

## Course description

<b>Course title</b>	Economics, legislation and rural appraisals
<b>Course code</b>	47002
<b>Scientific sector</b>	AGR/01
<b>Degree</b>	Environmental Management of Mountain Areas
<b>Semester</b>	II
<b>Year</b>	I
<b>Academic year</b>	2016/2017
<b>Credits</b>	6
<b>Modular</b>	<i>yes</i>

<b>Total lecturing hours</b>	20 + 20
<b>Total lab hours</b>	
<b>Total exercise hours</b>	10 + 10
<b>Attendance</b>	Optional
<b>Prerequisites</b>	-
<b>Course page</b>	<a href="https://www.unibz.it/en/faculties/sciencetechnology/master-environmental-management-mountain-areas/">https://www.unibz.it/en/faculties/sciencetechnology/master-environmental-management-mountain-areas/</a>

<b>Specific educational objectives</b>	<p>The course aims at teaching basic and applied aspects of real estate value and agriculture and forest resource appraisal. In particular the course provides students with the opportunity to: 1) understand factors influencing the value of farm and natural/forest resources; 2) become familiar with different appraisal methodologies and understand how to choose the most appropriate ones; 3) learn how to perform rural and forest appraisal procedures; 4) understand how to analyse rural and forest projects/investments and choose among project/investment alternatives; 5) understand basic aspects in the field of legal real estate appraisal; 6) acquire appropriate technical terminology to be adopted in both professional and research activities; 7) understand the relationship between environmental issues and the economy; 8) review the economic rationale underlying the need for environmental policy; 9) learn how to analyse the efficiency and cost-effectiveness of a varied sample of environmental policy instrument; 10) learn how to assess international environmental problems from an economic perspective 11) gain an understanding of economic valuation techniques; 12) review a series of applied examples of environmental policy-making.</p>
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<b>Module 1</b>	Agricultural and Forest Appraisals
<b>Lecturer</b>	<i>Mauro Masiero</i> <a href="mailto:Mauro.Masiero@unibz.it">Mauro.Masiero@unibz.it</a>

<b>Scientific sector of the lecturer</b>	AGR/01
<b>Teaching language</b>	English
<b>Office hours</b>	See on timetable
<b>Teaching assistant (if any)</b>	-
<b>Office hours</b>	-
<b>List of topics covered</b>	<p>The course will cover the following main topics:</p> <ol style="list-style-type: none"> <li>1) Introduction to agriculture and forestry economics and appraisal</li> <li>2) Farm and forest enterprise appraisal (accounting)</li> <li>3) Fundamentals of financial mathematics for appraisal</li> <li>4) Investment analysis and assessment</li> <li>5) Appraisal methodologies, including general appraisal issues (criteria, procedures, assumptions), farm and forest stand appraisal, natural resources appraisal and legal real estate appraisal</li> </ol>
<b>Teaching format</b>	<p>Theoretical topics will be presented in the class by the professor. Interaction and direct participation by students will be encouraged by means of exercises performed during classes and/or home assignments. Power Point (PPT) presentations of the lectures will be made available on the Moodle website of the University, along with links to external resources and exercises. Additional material might be provided on selected topics.</p>

<b>Module 2</b>	Environmental economics and legislation
<b>Lecturer</b>	<p>Elisabeth Gsottbauer  <a href="mailto:Elisabeth.Gsottbauer@unibz.it">Elisabeth.Gsottbauer@unibz.it</a>,  <a href="mailto:Elisabeth.Gsottbauer@uibk.ac.at">Elisabeth.Gsottbauer@uibk.ac.at</a></p>
<b>Scientific sector of the lecturer</b>	AGR/01
<b>Teaching language</b>	English
<b>Office hours</b>	On appointment
<b>Teaching assistant (if any)</b>	-
<b>Office hours</b>	-
<b>List of topics covered</b>	<p>The course will cover the following main topics:</p> <ol style="list-style-type: none"> <li>1) Introduction to the relationship between the economy and the environment</li> <li>2) Need for environmental policy making (market failures including external effects and public goods, internalisation of externalities)</li> <li>3) Design of environmental policy instruments (review of policy instruments including legal instruments, taxes/subsidies, tradable permits, moral suasion and others; policy criteria and instrument selection)</li> <li>4) International environmental problems (game-theoretic analysis, global public goods, international environmental agreements)</li> <li>5) Environmental valuation methods (basic concepts &amp; theory, revealed and stated preferences approaches, application to economics of valuing ecosystem services)</li> </ol>

	<p>and biodiversity)</p> <p>6) Policy instruments in practice (applied examples from road transportation, land-use and biodiversity conservation, and energy)</p>
<b>Teaching format</b>	<p>The course will consist of a mixture of lectures (PowerPoint), exercises, a case study and a final examination. Lectures will be closely linked to the course literature and PowerPoint presentations will be made available to you on the Moodle website of the University. Class exercises and case study work will also help students to understand contents and material presented.</p>

<b>Learning outcomes</b>	<p><b>Knowledge and understanding</b> of: i) factors influencing the value of farm and forest resources; ii) the process of identifying, gathering, and organizing information and data necessary for conducting an appraisal procedure; iii) project/investment analysis in the rural and forest sector; (iv) economic framework underlying environmental policy making; (v) selection criteria for the evaluation of environmental policy instruments; (vi) background and methods of environmental valuation techniques.</p> <p><b>Applying knowledge and understanding</b> to: i) analyse farm and forest enterprises; ii) perform basic farm/forest appraisal process, employing different valuation approaches; iii) analyse the economic feasibility, profitability, and repayment ability of alternative investments in the rural and forest sector; (iv) select environmental policy options suited to the problem (v) model international environmental problems using tools of game theory.</p> <p><b>Making judgments</b> on: i) farm/forest enterprise accounting and economic performances; ii) the identification and implementation of appropriate appraisal methodologies to farm, forest and natural resources; iii) the identification of the best investment alternatives in the rural and forest sector; (iv) selection and design of environmental policy instruments; (v) institutional solutions to specific international environmental problems; (vi) use and choice of appropriate environmental valuation techniques.</p> <p><b>Communication skills</b> (i) to present basic and applied aspects of rural and forest appraisal as well as economic evaluation of rural projects/investments by use of appropriate technical terminology; (ii) to present an economic analysis of specific environmental issues and an</p>
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	<p>assessment of potential policy options .</p> <p><b>Learning skills</b> to autonomously develop and update the knowledge acquired during the course for their future professional career and/or academic studies.</p>
<b>Assessment</b>	The assessment of students' outcomes will be carried out through i) written exam; ii) oral exam
<b>Assessment language</b>	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 two modules.</p> <p>The mark for Module 1 will be assigned based on the final written/oral exam (70%) and class/home assignments and exercises as well as participation and proactive attitude during classes (30%).</p> <p>The mark for Module 2 will be assigned based on a final written exam (80%), which consists of several questions aiming to test the understanding of the presented material, and a case study project as a class/home assignment (20%).</p> <p>Relevant for the written exam assessment are clarity of answers, mastery of technical terminology, ability to choose and use correct appraisal methodologies, and evaluate;</p> <p>Relevant for the oral exam assessment are correctness and clarity of answers, mastery of the technical terminology, capability to establish relationships between different topics.</p> <p>Relevant for the class/home assignments and exercises are accuracy, timeliness, clarity, and mastery of the technical terminology.</p>
<b>Required readings</b>	<p>Books:</p> <ul style="list-style-type: none"> <li>• Drummond, H., Goodwin, J. (2011). Agriculture economics. Prentice Hall, NJ.</li> <li>• Tietenberg, T., Lewis, L. (2009). Environmental and Natural Resources Economics. Pearson International Edition, Boston, MA.</li> <li>• Sterner, T., and Coria, J. (2012) Policy instruments for environmental and natural resource management. Second Edition. Resources for the Future. Routledge Taylor&amp;Francis Group.</li> <li>• Perman, R., Ma, Y., McGilvray, J. and Common, M. (2010) Natural resource and environmental economics. Pearson.</li> <li>• Barrett, S. (2010) Why cooperate?: The incentives to supply global public goods. 1st Edition. Oxford University Press.</li> </ul>

**Supplementary readings**

- Additional scientific papers provided in class