

## Syllabus

### Course description

<b>Course title</b>	Management of mountain forests
<b>Course code</b>	47004
<b>Scientific sector</b>	AGR 05
<b>Degree</b>	Environmental Management of Mountain Areas (EMMA)
<b>Semester</b>	1
<b>Year</b>	I
<b>Academic year</b>	2018/19
<b>Credits</b>	6
<b>Modular</b>	No

<b>Total lecturing hours</b>	36
<b>Total lab hours</b>	
<b>Total exercise hours</b>	24
<b>Attendance</b>	Highly suggested
<b>Prerequisites</b>	-
<b>Course page</b>	<a href="https://next.unibz.it/en/faculties/sciencetechnology/master-environmental-management-mountain-areas/course-offering/">https://next.unibz.it/en/faculties/sciencetechnology/master-environmental-management-mountain-areas/course-offering/</a>

<b>Specific educational objectives</b>	<p>The course belongs to the class "characterizing" and specifically to the scientific disciplinary area of forestry and environmental disciplines. It is aimed to provide knowledge and the scientific basis for the understanding of the ecological functioning of mountain forest ecosystems. The ecological functioning of forests will be considered as the fundamental base to drive mountain forest management. Management will be discussed under a multi-objective perspective.</p>
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<b>Lecturer</b>	<i>Giustino Tonon, K Building, Room 202, email: <a href="mailto:giustino.tonon@unibz.it">giustino.tonon@unibz.it</a>, tel. 0471-017190</i>
<b>Scientific sector of the lecturer</b>	AGR 05
<b>Teaching language</b>	English
<b>Office hours</b>	At any time for an appointment with the lecturer
<b>Teaching assistant (if any)</b>	Pietro Panzacchi
<b>Office hours</b>	At any time for an appointment
<b>List of topics covered</b>	<p>The course will cover the following topics:</p> <ol style="list-style-type: none"> <li>1. Importance of mountain forest;</li> <li>2. Ecosystem services of Mountain forests;</li> <li>3. Mountain forests and hydrology;</li> <li>4. Principles of protection forestry;</li> <li>5. Mountain forest and climate change;</li> <li>6. Measuring carbon balance in forest ecosystems;</li> <li>7. Mountain forest and biodiversity;</li> </ol>

	8. Mountain forest and timber production; 9. Silvicultural systems and forest structure; 10. Mountain forests management; 11. Forest dynamics and dead wood; 12. Measuring and forest modeling; 13. Forest typologies; 14. Dendro-chronology and dendroecology 15. Elements of forest road project 16. Ecology of forest fire
<b>Teaching format</b>	This is a lecture- and field-course in which topics are presented by the professor. Practical parts and excursions are explained by the professor with the support of local forest managers. Power Point presentations will be available in the course reserve collection database of the faculty.

<b>Learning outcomes</b>	<p><b>Knowledge and understanding</b>        The course is aimed to provide knowledge and the scientific basis for the understanding of the ecological functioning and services of mountain forest ecosystems. The ecological functioning of forests will be considered as the fundamental base to drive mountain forest management. Management will be discussed under a multi-objective perspective.</p> <p><b>Applying knowledge and understanding</b>        By the end of the course, students should be able to:</p> <ol style="list-style-type: none"> <li>1. Identify mountain forest types and ecosystems, also in the historical perspective;</li> <li>2. Describe and forecast forest functioning and dynamics in relation to the main natural and human-induced disturbances;</li> <li>3. Prepare a multi-objective plan of forest management;</li> <li>4. Integrate the concept of ecosystem services into forest management;</li> <li>5. Manage forests according to main ecosystem service in mountain areas.</li> </ol> <p><b>Making judgments</b>        Students will have the ability to integrate knowledge formulate judgments and handle complexity of forest ecosystems and their social services.</p> <p><b>Communication skills</b> to present the acquired skills with a correct technical language.</p> <p><b>Learning skills</b> Students will be able to autonomously extend the knowledge acquired during the study course by reading and understanding scientific and technical documentation.</p>
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<b>Assessment</b>	Oral exam that includes questions to assess the knowledge and understanding of the course topics and questions designed to assess the ability to transfer these skills to study cases. Space will also be dedicated to the evaluation of the ability to produce critical judgment about the topics of the course, and to the evaluation of the communication skills.
<b>Assessment language</b>	English
<b>Evaluation criteria and criteria for awarding marks</b>	Clarity of answers, mastery of language (also with respect to teaching language), ability to summarize, evaluate, and establish relationships between topics.
<b>Required readings</b>	There is no single textbook that covers the entire course. The course material is made up by the lecture notes and papers or chapters that will be advised during the course.
<b>Supplementary readings</b>	