



# UNIVERSITÀ DEGLI STUDI DI PALERMO

<b>DEPARTMENT</b>	Scienze Agrarie, Alimentari e Forestali		
<b>ACADEMIC YEAR</b>	2023/2024		
<b>MASTER'S DEGREE (MSC)</b>	LANDSCAPE ARCHITECTURE		
<b>INTEGRATED COURSE</b>	GREEN INFRASTRUCTURES AND BIODIVERSITY IN URBAN FOREST - INTEGRATED COURSE		
<b>CODE</b>	23351		
<b>MODULES</b>	Yes		
<b>NUMBER OF MODULES</b>	2		
<b>SCIENTIFIC SECTOR(S)</b>	AGR/11, AGR/05		
<b>HEAD PROFESSOR(S)</b>	LA MANTIA TOMMASO	Professore Ordinario	Univ. di PALERMO
<b>OTHER PROFESSOR(S)</b>	LO VERDE GABRIELLA	Professore Associato	Univ. di PALERMO
	LA MANTIA TOMMASO	Professore Ordinario	Univ. di PALERMO
<b>CREDITS</b>	9		
<b>PROPAEDEUTICAL SUBJECTS</b>			
<b>MUTUALIZATION</b>			
<b>YEAR</b>	2		
<b>TERM (SEMESTER)</b>	1° semester		
<b>ATTENDANCE</b>	Not mandatory		
<b>EVALUATION</b>	Out of 30		
<b>TEACHER OFFICE HOURS</b>	<p><b>LA MANTIA TOMMASO</b></p> <p>Monday 09:00 13:00 Studio Prof. La Mantia, Dip. SAAF, Viale delle Scienze Ed. 4 , Stanza 0037</p> <p>Tuesday 09:00 13:00 Studio Prof. La Mantia, Dip. SAAF, Viale delle Scienze Ed. 4 , Stanza 0037</p> <p><b>LO VERDE GABRIELLA</b></p> <p>Monday 09:30 13:00 Studio del docente (n. 105), viale delle Scienze, Ed. 5, ingresso B (ex Entomologia agraria), primo piano.</p>		

**DOCENTE:** Prof. TOMMASO LA MANTIA

<b>PREREQUISITES</b>	Ability to interpret the ecological characteristics of a territory even strongly modified compared to the natural ones as in the case of an urban environment and therefore the ability to choose plant species and design green spaces. Ability to evaluate the characteristics of the arthropod fauna and relations with the environment. Ability to read a place and to return its characters through appropriate drawings from the point of view of information and scale of representation. Knowledge of the history of modern and contemporary architecture.
<b>LEARNING OUTCOMES</b>	Knowledge and understanding of the themes and issues related to the notions of ecology, forestry, ecosystem relations and landscape. Ability to apply knowledge and understanding to the architectural and urban project that involves the use of vegetation. Autonomy of judgment in evaluating the complexity of the architectural and urban project also from the point of view of its landscape and ecological values. Communication skills in transmitting one's point of view, in a clear and concise form, both written and oral, on the notion of landscape, on the functions of vegetation, on the ecosystemic relationships between the different components including fauna. Learning skills in developing and deepening the methodologies learned and independently developing the ability to integrate in their projects, also written in other courses, the value deriving from the landscape, from the use / choice of flora and from the ecological relationships between the different components.
<b>ASSESSMENT METHODS</b>	The final exam will consist of an oral test and the presentation of a project that may also include the design elements provided in the three course modules at the same time. The ability to summarize the information received, the ability to organize one's work and share the result of the processing, to ask the teachers for any additions or further insights on the issues addressed, or even the need to address specific topics, will be evaluated also during the course of the process based on current emergencies.
<b>TEACHING METHODS</b>	Lectures, classroom exercises, field visits, design workshops

**MODULE**  
**URBAN FOREST AND GREEN INFRASTRUCTURES**

*Prof. TOMMASO LA MANTIA*

**SUGGESTED BIBLIOGRAPHY**

I testi sono testi generali verranno forniti numerosi articoli per aspetti specifici  
 Paci M., 2011 - Ecologia Forestale. Elementi di conoscenza dei sistemi forestali. Edagricole ISBN: 8850653239  
 Piusi P., 1994 - Selvicoltura Generale. UTET, Capp. XII-XIII ISBN-10: 880204869X  
 Menno Schilthuizen, Darwin Comes To Town: How The Urban Jungle Drives Evolution, 2018, Picador/New York ISBN-10 : 1250127823; ISBN-13 : 978-1250127822

<b>AMBIT</b>	50366-Ecologia del Paesaggio e Ingegneria Naturalistica
<b>INDIVIDUAL STUDY (Hrs)</b>	102
<b>COURSE ACTIVITY (Hrs)</b>	48

**EDUCATIONAL OBJECTIVES OF THE MODULE**

The course aims to give students the basic knowledge of forest ecology and forestry. The aim of the course is to make the student aware of the choices to be made in the creation of new tree formations, whether urban or linear such as riparian vegetation. The choice of the species of plants to be used is a fundamental moment with reference both to environmental compatibility but also to the functions that plants must perform. The functions refer to the autoecology of the species but also to the ecological relationships that will be established in the tree formations (small woods, hedgerows, windbreak, etc. In this sense, an exact knowledge of the dynamic and ecological relationships that link forest formations to open formations is fundamental. Therefore, the actions implemented in the area such as green "infrastructures" must be carefully evaluated to give ecological concreteness to actions that generally fall within the theme of ecological networks. The purpose of the exercises is to address specific cases chosen on the territory and in the cities where multifunctional tree system will be designed. These will be addressed in a multidisciplinary way and taking into account the real constraints existing in the area such as fires and grazing for suburban areas.

**SYLLABUS**

<b>Hrs</b>	<b>Frontal teaching</b>
2	Notions of forest ecology, forestry, wood arboriculture
2	Concepts of autochthonous, allochthonous, alien, invasive species
6	Urban forest: an oxymoron
6	Green infrastructure
2	The choice of species and planting techniques
2	Le reti ecologiche: una valutazione ecologica
2	The planning from "farm" to territorial
2	The management of natural and semi-natural environments
<b>Hrs</b>	<b>Practice</b>
5	Exercise: designing a green infrastructure
5	Exercise: designing an urban forest
5	Tutorial: designing in a protected area
<b>Hrs</b>	<b>Others</b>
4	Field trip
5	Field trip

**MODULE**  
**ECOLOGICAL INFRASTRUCTURES AND ATRHROPOD DIVERSITY**

*Prof.ssa GABRIELLA LO VERDE*

**SUGGESTED BIBLIOGRAPHY**

Battisti, A., De Battisti, R., Faccoli, M., Masutti, L., Paolucci, P., & Stergulc, F. (2013). Insetti e foreste. Lineamenti di zoologia forestale. Padova University Press  
Appunti dalle lezioni e articoli forniti dal docente su argomenti specifici.

<b>AMBIT</b>	20873-Attivit Formative Affini o Integrative
<b>INDIVIDUAL STUDY (Hrs)</b>	51
<b>COURSE ACTIVITY (Hrs)</b>	24

**EDUCATIONAL OBJECTIVES OF THE MODULE**

The course aims to provide students with basic knowledge about arthropods (main characteristics, identification of the main taxonomic groups, ecology), which are useful to implement sampling and monitoring protocols and to design green infrastructures in order to increase their abundance and diversity.

**SYLLABUS**

<b>Hrs</b>	<b>Frontal teaching</b>
4	Arthropods and their identification.
2	Ecological role of arthropods and their use as ecological indicators.
4	Arthropods and the environment: diversity, habitat fragmentation and ecosystem services.
4	Sampling methods and populations monitoring.
2	Diversity and arthropods.
<b>Hrs</b>	<b>Practice</b>
3	Field and laboratory exercise: sampling and monitoring.
4	Arthropods and environment, from a preliminary study to management and infrastructure planning
<b>Hrs</b>	<b>Others</b>
1	The Entomological Collection of the Department SAAF