



General information	
Academic subject	Plant Ecology
Degree course	Master's degree in Environmental Biology
Academic Year	II
European Credit Transfer and Accumulation System (ECTS)	6
Language	Italian
Academic calendar (starting and ending date)	II semester
Attendance	strongly recommended

Professor/ Lecturer	
Name and Surname	Valeria Tomaselli
E-mail	valeria.tomaselli@uniba.it
Telephone	080 544 2159
Department and address	Istituto Botanico, Campus Universitario, via Orabona 4, Bari
Virtual headquarters	
Tutoring (time and day)	by appointment (e-mail)

Syllabus	
Learning Objectives	The course aims to provide fundamental knowledge on the main ecological factors determining the distribution of plants on the Earth and in the various ecosystems and on the main survey methods used for the characterization of the territory in terms of flora, vegetation and landscape.
Course prerequisites	Basic knowledge of Botany, Systematic Botany, Plant physiology and Ecology
Contents	<p>Introduction to the topics of Plant Ecology, Geobotany, Flora and Vegetation. Main ecological factors and relationships with plants (light, water, temperature). Soil (substrate and soil, stages of pedogenesis, texture and structure, humus, soil profile and horizons).</p> <p>Climate and phytoclimate (factors and elements of climate; climate indices, climate diagrams; relationship between climate and vegetation).</p> <p>The biomes of the Earth.</p> <p>Ecology of fire.</p> <p>Reproductive ecology and phenology.</p> <p>Flora (floristic richness and diversity; biological forms and their indicator meaning; chorotypes, endemisms, chorologic spectra)</p> <p>Vegetation analysis (criteria in the study of vegetation, the phytosociological method, plant association and other phytosociological units, vegetation zones and belts; zonal, azonal and extrazonal vegetation; vegetation dynamism, primary and secondary successions, climax); main landscape classification systems.</p> <p>The contents of the field trips will deal about the subjects debated during class lectures</p>
Books and bibliography	<p>Pignatti S., 1994. Ecologia del Paesaggio. UTET, Torino.</p> <p>Pignatti S., 1995. Ecologia vegetale. UTET, Torino.</p> <p>Ubaldi D., 2012 – Guida allo studio della flora e della vegetazione. Clueb, Bologna.</p> <p>Cristeca V., Gafta D., Petrotti F., 2015. Fitosociologia. Temi, Trento</p>
Additional materials	The suggested texts are available for reference at the Library of the Plant Biology Section of the Department of Biology. During the course, slides and other electronic documents will be provided.



Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
150	44	6	100
ECTS			
6	5,5	0,5	
Teaching strategy		Lectures supported by multimedia tools and field trips aimed at the identification and field direct analysis of adaptation strategies of the main species of the Mediterranean area, by means of comparative analysis of diagnostic characters.	
Expected learning outcomes			
Knowledge and understanding on:		<ul style="list-style-type: none"> ○ relationships between plants and main ecological factors; ○ mechanisms influencing the relationships among ecologic factors and floristic composition, structure, dynamics, distribution and phenology of plant communities; ○ different levels of plant diversity and landscape complexity 	
Applying knowledge and understanding on:		<ul style="list-style-type: none"> ○ interpreting the vegetation of a geographic area, at different observation scales 	
Soft skills		<ul style="list-style-type: none"> ● <i>Making informed judgments and choices</i> ○ ability in understanding the main causes of plant distribution at different levels of expression. ○ analytical skills for the deepening and applicability of the acquired knowledge. ● <i>Communicating knowledge and understanding</i> ○ acquisition of the lexicon and the scientific terminology peculiar to the discipline; ○ ability to work in teams involved in environmental conservation; ○ ability to carry out in-depth analysis through specialized bibliography. ● <i>Capacities to continue learning</i> ○ ability to access bibliographic sources and updated databases and to carry out a critical interpretation of the scientific literature. 	

Assessment and feedback	
Methods of assessment	Oral exam
Evaluation criteria	<ul style="list-style-type: none"> ● <i>Knowledge and understanding</i> ○ assessment of the acquisition of the basics about the different levels of expression of plant diversity on the Earth, the relationships between plants and main ecological factors and the causes of the geographic distribution of flora and vegetation on the Earth; ○ assessment of the full understanding of the relationships among the different modules of the coursework (ecological factors, flora and vegetation) ● <i>Applying knowledge and understanding</i> ○ assessment of the ability in reading and interpreting flora and vegetation of a geographic area ● <i>Autonomy of judgment</i> ○ assessment of the ability in interpreting the relationships among the distribution of species, communities and plant landscapes and the related causes;



	<ul style="list-style-type: none">○ o analytical skills for an in-depth study and applicability of the acquired knowledge● <i>Communicating knowledge and understanding</i>○ assessment of the ability to express concepts and formulate interpretations, with a correct use of language and clarity in exposition, making use of the scientific terminology learnt during the semester● <i>Communication skills</i>○ Assessment of the acquisition of appropriate terminology● <i>Capacities to continue learning</i>○ assessment of the acquisition of critical abilities and of autonomy in achieving new knowledge
Criteria for assessment and attribution of the final mark	Exam with mark out of 30
Additional information	