Freie Universität Bozen
Libera Università di Bolzano
Università Liedia de Bulsan

Syllabus
Course description

Course title	**Basics of Landscape Ecology**
Course code	47050A
Scientific sector	BIO/03
Degree	Environmental Management of Mountain Areas
Semester	I
Year	I
Academic year	2022-23
Credits	3
Modular	NO

Total lecturing hours	18
Total lab hours	
Total exercise hours	12
Attendance	requested
Prerequisites	none
Course page	Course Offering - enrolled from 2021 / Free University of Bozen-Bolzano (unibz.it)

Specific educational objectives	The course provides basic and applied aspects of interdisciplinary Landscape Ecology with regard to ecology, biology, geography as well as aspects of the social sciences. The course is obligatory within the master program EMMA. Additionally to the up-to-date basic and applied aspects of Landscape Ecology, the course provides professional skills for environmental and landscape management.

Lecturer	Prof. Dr. Stefan Zerbe
Scientific sector of the lecturer	BIO/03
Teaching language	English
Office hours	Upon request
Teaching assistant	Dr. Uta Fritsch
Office hours	-
List of topics covered	The course will cover the following topics: 1. Introduction to the discipline and history of Landscape Ecology 2. Landscape history in Central Europe 3. Patterns and processes in landscapes 4. Methodologies in Landscape Ecology 5. Ecosystems and land-use types in mountain areas 6. Vegetation and its differentiation in landscapes 7. Ecosystem and landscape services 8. Urban landscapes 9. Interdisciplinary aspects in Landscape Ecology 10. Biological invasions in landscapes

Teaching format	In the lecture part, the topics are presented by the professor. In the seminar part, students elaborate short presentations on selected topics of applied landscape ecology. On the excursions, the professor and local guides will be active. Generally, Power Point presentations will be available in the course reserve collection database of the Faculty. The professor will eventually provide additional material.

Learning outcomes	**Knowledge and understanding** of basic and applied aspects and methodologies in Landscape Ecology; knowledge and understanding of landscape patterns and processes as well as human impact on mountain ecosystems and landscapes **Applying knowledge and understanding** to landscape and ecosystem management, solving environmental problems, or within research projects **Making judgements** on anthropogenic landscape changes, human impact, management options, and sustainable landscape development **Communication skills** to present basic and applied aspects of landscape ecology and management to stakeholders, scientists, and the public clearly and unambiguously **Learning skills** allow the students to continue their studies in a manner that may be largely self-directed or autonomous within practical projects or a PhD program

Assessment	Student presentation (40 %) and written exam (60 %)
Assessment language	English
Evaluation criteria and criteria for awarding marks	• Relevant for written exam assessment: clarity of answers, ability to summarize, evaluate, and establish relationships between topics; • Relevant for assessment of student presentations (seminar): ability to extract the key messages, creativity, skills in critical thinking, ability to summarize and interpret in own words

Required readings	• Zerbe, S. 2022. Restoration of Multifunctional Cultural Landscapes. Merging Tradition and Innovation for a Sustainable Future. Landscape Series 30, Springer • Farina, A., 2007. Principles and Methods in Landscape Ecology: Towards a Science of the Landscape. 2. ed., Springer, Dordrecht, pp1-414. • Turner, M.G., Gardner, R.H. 2015. Landscape Ecology in Theory and Practice. Pattern and Process. Springer, 2nd ed.

	• Leuschner, C. & Ellenberg H. (2017): Vegetation of Central Europe. 2 Volumes.
Supplementary readings	Papers provided during the lecture and seminar