Course code	Course title : **URBAN ZOOLOGY**			
	Subject Status	Semester	ECTS credits	Number of hours
	Obligatory	I	4	2P + 1V + 1L

Study program is organized: at Master studies, Study program Plant Production, field of study Plant Protection (duration 4 semesters, 120 ECTS credits, after completing undergraduate studies during 3 years and 180 ECTS credits)		
Prerequisites other subjects (recommendation): There are no requirements for reporting and lecture of this course		
Course aims: Introducing students to the basics of zoology in urban areas. Enabling students to assess the state of diversity of animal species in urban areas, their impact on humans and domestic animals. Considering the anthropogenic impact on urban populations of different animal species in order to enable students to make a decision on the manner and time of their control using pesticidal and non-pesticidal pest control measures.		
The name of teacher and assistant: assis.prof Igor Pajović		
Method of Teaching: Lectures, seminars, consultations, colloquiums and final exam.		
WORK PLAN**:**		
Week and date		
Preliminary weeks		Preparation and semester enrollment
I Week	Lecture	Introduction to Urban zoology
	Exercises	Introduction to laboratory work, use of keys for determination
II Week	Lecture	The concept and characteristics of urban habitats
	Exercises	Field work techniques, sampling
III Week	Lecture	Characteristics of animal populations in urban habitats
	Exercises	Animal groups of importance for urban habitats: Protozoa, Plathelminthes, Nematodes
IV Week	Lecture	Causes and consequences of urban habitats by various animal species important in communal, medical and veterinary hygiene
	Exercises	Animal groups of importance for urban habitats: Annelida
V Week	Lecture	Vector species and their relationship to humans and other organisms in urban areas
	Exercises	Animal groups of importance for urban habitats: Arthropoda
VI Week	Lecture	Animals of importance in urban habitats from the Protozoa, Plathelminthes, Nematode and Annelida groups. Colloquium I
	Exercises	Animal groups of importance for urban habitats: Insecta
VII Week	Lecture	Animals of importance in urban habitats from the group Arthropoda I part
	Exercises	Animal groups of importance for urban habitats: Mollusca
VIII Week	Lecture	Animals of importance in urban habitats from the groups Arthropoda II part and Mollusca
	Exercises	Animal groups of importance for urban habitats: Pisces
IX Week	Lecture**.**	Animals of importance in urban habitats from the Pisces, Amphibia and Reptilia groups.
	Exercises	Animal groups of importance for urban habitats: Amphibia
X Week	Lecture	Animals of importance in urban habitats from the Aves group.
	Exercises	Animal groups of importance for urban habitats: Reptilia
XI Week	Lecture	Animals of importance in urban habitats from the group Mammalia II colloquium
	Exercises	Animal groups of importance for urban habitats: Aves
XII Week	Lecture	Monitoring of potential pests and vectors
	Exercises	Animal groups of importance for urban habitats: Mammalia
XIII Week	Lecture	Possibilities of non - pesticidal control of potential pests and vectors
	Exercises	Methods of application of non-pesticide protection measures
XIV Week	Lecture	Use of biocides and pesticides in communal, medical and veterinary hygiene
	Exercises	Methods of application of biocides and pesticides
XV	Lecture	Monitoring of protected species and maintenance of populations in urban areas
	Exercises	Planning and monitoring of pests, vectors and protected species
XVI		
XVII-		
XVIII-XXI-		

Consultations: 2 hours during the week

Load students in hours:

A week	***During the semester***:
5 x 40/30 = 6 hours 40 min. **Structure:** 2 hours lectures 2 hours exercises and laboratory 2 hours and 40 minutes individual work of student (preparation for exercises, seminar work) including consultation	Teaching and the final exam**:** 6 h 40 min x 16 = 106 h 40 min. Necessary preparation (before semester administration, enrollment and verification)**:** 2 x 6 h 40 min = 13 h 20 min Total hours for the course: 5 x 30 = 150 hours Additional work to prepare the corrective final exam, including the exam taking 0 – 30 hours Structure: 106 h 40 min (teaching) + 13 h 20 min (preparation) + 30 h (additional work)

State of student during course: Students are required to attend lectures and exercises, seminar work, both tests and final exam.

Recommended literature:

1. Robinson W.H. (2005): Urban Insects and Arachnids: A Handbook of Urban Entomology. Cambridge University Press.
2. Bonnefoy X., Kampen H., Sweeney K. (2008): Public Health Significance of Urban Pests. World Health Organization.

***Additional literature*:**

3. Hickman, Jr. C.P., Roberts, L.S., Keen, S.L., Larson, A., I'Anson, H., Eisenhour, D.J. (2008): Integrated Principles Of Zoology, 14th Ed. McGraw-Hill, New York, USA.
4. Rajković D. i Kostić D. (1995): Praktikum iz poljoprivredne zoologije. Univerzitet u Novom Sadu, Prirodno-matematički fakultet, Institut za biologiju, Novi Sad.

Forms of assessment and evaluation:

seminar_____ 10 points
two colloquiums _____ 20 points each (in total 40 points)
final exam_____ 50 points
Passing grade is obtained if the cumulative accumulates at least 51 points.

Learning outcomes:

After completing lectures, exercises and the exam student will be able to:
1. Uses theoretical and practical knowledge of zoology in urban areas
2. Evaluates the interactive impact of anthropogenic factors on populations of different animal species
3. Considers the risk to human and domestic animal health from vector animal species
4. Uses biocides and pesticides against vector species in communal, medical and veterinary hygiene
5. Uses the acquired knowledge in order to protect the environment from the communal-medical and veterinary aspect

Teacher who provided the information*:* assistant professor Igor Pajović
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