

Course title: GENERAL AND VETERINARY GENETICS

ECTS credit allocation (and other scores):5

Semester: spring

Level of study: ISCED-7- long-cycle programmes (EQF-7)

Branch of science: Agricultural sciences

Language: English

Number of hours per semester: 60

Course coordinator/ Department and e-mail: prof. dr hab. Krzysztof Wasowicz, Department of Pathophysiology, Forensic Veterinary Medicine and Administration, wasowicz@uwm.edu.pl

Type of classes: classes and lectures

Substantive content

CLASSES: The course is divided into 2 parts. The first one is devoted to the classical mendelian genetics principles, as inheritance of one pair of alleles, independent inheritance of traits, multiple alleles, sex-linked genes. The second part is devoted to the problems of linked genes and their importance for creating genetic maps and identification of lethal genes, genetic interpretation of relativity and inbred, as well as to the selected inheritable diseases of large domestic animals.

LECTURES: Lectures are devoted to the topics of the classical and molecular general genetics, as well as to the topics of the veterinary genetics with the stress put on the general and specific pathogenetics. The topics include the mendelian and non-mendelian genetics, as well as epigenetics, the formation and functioning of lethal genes and the common inheritable diseases and developmental malformations. Additionally, the lectures deal with the selected problems of immunogenetics (blood groups, MHC molecules) and ecogenetics (genetically determined susceptibility to drugs and toxins). The problems of genetical aspects of oncogenesis and control of development are also included.

On completion of the study programme the graduate will gain:

Knowledge: Mechanisms of inheritance, influence of genes on functions of the organism, knowledge on the mutation mechanism and repair, inherited diseases.

Skills: Analysis of mechanisms of inheritance

Social Competencies: none

Basic literature: B. Kosowska, B. Nowicki, Genetyka weterynaryjna, wyd. PZWL, 1999 ; 2) K. Charon, M. Świtoński, Genetyka zwierząt, wyd. PWN, 2004

Supplementary literature:

The allocated number of ECTS points consists of:

Contact hours with an academic teacher:60

Student's independent work:65