

TEACHING SCHEDULE: Ecology and Environmental Legislation

LECTURER: Prof. Roberto Carlucci

A.A. 2019-2020

Teaching	Ecology and Environmental Legislation		
SSD	BIO/07		
Year of study	2019-2020		
Code of Teaching	062065		
Semester	I		
Lecturer	Roberto Carlucci		
Credits	10 (8 frontal lessons + 2 exercises)		
Lessons	1 st october – 15 th january		
Preparatories	NO		
Prerequisites	The teaching of Ecology and Environmental Legislation is designed as an interdisciplinary study programme that aims to provide knowledge on the interactions between the biotic and abiotic components in the marine and terrestrial ecosystems in their natural state or human impacted condition. Therefore, the prerequisites required to the student are inherent the basic knowledge for the subjects related to biology, geology, mathematics, physics and chemistry.		
Formative objectives	The specific expertise developed by the teaching of Ecology and Environmental Legislation will enhance the student in multidiscipline skills with attention paid to the modelling of environmental systems and quali-quantitative relations between the biotic and abiotic components. In this regard, the frequency of lectures, laboratory and work on field favour the student's ability to collect, process and analyse independently scientific data concerning environmental systems at different spatial and temporal scale, preparing him to the planning of experimental models and their evaluation and synthetic reporting.		
Teaching methods	Front Lessons	Laboratory + Exercises	Total
<i>Assisted teaching hours</i>	72	30	102
<i>Individual study hours</i>			
<i>Credits</i>	8	2	10
Evaluation methods	<p><i>Student assessment includes an oral test articulated on the entire program provided for teaching. It checks the understanding of theoretical and modelling aspects as well as the multidisciplinary problem-solving skills. The score of the examination paper is attributed by a vote expressed in thirtieths. In the evaluation it will take into consideration the following elements:</i></p> <ol style="list-style-type: none"> <i>1. Contextualization of environmental concerns subject;</i> <i>2. Organization of the knowledge acquired in an independent and inedited version;</i> <i>3. Consistency of logic-experimental construct and linguistic properties;</i> <i>4. Adequacy in methodological and instrumental processing.</i> <p><i>Partial satisfaction of the aspects listed above is a necessary condition for achieving a rating of 18/30. Rating higher than 27/30 will be awarded to students whose tests meet all four aspects listed above. To pass the exam, report, then a vote of not less than 18/30, student must demonstrate that have acquired sufficient knowledge of program arguments. To achieve a score of 30/30 and praise, the student must, however, demonstrate that have gained an excellent knowledge of all topics covered during the teaching.</i></p>		
Program	<p>Program of Ecology and Environmental Legislation 2019-2020</p> <ol style="list-style-type: none"> General principles in Ecology and concept of Ecosystem; Energy in ecosystems: thermos-dynamic theory and primary production; Flux of energy trough ecosystems; Energy in trophic web. Trophic web. Ecological pyramids; Bio-accumulation and bio-magnification; Decomposition and cycle of nutrients; Bio-geochemical cycle of water; 		

	8. Bio-geochemical cycle of Oxygen; 9. Bio-geochemical cycle of Carbon; 10. Bio-geochemical cycle of Nitrogen; 11. Bio-geochemical cycle of Phosphate; 12. Demography and population dynamic; 13. Predation and Competition; 14. Biodiversity and measures; 15. EU Directive 152/2006; 16. Habitat Directive; 17. Marine Strategy Framework Directive.
Reference texts	E. P. Odum - Basi di ecologia - Piccin Ed. Smit & Smith Elementi di Ecologia Ed. Pearson Colin R. Townsend, John L. Harper, Michael Begon - L'essenziale di ecologia - Zanichelli. R. Ricklefs - L'Economia della natura - Ed. Zanichelli. Autori vari - LE SCIENZE quaderni. I cicli della biosfera. Numero 6, marzo 1983.
Extensive texts and teaching tools	Teaching support is provided with slide shows in Microsoft Office Power Point and laboratory and field exercises are conducted. Further teaching material is provided directly by the teacher.