



UNIVERSITÀ
DEGLI STUDI DI BARI
ALDO MORO

DIPARTIMENTO DI
SCIENZE DEL SUOLO, DELLA
PIANTA E DEGLI ALIMENTI

LAUREA MAGISTRALE IN
MEDICINA DELLE PIANTE
INTERNATIONAL JOINT MASTER DEGREE IN
PLANT MEDICINE



General information	
Academic subject	Urban Entomology (Module of I.C. Applied Entomology for Mediterranean crops)
Degree course	Master Course in Plant Medicine (LM69)
Academic Year	2021-2022 (First year - second semester)
European Credit Transfer and Accumulation System (ECTS)	3
Language	Italian
Academic calendar (starting and ending date)	March 1 st - June 17 th 2022 (Pause 2022 April 20 th – May 6 th , for midterm exam)
Attendance	No

Professor/ Lecturer	
Name and Surname	Francesca Garganese
E-mail	francesca.garganese@uniba.it
Telephone	+390805442880
Department and address	Ex Faculty of Agriculture, building of the central library, fifth floor, room n. 16/V
Virtual headquarters	Teams Code: udh2xxd
Tutoring (time and day)	From Monday to Friday by appointment via e-mail or telephone.

Syllabus	
Learning Objectives	Recognize orders, families and the main species of harmful insects in the urban environment, their niches, their biology and their damage
Course prerequisites	General knowledge on Arthropods
Contents	<p>The course is tailored and focused on the diverse urban ecosystem management options. Recognition, management and control of urban green pest and contaminants arthropods plus “ex-post” control action effect estimation are the main topics of teaching. The course target to qualify the student as a technical consultant and expert witness mastering the topic by discussing several effective pest population management strategies and control means.</p> <p>Urban ecology and arthropods population dynamic in urban areas and parks. General entomology topics are discussed as needed for pest and damage control. Main features of urban and artificial environments, damage concept and nature. Control VS management, sampling procedures and damage estimation, IPM (Integrated Pest Management), ruling, hygiene (sanitization). Physical, biological, chemical and natural control. Pest bionomics and consequents control strategies for: Dermaptera, Blattodea, Isoptera, Hemiptera, Thysanoptera, Coleoptera, Diptera, Lepidoptera, Hymenoptera and lesser Taxa.</p>
Books and bibliography	<ul style="list-style-type: none"> • Parris K.M. 2016 - Ecology of Urban Environments. Wiley Blackwell, ISBN: 9781444332643 (Hardback) ISBN: 9781444332650 (Paperback), 224 pp. • Partho Dhang (Ed.) 2014 - Urban Insect Pests Sustainable Management Strategies. C.A.B. International, ISBN-13: 978 1 78064 275 8, 249 pp. • Roques A, Kenis M., Lees D., Lopez-Vaamonde C., Rabitsch W., Rasplus J.-Y., Roy D.B. (Ed.s) 2010 - Alien terrestrial arthropods of Europe. Special Issue, BioRisk, 4: 1021 pp. http://pensoftonline.net/biorisk
Additional materials	

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			



75	16	14	45
ECTS			
3	2	1	
Teaching strategy	Handouts in English are given at course kick-off, with ppt and pdf presentations.		
	Teaching is delivered in technology-enhanced mode (distance teaching integrating frontal teaching) or blended learning (mixed, frontal and distance teaching).		
Expected learning outcomes			
Knowledge and understanding on:	<ul style="list-style-type: none"> ○ Taxonomy, epidemiology, bionomics of urban pests ○ Urban pest identification 		
Applying knowledge and understanding on:	<ul style="list-style-type: none"> ○ Ability to manage urban ecosystem pests. ○ Ability to use proper control means and formulates to urban IPM. 		
Soft skills	<ul style="list-style-type: none"> • <i>Making informed judgments and choices</i> <ul style="list-style-type: none"> ○ Skill in urban environment analysis and in sustainable and eco-compatible pest control actions timing and placement • <i>Communicating knowledge and understanding</i> <ul style="list-style-type: none"> ○ Communication skill by one more than Italian European written and spoken language, at least. • <i>Capacities to continue learning</i> <ul style="list-style-type: none"> ○ Continuous learning in career. 		

Assessment and feedback	
Methods of assessment	The exam consists of an oral exam on topics developed during class and theoretical-practical hours in the classroom and in the laboratory as reported in the Didactic Regulations of the Master's Degree Course in Plant Medicine (art.9) and in the study plan (annex A).
Evaluation criteria	<ul style="list-style-type: none"> • <i>Knowledge and understanding</i> <ul style="list-style-type: none"> ○ Order, Family and main urban pest identification. Pest niche, bionomics and damages assessment. • <i>Applying knowledge and understanding</i> <ul style="list-style-type: none"> ○ Ability to target the proper control actions components for built an effective IPM strategy versus urban pests. • <i>Autonomy of judgment</i> <ul style="list-style-type: none"> ○ Skill to adapt control means and strategies to actual urban pest control situation. • <i>Communicating knowledge and understanding</i> <ul style="list-style-type: none"> ○ Ability to share the ratio and expected results of urban pest control chooses and opportunities with social and private environments. • <i>Communication skills</i> <ul style="list-style-type: none"> ○ Ability to organize the acquired knowledge in form of didactic presentation and to articulate it for didactic purposes. • <i>Capacities to continue learning</i> <ul style="list-style-type: none"> ○ Skill to evolve knowledge and pest management background to follow changes in commitment requests.
Criteria for assessment and attribution of the final mark	Exam oral: will be given in the form of topic discussion on the same arguments proposed. Candidate will discuss three topics picked from about the thirty highlighted in handouts and textbook. The Exam evaluation will concur to the vote of the Integrated Course. The student will sustain the Exam as detailed in the proper calendar. The evaluation of candidate Partial and Exam are in Annex "A" of the Master Course didactic rules that follow the common European reference framework.



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	Being the handouts and the textbook in English, international students will follow the lessons in Italian and prepare the Partial and the Exam, as Italians will do.
Additional information	