

Syllabus

Course description

Course title	Nature conservation and management
Course code	47033
Scientific sector	BIO/03 and AGR/19
Degree	Environmental Management of Mountain Areas (EMMA)
Semester	II
Year	I
Academic year	2023/2024
Credits	9 (3+3+3)
Modular	Yes

Total lecturing hours	58 (18+20+20)
Total lab hours	-
Total exercise hours	32 (12+10+10)
Attendance	Recommended
Prerequisites	None
Course page	https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/master-environmental-management-mountain-areas/course-offering/

Specific educational objectives	<p>This course belongs to those characterizing the Master program, in the area of Nature conservation and Management. The course aims at teaching basic and applied aspects of Nature conservation and Management, including botany and wildlife management in particular related to mountain areas. The geographical focus will be Europe and its mountain areas.</p> <p>By the end of the course, the student is expected to have acquired 1) knowledge on basic and applied aspects of nature conservation and management including botany and wildlife; 2) the capacity to plan and manage nature conservation areas; 4) the knowledge on approaches, methodologies, tools, and limitations of nature conservation and management including botany and wildlife, in particular under current and future trends of environmental and societal changes; and 5) the capacity to critically reflect current trends in nature conservation and management and related measures.</p>
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Module 1	Applied botany
Lecturer	Prof. Dr. Camilla Wellstein
Scientific sector of the lecturer	BIO/03
Teaching language	English

Office hours	Upon arrangement by email
Teaching assistant (<i>if any</i>)	NN (probably Philipp Kirschner)
Office hours	-
List of topics covered	The course will cover the following topics: 1) Theory and concepts of botany; 2) Plant systematics and plant determination; 3) Methods in plant ecology; 4) Methods in vegetation ecology; 5) Ecology of key plant species; 6) Vegetation ecology in mountain environments; 7) Vegetation dynamics in mountain environments; 8) Plants under climate and land-use change; 9) Frontiers of research in applied botany.
Teaching format	The professor provides an introduction into the module in the first lesson. The format of this module combines lectures with exercises and excursions. Power-point presentations as well as practical work, group work and student presentations are used as methods. Material will be provided by the professor.

Module 2	Nature conservation and protected areas
Lecturer	Dr. Gianmaria Bonari
Scientific sector of the lecturer	BIO/03
Teaching language	English
Office hours	Upon arrangement by email
Teaching assistant (<i>if any</i>)	-
Office hours	-
List of topics covered	The course will cover the following topics: 1) Types of nature protection areas; 2) Evaluation methods in nature conservation ; 3) Regional, national and international initiatives for nature conservation; 4) Examples of nature protection areas and their development; 5) Limitations in nature conservation; 6) Stakeholders and actors in nature conservation; 7) Economic aspects of nature conservation; 8) Future challenges for nature conservation.
Teaching format	The professor provides an introduction into the module in the first lesson. The format of this module combines lectures with exercises and excursions. Power-point presentations as well as practical work, group work and student presentations are used as methods. Material will be provided by the professor.

Module 3	Wildlife management
Lecturer	Dr. Ioanna Pouloupoulou
Scientific sector of the lecturer	AGR/19
Teaching language	English

Office hours	Upon arrangement by email
Teaching assistant (if any)	-
Office hours	-
List of topics covered	<p>The course will cover the following topics:</p> <ol style="list-style-type: none"> 1. Wildlife ecology 2. Wildlife research 3. Wildlife monitoring 4. Wildlife control and handling (e.g. fencing, hunting) - Human wildlife conflict- Examples from various countries 5. Wildlife health management, Hygiene risks, Biosecurity 6. Predator management for livestock 7. Conservation and reintroduction projects and wildlife management and enforcement mechanisms in Europe and worldwide
Teaching format	<p>This module aims to provide students with an understanding of the different aspects of wildlife and how its management can affect all associated parameters from ecology to agroecosystems, etc. The format of this module combines lectures with exercises and field trips. Power-point presentations are used for better understanding of the module content, as well as practical work and group projects.</p>

Learning outcomes	<p>Knowledge and understanding of basic and applied aspects and methodologies in nature conservation, applied botany and wildlife management as well as in the management of nature conservation areas.</p> <p>Applying knowledge and understanding to nature conservation and management and solving environmental problems by integrating nature conservation and environmental protection into land use. Applying knowledge and understanding to plant, vegetation and wildlife ecology, protection and management.</p> <p>Making judgements on nature conservation and management, on applied botany and wildlife management as well as on human impact on plants, the wildlife and ecosystems.</p> <p>Communication skills to discuss critically basic and applied aspects of botany, wildlife, nature conservation and management strategies as well as to apply unambiguously with pertinent and adequate technical terminology.</p>
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	<p>Learning skills to autonomously deepen and update the knowledge acquired during the course seeking relevant information on scientific and technical literature, for their future professional and/or academic studies.</p>
Assessment	The assessment of students' outcomes will be carried out through a written exam.
Assessment language	English
Evaluation criteria and criteria for awarding marks	<p>The final grade for the entire course will be calculated as the average of the final grades obtained in the three modules.</p> <p>The mark of each Module (1, 2, 3) will be assigned based on the final written exam (80%) and the presentations (20%)</p> <p>Relevant for the written exam assessment are clarity of answers, mastery of language (with respect to teaching language), ability to summarize, evaluate, and establish relationships between topics.</p>
Required readings	<ul style="list-style-type: none"> • Hunter, M.L. & Gibbs, J. (2007): Fundamentals of Conservation Biology. 3rd edition. Blackwell • Primack R.B. (2018): Essentials of conservation biology. 6th edition. Sinauer Associates <p>Selected chapters of:</p> <ul style="list-style-type: none"> • Crawley, M.J. (2009): Plant ecology. Blackwell Science. • Ellenberg, H. (2009): Vegetation Ecology of Central Europe. Cambridge <p>Scientific papers and book chapters provided in class</p>
Supplementary readings	Additional scientific papers provided in class