

General Information	
Academic subject	Protection of the agricultural and forestry environment and hydraulic planning
Degree course	Sustainable Management of the Mediterranean Countryside
Curriculum	Agricultural Engineering
ECTS credits	6
Compulsory attendance	No
Language	Italian

Subject teacher	Name Surname	Mail address	SSD
	Francesco Gentile	francesco.gentile@uniba.it	AGR/08

ECTS credits details			
Basic teaching activities	Lessons 4 CFU	Practice 2 CFU	

Class schedule	
Period	First semester
Year	First
Type of class	Lecture- workshops

Time management	
Hours	150
In-class study hours	60
Out-of-class study hours	90

Academic calendar	
Class begins	October 9, 2017
Class ends	January 26, 2018

Syllabus	
Prerequisites/requirements	
Expected learning outcomes	<p><i>Knowledge and understanding</i> Know the issues related to the protection of agricultural land, viewed from the perspective of the management of the water resource. Know operational references; the types of water resources and processes; integrated management criteria.</p> <p><i>Applying knowledge and understanding</i> Application of "water-related" process management criteria that affect the sustainability of agriculture and the effects of land management on the quantity and quality of water. Application of natural resources management plans at different levels: local, regional, national and European community.</p> <p><i>Making informed judgements and choices</i> Ability to understand and use planning and territorial planning tools, assessing their implications for land management and water resources, with particular focus on eco-compatible and sustainable resource management.</p> <p><i>Communicating knowledge and understanding</i> Development of personal attitudes to communication, multidisciplinary group work and judgmental skills both on the technical and economic level and on the human and</p>

	<p>ethical level, using the Italian and a language of the Union, usually English.</p> <p><i>Capacities to continue learning</i></p> <p>Continuous updating of knowledge in the field, including tools that make use of new communication and information technology.</p>
Contents	<p>The Course is based on the knowledge of the issues concerning the agricultural land protection under the point of view of the water resources management. After the exam of the environmental scenario and some basic knowledge, the course deals with the water resources and the "water-related" processes conditioning the sustainability of the agriculture. The Course also deals with the land management effects on the quality and quantity of water resources, as well as the criteria of the integrated water resources management together with the programming and planning tools up to date in force on the several land scales (from the local to the European one).</p>
Course program	
Bibliography	<p>BRAS, R.L., 1990: Hydrology: an introduction to hydrologic science. Addison-Wesley Publishing Company.</p> <p>CHADWICK A., MORFETT J. (1998). Hydraulics in civil and environmental Engineering. E & FN SPON. An imprint of Routledge.</p> <p>NEWSON M. (1997). Land, Water and development. Sustainable management of river basin systems. Rutledge.</p> <p>SHAW E.M. (1996). Hydrology in Practice. Chapman & Hall, London.</p>
Notes	
Teaching methods	<p>Lectures will be presented through PC assisted tools (Powerpoint, Adobe Acrobat, etc.).</p>
Assessment methods (indicate at least the type written, oral, other)	<p>The exam consists of an oral test on the topics developed during the hours of theory and practice in the classroom and in the field, as reported in the Academic Regulations for the Master (article 9) and in the study plan (Annex A). For students enrolled in the course year in which the teaching is done there will be a mid-term exam. The mid-term exam will be oral. The outcome of this exam contributes to the final evaluation and is valid for one academic year. The evaluation of the student's preparation is based on pre-established criteria, as detailed in Annex A of the Degree Regulations. For students who took the mid-term exam, the final evaluation is expressed taking into account the result of the mid-term exam.</p>
Evaluation criteria	<p><i>Knowledge and understanding</i></p> <p>Ability to express properly the issues related to the protection of the agricultural-forest territory viewed from the perspective of the management of the water resource.</p> <p><i>Applying knowledge and understanding</i></p> <p>Ability to apply the "water-related" process management criteria that affect the sustainability of agriculture and the effects of land management on the quantity and quality of water.</p>

	<p><i>Making informed judgements and choices</i> Ability to evaluate operational strategies for applying natural resource management plans to the different levels: local, regional, national, European community.</p> <p><i>Communicating knowledge and understanding</i> Ability to communicate effectively the acquired skills.</p> <p><i>Capacities to continue learning</i> Continuous updating of knowledge in the subject, also with reference to acquired knowledge applications.</p>
Further information	