

<b>Study Programme:</b> Phytomedicine
<b>Course Unit Title: Control of synanthropic insects</b>
<b>Course Unit Code:</b> 19.FT1023
<b>Name of Lecturer(s):</b> Aleksandra Ignjatović Čupina, full professor; Mihaela Kavran, Assistant Professor
<b>Type and Level of Studies:</b> Undergraduate academic studies, first level
<b>Course Status (compulsory/elective):</b> Elective
<b>Semester (winter/summer):</b> Winter
<b>Language of instruction:</b> Serbian, optionally English
<b>Mode of course unit delivery (face-to-face/distance learning):</b> Face-to-face
<b>Number of ECTS Allocated:</b> 6
<b>Prerequisites:</b> Insect Systematics and Medical Entomology, Basics of Phytopharmacy
<b>Course Aims:</b> Acquaintance with insect species associated with men, their biology, ecology, behavior, impact on quality of human life and health, role in transmission of pathogenic agents, prevention of appearance and spreading, integral approach to surveillance of populations of insect pests, molestants, vectors and reservoirs of transmissible pathogenic agents, strategies of control of synanthropic insects.
<b>Learning Outcomes:</b> Acquiring knowledge and skills in identification of synanthropic insect species, recognition of their bioecology and behavior, knowledge and skills in selection and application of appropriate monitoring and control methods, with respect of integrated approach to control of harmful synanthropic insect species by selection of efficient, environmental friendly and health safe methods, monitoring and control of vector and invasive species of synanthropic insects, early detection, prevention of spreading and outbreaks.
<b>Syllabus:</b> <i>Theory</i> Synanthropic insect species (cockroaches, ants, wasps, flies, fleas, bugs, mosquitoes and other bloodsucking flies), associations of insects and men, economic, medical and veterinary importance (pests, molestants, allergenic and venomous species, vectors and reservoirs of pathogenic agents). Characteristics of breeding sites, biology and ecology (life cycle, seasonal dynamics, reproductive capacity), behavior of most important synanthropic insect species. Specific methods of monitoring, selection of sites, sampling frequency and techniques of monitoring populations of synanthropic insect species, prevention and control. Early detection and multidisciplinary approach to surveillance of invasive vector species and pathogens they transmit. Examples of good practice. <i>Practice</i> Morphological identification of most important synanthropic insect species. Practical exercises on application of monitoring and control methods. Case studies.
<b>Required Reading:</b> <ul style="list-style-type: none"> <li>• Robinson W.H. (2005): Handbook of Urban Insects and Arachnids. Cambridge University Press, UK. 472 pp.</li> <li>• Lane R.P., Crosskey R.W.(1993): Medical Insects and Arachnids. Springer Science+Business Media Dordrecht. 723 pp.</li> <li>• Takken W., Knols B.G.J. (2010): Emerging pests and vector-borne diseases in Europe. Ecology and control of vector-borne diseases Volume 1. Wageningen Academic Publishers, Netherlands. 499 pp.</li> <li>• Matthews G. (2011): Integrated Vector Management Controlling Vectors of Malaria and Other Insect Vector Borne Diseases. Wiley-Blackwell, UK. 234 pp.</li> <li>• Schaffner F., Bellini R., Petrić D., &amp; Scholte E.-J. (2012): <i>Guidelines for the surveillance of invasive mosquitoes</i>, Technical report, Avia-GIS, Zoersel, Belgium. European Centre for Disease Prevention and Control, Stockholm, Sweden 44 pp. + Annexes 72 pp.</li> <li>• Goddard J. (2007): Physician's Guide to Arthropods of Medical Importance. CRC Press Taylor &amp; Francis Group, USA.</li> <li>• Harwood &amp; James (1979): Entomology in Human and Animal Health, Macmillan Publishing Co., New York</li> <li>• Petrić, D., Zgomba, M., Bellini, R. and Becker N. (2012): Surveillance of Mosquito Populations: A Key Element to Understanding the Spread of Invasive Vector Species and Vector-Borne Diseases in Europe. Nova Science Publishers</li> <li>• Becker N., Petrić D., Zgomba M., Boase C., Madon M., Dahl C. and Kaiser A (2010): Mosquitoes and their control. Second Edition, Springer Verlag</li> </ul>

<b>Weekly Contact Hours:3</b>	<b>Lectures:1</b>	<b>Practical work:2</b>	
<b>Teaching Methods:</b> Lessons are given in form of oral presentations by computer, video beamer and other modern didactic tools. Practical classes involve individual work of students in identification of synanthropic insect species (by use of the binocular/microscope and identification keys), visual demonstrations and laboratory experiments..			
<b>Knowledge Assessment (maximum of 100 points):</b>			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation	5	written exam	10
Practical work	5	oral exam	50
Preliminary exam(s)	10	insect collection	
Seminar(s)	20		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			