. Further information about the rules and procedures of the course is delineated below.</p>
<b>Teaching Methodology</b>	The teaching method and allocated time is determined by the supervisor of each student depending on the type and subject of the thesis project
<b>Bibliography</b>	Determined by the supervisor of each student depending on the type and study subject of the thesis project
<b>Assessment</b>	Written thesis assignment and oral presentation
<b>Language</b>	English

### C. Higher Education Institution academic representatives

<i>Name</i>	<i>Position</i>	<i>Signature</i>
<b>Chrysoula Pitsouli</b>	Associate Professor, Postgraduate Affairs Committee Chair	
<b>Anna Papadopoulou</b>	Associate Professor	
<b>Antonis Kirmizis</b>	Professor	
<b>Niki Chartosia</b>	Special Teaching Staff	
Click to enter Name	Click to enter Position	
Click to enter Name	Click to enter Position	

**Date:** 10<sup>th</sup> January 2025

