Univerza v Ljubljani
Medicinska fakulteta

COURSE DESCRIPTION AND STUDY REGULATIONS

Course: Epigenetics in oncology

Course type: ELECTIVE

ECTS credits: 3

Nominated teacher(s): Petra Hudler, Nataša Debeljak

Valid for academic year: 2017/18

Associated/participating departments or institutes involved in the course: UL MF Institute of Biochemistry

Date of issue: 15. 9. 2017

1. Course objectives

The course aims to provide an advanced understanding of the core principles of epigenetic research in molecular biology of complex diseases and epigenetic processes in cells. The attendees will gain hands-on experience in bioinformatic tools available in the field of epigenetics and learn how to use them. Students will develop presentational skills and integrate the knowledge from lectures with oral presentations of pre-selected seminars. Selected aspects will be discussed in guided discussions enabling the students to adopt abstract thinking, integrating knowledge and skills from different areas of molecular genetics, and developing the skills to communicate and discuss the mechanisms of epigenetic changes in diseases.

2. Course description (in accordance with rules of assessment and examination*)

1. Lectures (10 hours):
Lectures will be held in the summer semester (April, May, 15:00-18:00) in sets of three or two school hours. Students are expected to attend all classes (lectures and seminars). The absence in case of illness, judicial recall, etc. can be excused once. The students are obliged to obtain official excuse in the written form.

All lectures are held at the UL MF Institute of Biochemistry, Vrazov trg 2, 1000 Ljubljana. The information about the time and place of lectures will also be published in the section Institute

of Biochemistry/Elective subjects/Epigenetics in Oncology of UL MF Online classroom service.

2. Seminar (35 hours):
Seminars are held in sets of three or two hours in the summer semester (April, May, 15:00-18:00).

Seminar themes will be presented at the lecture. The student(s) will select a theme and prepare seminar. Before preparing a seminar, students must consult a mentor of the section in which they will conduct a seminar. The mentor explains the course of the seminars and how to prepare the seminar. Attendance at the consultations is compulsory and is carried out after the lectures.

Students prepare a seminar in the form of a PowerPoint presentation and a short written summary (700-1000 words) to be submitted to the teacher 7 days before the oral presentation of the seminar by e-mail (PDF or Word document). Each student must complete 1 seminar.

Presentations of seminars will be held in the above-specified terms at the UL MF Institute of Biochemistry, Vrazov trg 2, 1000 Ljubljana. The information about the time and place of class will also be published in the section Institute of Biochemistry/Elective subjects/ Epigenetics in Oncology of UL MF Online classroom service. The presence is mandatory. The absence in case of illness, judicial recall, etc. can be excused once. The students are obliged to obtain official excuse in the written form.

3. Description of assessment of knowledge and skills during the course
There are no planned assessments of knowledge and skills during the course.

4. Eligibility requirements for the examination (course exam)
Attendance of lectures and seminars. Active participation of students in lecture- and seminar-discussions.

5. Final examination (Course exam): description of examination procedure
Seminar examination: The evaluation of oral presentation of the seminar work: 50% of the final grade. Evaluation of a written report/seminar: 50% of the grade.

6. Additional provisions related to student assessment
When presenting a seminar paper, it is permissible to use a personal or institute laptop with a web connection.

Students, who fail to meet all the required obligations in the course, must pass a written exam and an oral exam – discussion of the pre-selected topics. The written part of the exam comprises 10 essay questions, which will include topics from lectures and seminars. The use of computers or other devices with access to the Internet is permitted in the case of oral defence.

The Committee exam will be carried out according to Article 30 of the Regulations for assessment of knowledge and skills for the uniform master's study programmes of medicine and dental medicine. The committee exam will consist of written, oral assessment and practical work (working with online tools and freely accessible applications).

7. Other
References and study literature:
1. Handel, A.E., G.C. Ebers, and S.V. Ramagopalan. Epigenetics: molecular mechanisms and implications for disease. Trends Mol Med, 2010, 16(1), 7-16.

2. Chen, Z.Y., J.L. Zhang, H.X. Yao, P.Y. Wang, J. Zhu, W. Wang, X. Wang, Y.L. Wan, S.W. Chen, G.W. Chen, and Y.C. Liu. Aberrant methylation of the SPARC gene promoter and its clinical implication in gastric cancer. Sci Rep, 2014, 4, 7035.
3. Ito, S. and I. Kuraoka. Epigenetic modifications in DNA could mimic oxidative DNA damage: A double-edged sword. DNA Repair (Amst), 2015, 32, 52-7.
4. Drugi najnovejši pregledni članki s področja /The latest review articles from the field.

*Pravilnik o preverjanju in ocenjevanju znanja in veščin za enovita magistrska študijska programa Medicina in Dentalna medicina