

<b>General Information</b>	
Academic subject	Ecology
Degree course	Science of Primary Education
Curriculum	
ECTS credits	6
Compulsory attendance	No
Language	Italiano

<b>Subject teacher</b>	Name Surname	Mail address	SSD
	Gianfranco D'Onghia	gianfranco.donghia@uniba.it	BIO/07

<b>ECTS credits details</b>			
Basic teaching activities			

<b>Class schedule</b>	
Period	First semester
Year	Third year
Type of class	Lectures

<b>Time management</b>	
Hours measured	60 min
In-class study hours	45
Out-of-class study hours	765

<b>Academic calendar</b>	
Class begins	October
Class ends	January

<b>Syllabus</b>	
Prerequisite requirements	
Expected learning outcomes (according to Dublin Descriptors)	<p><i>Knowledge and understanding</i></p> <p><i>Applying knowledge and understanding</i></p> <p><i>Making informed judgements and choices</i></p> <p><i>Communicating knowledge and understanding</i></p> <p><i>Capacities to continue learning</i></p>
Contents	<p><b>INTRODUCTION</b></p> <p>The life is organized according to systems of various complexity. The emergent properties. Interdependence of the part from the whole and the whole from the part. Regulation and control of the living systems. The ecosystem: components and factors. Self-organization and cybernetic nature of the ecological systems. Self-regulation of the biosphere and the Gaia hypothesis.</p> <p><b>ENERGY IN THE ECOSYSTEMS</b></p> <p>The flow of the energy in the ecosystems. The concept of productivity. Productivity in the aquatic and terrestrial</p>

	<p>environments. Global distribution of the primary productivity. Production of food, fibers, materials and fuels. Food webs and ecological pyramids. Dissipating processes in the food webs. Quantity and quality of the energy. Bioaccumulation and biomagnification. Energetic tipologies of ecosystems. The urban-industrial ecosystem.</p> <p><b>THE CYCLE OF THE MATTER IN THE ECOSYSTEMS</b></p> <p>Decomposition and nutrient cycles. Biogeochemical cycles. The cycle of the water and the climate. Provision and lost of water by organisms. The cycle of the carbon and green-house effect. Nitrogen, phosphorus and sulphur cycles. Soil fertility; eutrofication; acid rains. Oxigen and ozone. The litter problem and the closure of the circle.</p> <p><b>BIODIVERSITY</b></p> <p>Biotic components of the ecosystem. Life-history strategies of the different species. Function of the species in the ecosystem and ecological niche. The organisms are organized in population. Population structure and dynamics. Species interactions in the community. Community structure and dynamics. The ecological succession. Distribution of the biodiversity on the Earth planet.</p> <p><b>HUMAN ECOLOGY</b></p> <p>Biodiversity, goods and ecosystem services. Ecology and Economy. Grow of the population, utilization of the natural resources and sustainability. Habitat degradation and lost, species extinction and global change of the climate.</p>
<b>Course program</b>	
Bibliography	Eugene P. Odum – ECOLOGIA. Un ponte tra scienza e società. Ed. PICCIN
Notes	Suggested
Teaching methods	Power Point presentations
Assessment methods	Oral exam
Further information	