SYLLABUS

1. Course title:

Behavioral genetics

2. Code:

3. Cycle of study:

1

4. ECTS credits:

2

5. Type of course:

○ Mandatory   ◉ Elective

6. Prerequisites:

7. Class restrictions:

8. Duration / semester:

1   3

9. Weekly contact hours:

9.1. Lectures:	2
9.2. Seminars:	0
9.3. Laboratory/Practice classes:	0

10. Faculty:

Humanities and Social Sciences

11. Department/study program:

Psychology

12. Lecturer:

13. Lecturer's e-mail:

14. Web site:

www.ff.unitz.ba

15. Course aims:

The aim of this course is to acquire theoretical knowledge in the field of behavioral genetics, professional training for work in scientific institutions based on the basic postulates of molecular genetics.

16. Learning outcomes:

After passing the course, students will be able to:define the subject, tasks and goals in this field of behavioral genetics; to get involved in genetic counseling teams;classifies diseases that are genetically determined.

17. Course content:

Course content: Fundamentals of molecular biology. Cell molecular structure. Genes. Transmission of genetic information. Chromosome molecular structure. DNA genome recombination. Mendelian genetics. Inheritance of dominant and recessive traits. Polygenic inheritance. Mendelian and biochemical-quantitative approach to behavioral genetics. The share of the genome in the etiology of variation in human behavior. Chromosome aberrations. Syndromes and disease states as a consequence of structural aberrations. Syndromes and disease states as a consequence of numerical aberrations. Chromosomal instability syndromes. Genetic changes that lead to behavioral abnormalities in humans. Modern cytogenetic methods and molecular genetic methods in the detection of genetic behavioral disorders. Candidate gene detection tests, detection of increased number of CAG sequence repeats. Genetic basis of mental disorders (studies on the influence of genes on depression and schizophrenia. Genetic causes of autism. Psychiatric disorders (Alzheimer's disease). Gene therapy. Gene therapy of somatic and sex cells. Target cells for gene therapy. Genetic counseling. Access to DNA testing. Genetic maps, Morphological markers, Molecular markers, Mapping strategies.

18. Learning methods:

The following are preferred learning styles: visual, auditory, verbal, kinesthetic, logical-mathematical, social and independent. The most important methods of learning the subject are:- lectures with the use of multimedia tools, active learning techniques and discussion;-preparation and presentation of group and individual seminar papers.

19. Assessment methods:

Knowledge testing will be done through tests (test I, test II), final exam and teaching activities.After five weeks of completing the course, students take a written test I, which includes previously processed material from the lecture. The test consists of multiple choice questions, simple recollections or essay questions. A student on test I can achieve a maximum of 20 points. After ten weeks of completing the course, students take written test II, which includes the teaching material after test I. The test consists of multiple choice questions, simple memorization or essay questions. A student on the second test can achieve a maximum of 20 points. Both tests are taken by all students in the course at the same time, thus achieving uniformity of the level of knowledge being tested, as well as the conditions under which the student takes the exam. As part of the pre-examination obligations, students are given the opportunity to write an individual or group seminar paper that will cover a specific topic from the course content. The seminar paper is submitted in writing to the subject teacher for review and assessment, and then presented orally. All students of the group participate in the preparation and presentation of the group seminar paper, whose participation is valorized individually. For the done and presented seminar paper, the student can achieve from 0 to 5 points. A student for continuous activity in lectures throughout the semester, a student can earn from 0 to 5 points.The final exam is of the written type, which includes the complete material. All students have the right to take the final exam, regardless of the number of pre-exam points won. In order for a student to pass the course, he must achieve a minimum of 54 cumulative points. If the student with the final exam does not achieve the appropriate number of points that are added to the points of pre-exam activities and allows a passing grade, the student attends a remedial or additional remedial exam.At the beginning of the winter semester, the student must state in writing whether he wants to contain the number of pre-examination points or not. If you do not declare all points of pre-examination activities (except attendance) are canceled.

20. Assessment components:

The grade on the exam is based on the total number of points earned by the student by fulfilling pre-exam obligations and passing the final exam, and according to the quality of acquired knowledge and skills, and contains a maximum of 100 points and is determined according to the following scale:

Student Obligations	Points
Attendance at lectures	5
Tests I and II	40
Seminar paper	5
Total pre - examination obligations	50
Final exam	50

21. Required reading list:

1. Ricki Lewis Human genetics-Concept i applications, Published by MCGrraw Hill, 2005
2. Zergollem Lj. i sur. Humana genetika. Zagreb: Medicinska naklada, 1994
2. Harper PS. Practical genetic counselling. Oxford: Butterworth-Heinemann, 5th ed. 2000.
3. Barišić I. Osnove humane genetike, skripta 2005.

22. Web sources:

-htpp:// www.ncbi.nlm.nih.gov

23. Applicable starting from the academic year:

2022/2023

24. Adopted in the Faculty/Academy session: