

General Information	
Academic subject	Soil bioengineering
Degree course	Sustainable Management of the Mediterranean Countryside
Curriculum	Agricultural Engineering
ECTS credits	3
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 2 CFU	Practice 1 CFU	

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

Time management	
Hours	75
In-class study hours	30
Out-of-class study hours	45

Academic calendar	
Class begins	October 2, 2017
Class ends	January 26, 2018

Syllabus	
Prerequisites/requirements	
Expected learning outcomes (according to Dublin Descriptors) (it is recommended that they are congruent with the learning outcomes contained in A4a, A4b, A4c tables of the SUA-CdS)	<p><i>Knowledge and understanding</i> Acquire skills and knowledge to be used in public and private companies about the use of mechanical elements in combination with biological elements (plants), functioning together for soil conservation and environmental restoration purposes.</p> <p><i>Applying knowledge and understanding</i> Application of design criteria related to soil bioengineering techniques; Apply knowledge regarding the definition of technical specifications of works and the determination of their costs.</p> <p><i>Making informed judgements and choices</i> Ability to understand and use design tools for soil bioengineering interventions, 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 ethical level, using the Italian and a language of the Union, usually English.</p> <p><i>Capacities to continue learning</i></p>

	Continuous updating of knowledge in the field, including tools that make use of new communication and information technology.
Contents	The Course deals with the basic principles and applications of soil bioengineering techniques. Soil bioengineering uses live plants and plant parts alone or in conjunction with other materials (straw, wood, stones, wire meshes, degradable erosion control mats, geotextiles, etc...) to provide erosion control, slope and stream bank stabilization, landscape restoration. The bases are the engineering principles.
Course program	
Bibliography	Notes of the lectures distributed during the course. Gray D.H. and Sotir R.B. Biotechnical and Soil Bioengineering slope stabilization. Wiley interscience.
Notes	
Teaching methods	Lectures will be presented through PC assisted tools (Powerpoint, Adobe Acrobat, etc.).
Assessment methods (indicate at least the type written, oral, other)	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.
Evaluation criteria	<p><i>Knowledge and understanding</i> Ability to express properly the issues related to the design of soil bioengineering interventions.</p> <p><i>Applying knowledge and understanding</i> Ability to properly apply the design criteria for the works and to evaluate the relative costs.</p> <p><i>Making informed judgements and choices</i> Ability to understand and use design tools for soil bioengineering interventions.</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	