

## Syllabus

### Course description

<b>Course title</b>	<b>Nature conservation and management</b>
<b>Course code</b>	47033
<b>Scientific sector</b>	BIO/03 and AGR/19
<b>Degree</b>	Environmental Management of Mountain Areas (EMMA)
<b>Semester</b>	II
<b>Year</b>	I
<b>Academic year</b>	2022/2023
<b>Credits</b>	9 (3+3+3)
<b>Modular</b>	Yes

<b>Total lecturing hours</b>	58 (18+20+20)
<b>Total lab hours</b>	-
<b>Total exercise hours</b>	32 (12+10+10)
<b>Attendance</b>	Recommended
<b>Prerequisites</b>	None
<b>Course page</b>	<a href="#">Course Offering - enrolled from 2021 / Free University of Bozen-Bolzano (unibz.it)</a>

<b>Specific educational objectives</b>	<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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<b>Module 1</b>	<b>Applied botany</b>
<b>Lecturer</b>	Prof. Dr. Camilla Wellstein
<b>Scientific sector of the lecturer</b>	BIO/03
<b>Teaching language</b>	English
<b>Office hours</b>	From Monday to Friday, upon arrangement by email
<b>Teaching assistant (if any)</b>	Kindermann Elisabeth

<b>Office hours</b>	-
<b>List of topics covered</b>	<p>The course will cover the following topics:</p> <ol style="list-style-type: none"> <li>1) Theory and concepts of botany;</li> <li>2) Plant systematics and plant determination;</li> <li>3) Methods in plant ecology;</li> <li>4) Methods in vegetation ecology;</li> <li>5) Ecology of key plant species;</li> <li>6) Vegetation ecology in mountain environments;</li> <li>7) Vegetation dynamics in mountain environments;</li> <li>8) Plants under climate and land-use change;</li> <li>9) Frontiers of research in applied botany.</li> </ol>
<b>Teaching format</b>	<p>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.</p>

<b>Module 2</b>	<b>Nature conservation and protected areas</b>
<b>Lecturer</b>	Dr. Gianmaria Bonari
<b>Scientific sector of the lecturer</b>	BIO/03
<b>Teaching language</b>	English
<b>Office hours</b>	Upon arrangement by email
<b>Teaching assistant (if any)</b>	-
<b>Office hours</b>	-
<b>List of topics covered</b>	<p>The course will cover the following topics:</p> <ol style="list-style-type: none"> <li>1) Types of nature protection areas;</li> <li>2) Ecological assessment tools in nature conservation ;</li> <li>3) National and international initiatives for nature conservation;</li> <li>4) Examples of nature protection areas and their development;</li> <li>5) Limitations in nature conservation;</li> <li>6) Stakeholders and actors in nature conservation;</li> <li>7) Economic aspects of nature conservation;</li> <li>8) Future challenges for nature conservation.</li> </ol>
<b>Teaching format</b>	<p>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.</p>

<b>Module 3</b>	<b>Wildlife management</b>
<b>Lecturer</b>	Dr. Stefano Filacorda
<b>Scientific sector of the lecturer</b>	AGR/19
<b>Teaching language</b>	English
<b>Office hours</b>	Upon arrangement by email
<b>Teaching assistant (if any)</b>	-

<b>Office hours</b>	-
<b>List of topics covered</b>	<p>The course will cover the following topics:</p> <ol style="list-style-type: none"> <li>1) Wildlife ecology;</li> <li>2) Wildlife research;</li> <li>3) Wildlife monitoring;</li> <li>4) Wildlife control (e.g. fencing, hunting) – Examples from various countries;</li> <li>5) Review of accidents with humans;</li> <li>6) Examples of reintroduction projects and wildlife management in Europe and worldwide;</li> <li>7) Hygiene risks, Biosecurity;</li> <li>8) Predator management for livestock.</li> </ol>
<b>Teaching format</b>	<p>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 and group work are used as methods. Material will be provided by the professor.</p>

<b>Learning outcomes</b>	<p><b>Knowledge and understanding</b> 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><b>Applying knowledge and understanding</b> 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><b>Making judgements</b> 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><b>Communication skills</b> 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> <p><b>Learning skills</b> 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>
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<b>Assessment</b>	The assessment of students' outcomes will be carried out
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	through a written exam.
<b>Assessment language</b>	English
<b>Evaluation criteria and criteria for awarding marks</b>	<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>
<b>Required readings</b>	<ul style="list-style-type: none"> <li>• Hunter, M.L. &amp; Gibbs, J. (2007): Fundamentals of Conservation Biology. 3rd edition. Blackwell</li> <li>• Primack R.B. (2018): Essentials of conservation biology. 6th edition. Sinauer Associates</li> </ul> <p>Selected chapters of:</p> <ul style="list-style-type: none"> <li>• Crawley, M.J. (2009): Plant ecology. Blackwell Science.</li> <li>• Ellenberg, H. (2009): Vegetation Ecology of Central Europe. Cambridge</li> </ul> <p>Scientific papers and book chapters provided in class</p>
<b>Supplementary readings</b>	Additional scientific papers provided in class