

Name: Molecular Medicine/ Medycyna Molekularna

Lecture language: **English**

Semester: **summer 2022**

ECTS: 3 points

Responsible teachers: **Mateusz Bujko, PhD**
Paulina Kober, PhD
Michał Mikula, PhD

Module summary:

This module will provide the background information on molecular medicine. It will give the overview of currently used molecular techniques and cover the selected issues on their application in practice. The role of molecular biomarkers and targeted therapy in oncology will be emphasized.

The course will provide the basic knowledge on biomarkers development and routine testing. The role of various kinds of molecular biomarkers, including genetic, epigenetic, transcriptomic and metabolic markers in choosing and monitoring therapy will be discussed.

Module content Lectures (15h)

21.03.2022

10.00 am 1. Introduction - the role of molecular disorders in human diseases. (2h) – Mateusz Bujko, PhD

11.30 am 2. Tools of molecular medicine (2h) – Mateusz Bujko, PhD

04.04.2022

10.00 am 3. Targeted therapies - personalized medicine (2h) – Paulina Kober, PhD

11.30 am 4. Biomarkers and diagnostics (2h) – Mateusz Bujko, PhD

18.04.2022

10.00 am 5. Pharmacogenomics (2h) – Mateusz Bujko, PhD

11.30 am 6. Proteomics and metabolomics (2h) – Michał Mikula, PhD

25.04.2022

10.00 am 7. Epigenetics - introduction, mechanisms (2h) – Paulina Kober, PhD

11.30 am 8. Epigenetics – the role in human diseases (1h) – Paulina Kober, PhD

Teaching methods and techniques:

- Lectures: The topics presented in the lecture are shown in the form of a multimedia presentation in Teams application

The conditions obtaining the acknowledge for the classes, including the rules of exam retaking, as well as the conditions of admission to the exam:

In order to pass the subject a positive grade must be obtained from a test on the entirety of the theoretical material. **The exam is scheduled following the last lecture!**

Participation rules in classes:

- Attendance is mandatory: **Yes**

- Participation rules in classes: Students that take part in the classes will learn subsequent topics according to the syllabus of the class. Students should systematically ask questions. Recording of the lecture can only be done with the approval of the lecturer.

The method and mode of making up for the absences

If the requirements are met for obtaining a passing grade, the student is required to independently catch up with the material. If he/she fails to do so, he/she must obtain a positive grade on a test that pertains to the material discussed during his absence.

Prerequisites and additional requirements:

Without requirements