# Syllabus

## Course description

<table>
<thead>
<tr>
<th>Course title</th>
<th>Mountain agriculture</th>
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<tr>
<td>Course code</td>
<td>47055</td>
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<tr>
<td>Scientific sector</td>
<td>AGR/02 – AGR/19</td>
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<tr>
<td>Degree</td>
<td>Environmental Management of Mountain Areas</td>
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<tr>
<td>Semester</td>
<td>II</td>
</tr>
<tr>
<td>Year</td>
<td>I</td>
</tr>
<tr>
<td>Academic year</td>
<td>2022/23</td>
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<tr>
<td>Credits</td>
<td>9</td>
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<td>Modular</td>
<td>Yes</td>
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| Total lecturing hours               | 56 (20+24+12)                                                                         |
| Total lab hours                     | 34 (10+16+8)                                                                          |
| Total exercise hours                | 34 (10+16+8)                                                                          |
| Attendance                          | Not compulsory, but recommended. Strongly recommended the attendance to the field activities. |
| Prerequisites                       | Students should have a basic knowledge of sustainable agriculture and animal production |
| Course page                         | Course Offering - enrolled from 2021 / Free University of Bozen-Bolzano (unibz.it)     |

## Specific educational objectives

The course delivers detailed information on crop and livestock production systems as well as on wildlife management that provide economic opportunities for the mountain farms. Students will be able to evaluate such production systems and to identify weaknesses and strengths. Furthermore, they will be able to design production systems for a given area and adapt their management in order to improve their ecological and economic sustainability, and integration with the surrounding environment.

## Module 1

### Grassland management and feed production

**Lecturer**

Dr. Giovanni Peratoner  
e-mail: giovanni.peratoner@unibz.it  
Webpage: https://www.unibz.it/de/faculties/sciencetechnology/academic-staff/person/35053-giovanni-peratoner

**Scientific sector of the lecturer**

AGR/02

**Teaching language**

English

**Office hours**

see timetable

**Teaching assistant (if any)**

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**List of topics covered**

The Module will cover the following topics:

1. Biology and agronomic traits of the main forage species
2. Relationship between climate, management
intensity, yield, botanical composition and forage quality
3. Fertilisation with farm dung
4. Management of pastures and meadows
5. Forage conservation
6. Grassland establishment and improvement

Teaching format
Lectures, Excursions

Module 2
Livestock management in mountain areas

Lecturer
Prof. Dr. Dr. Matthias Gauly, Universitätsplatz 5, Room K1.10, matthias.gauly@unibz.it, phone: 0471 017115, Webpage: https://www.unibz.it/en/faculties/sciencetechnology/academic-staff/person/34735-matthias-gauly
Dr. Ioanna Poulopoulou
Piazza Università 5, 39100 Bolzano-Bozen, Room K1.09
e-mail: Ioanna.Poulopoulou@unibz.it

Scientific sector of the lecturer
AGR/19

Teaching language
English

Office hours
During semester, upon arrangement by email

Teaching assistant (if any)
-

List of topics covered
The Module will cover the following topics:
1. Structures of animal production Europe with special focus on mountain areas
2. Production and management systems in livestock (cattle, pigs, small ruminants, poultry, horses)
3. Production and management of non-domesticated species (e.g. deer)
4. Biology of selected wildlife species
5. Management of large carnivores (wolf, bear, lynx) and interactions with livestock farming

Teaching format
Lectures and excursions are followed by presentations of the students. Each student gives at least one presentation on a specific topic related to livestock and wildlife management.

Learning outcomes
Knowledge and understanding of the main characteristics of the grassland and livestock production systems in mountain areas.

Applying Knowledge and understanding to identify in a given area, the main environmental and economic constraints that affects plant and animal production.

Making judgments to be able to identify for a given environment and production system, the most suitable
management techniques in order to improve its economic and ecological sustainability.

**Communication skills**
Ability to present and discuss the acquired knowledge using a scientific terminology and sound arguments.

**Learning skills**
Ability to autonomously extend the knowledge acquired during the course by critically reading of scientific literature.

### Assessment

The two modules of Mountain agriculture (Grassland management and feed production and Livestock management in mountain areas) will be jointly assessed by oral exams on topics presented and discussed in classes and during the field activities, to be offered starting from the end of the course.

### Assessment language

English

### Evaluation criteria and criteria for awarding marks

The evaluation process takes place in the context of oral exam based on the correctness of the answers, on the language correctness, on the students’ ability to argument their answers, to derive relationships and to create connections between the topics.

In module 2 (Livestock management in mountain areas), the student presentation counts 30% and the oral exam 70% of the grade obtained in this module.

The final grade for the entire course will be calculated as the weighted average (40% for module 1 and 60% for module 2) of the final grades obtained in the two modules.

### Required readings

There is no single textbook that covers the content of the entire course.

Selected chapters of the following textbook:


Hand-outs from lectures

### Supplementary readings

- **Tierzucht.** Alfons Willam, Henner Simianer, 2011. ISBN 978-3-8252-3526-0, UTB.

More references will be mentioned during the lectures.