Study Programme : PhD in Biology

Degree level: Doctoral degree

Course Title: HELMINTHOFAUNA OF TETRAPOD VERTEBRATES

Professor: Ester Popović, PhD; Desanka Kostić, PhD

Required/Elective Course: Elective Course

Number of ECTS: 15

Prerequisites: /

Course Objective:
Student will get acquainted with the basics of helminthological technique, helminthofauna of tetrapod vertebrates from various ecosystems, their diversity, life cycles, economic and sanitary significance of various groups (trematodes, nematodes), and ecological aspects of infestation.

Course Outcome:
Students will be able to work in parasitological laboratories.

Course Content:
Theoretical part
a) FLUKES - Structure, biology and physiology of flukes (eggs and miracidiums, parthenogenetic generations, cercariae, metacercariae). The influence of ecological factors on contamination of the first transitional host. The influence of biotic factors on contamination of mollusks with fluke's larvae. Seasonal and local variation of mollusks contamination. The influence of ecological factors on the contamination of the second transitional and final host. Hostal specificity and specificity in relation to localization of invasion. Mutual relationships among various fluke species. The basic directions of evolutionary processes of flukes. Classification of trematodes, parasites of tetrapod vertebrates.
б) NEMATODES - Structure, and biology of nematodes. Ways of contaminations and localization. Hostal specificity. The influence of abiotic and biotic factors on the contamination of the host. Mutual relationships among various groups of helminthes. Classification of nematodes, parasites of tetrapod vertebrates.

Practical part
During the practicals, helminthological research of different members of the tetrapod vertebrate species will be done. Making of permanent preparations of flukes. Bleaching of nematodes in lactic acid. Determination of helminthes. Morphometrics.

Reading List:

1. GINECINSKAJA, T. A. (1968): Trematodi, ih žizneni cikl, biologia i evolucia, L., "Nauka", 411.
2. SKRJABIN, K. I. (1960): Trematodi životnih i čeloveka, Akad. nauk SSSR, Tom XVII, Moskva.
3. SKRJABIN, K. I. (1962): Trematodi životnih i čeloveka, Akad. nauk SSSR, Tom XX, Moskva.
4. SKRJABIN, K. I. (1970): Trematodi životnih i čeloveka, Akad. nauk SSSR, Tom XXIII, Moskva.
5. SKRJABIN, K. I. (1971): Trematodi životnih i čeloveka, Akad. nauk SSSR, Tom XXIV, Moskva.
6. SKRJABIN, K. I., ŠIHOBALOV, N. P. ŠULC, R. S. (1954): Osnovy nematologii. Trichostrongilidy životnych i čeloveka. Tom III. Akad. nauk, SSSR. Moskva.
7. SKRJABIN, K. I., ŠIHOBALOV, N. P., LAGADOVSKAJA, E. A. (1961): Osnovy nematologii. Oksiuraty životnych i čeloveka. Tom X. Akad. nauk, SSSR. Moskva.
8. SKRJABIN, K. I., ŠIHOBALOV, N. P., LAGADOVSKAJA, E. A. (1964): Osnovy nematologii. Oksiuraty životnych i čeloveka. Tom XIII. Akad. nauk, SSSR. Moskva.
9. VOJTKOVA, L. (1974): Motolice obojžyvelnik ČSSR, I- Dosp. motolice, Universita J.E. Purkyne, Brne.

And all other scientific works from the given area that would be of interest for stidents.

Total hours:				
Lectures: 5	Practicals:	Other:	Student research work: 5	

Methods of instruction:
Theoretical classes, practicals and work in laboratory.
*Writing seminar papers on given and/or selected topics.

Assessment (maximum number of points 100)

Requirements
Test(s): 20 Oral exam: 50 Seminar paper: 30

Remark: