

COURSE DESCRIPTION

University: <i>University of Presov</i>	
Faculty/university workplace: <i>Faculty of Health Care</i>	
Code: <i>6/LVM/VMIMG-ER/25</i>	Course title: <i>Investigative methods in Immunology and Genetics</i>
Type, scope and method of educational activity: Type of educational activity: <i>Lecture</i> Scope of educational activity: <i>2 hour per week, 26 per semester</i> Method of educational activity: <i>Attendance</i>	
Number of credits: <i>2</i>	
Recommended semester:	
Study grade: <i>Bachelor</i>	
Prerequisites: <i>6/LVM/GENET/22 - Genetics, 6/LVM/MIKIM/22 - Microbiology and immunology</i>	
Conditions for passing the course: Form of assessment: Final evaluation: <i>Prerequisites and co-requisites: the course ends with an continuous assessment (PH)</i> <i>Full-time form of study: contact hours 26 hours / semester, 2 hours lecture / week, non-contact teaching 34 hours / semester, total student workload 60 hours, full-time teaching.</i> <i>Student load assessment rules are available at: https://www.unipo.sk/fakulta-zdravotnictva/pokyny/</i> <i>Active participation in lectures is mandatory for successful completion of the course. A student can have a maximum of 2 absences justified on the basis of a medical certificate. In the absence of the student will receive substitute tasks, respectively. undergoes consultations. In case of unjustified non-participation or a large number of absences, the student will not be granted credits.</i> <i>The assessed credit will be the average of successful continuous examinations during the semester.</i> Test classification criteria: <i>A: 100-90% points</i> <i>B: 89 - 80% points</i> <i>C: 79-70% points</i> <i>D: 69-60% points</i> <i>E: 59-50% points</i> <i>FX = 49.99 or less%.</i> Final rating: <i>The evaluation will be awarded on the basis of meeting all the above requirements according to the classification scale A, B, C, D, E, FX - Study Regulations PU in Prešov</i> https://www.unipo.sk/fakulta-zdravotnictva/vzdelavanie1/	
Learning outcomes: <i>After completing the course, students are able / are able to:</i> Knowledge <i>After getting acquainted with the basic information, the student has an adequate level of understanding and skills at a declarative level for:</i> <i>-definition of basic examination procedures and methods in immunology and genetics</i> <i>-characterization of the principles of laboratory tests used in immunology and genetics in the diagnosis of diseases and pathological conditions.</i> Skills <i>The student has the ability to apply knowledge especially in the field of cognitive and practical:</i> <i>-to apply basic laboratory activities in laboratories of immunology, genetics, as well as methods used in basic or applied research.</i> Competences <i>The student is able to use the knowledge for professional and personal development, especially in the form of:</i> <i>-demonstration of the ability to independently perform basic laboratory tests</i> <i>-application of acquired knowledge and skills when working in a sterile environment and with various biological material</i>	
Course content: Course contents:	

- Basic characteristics of examination methods, phases of laboratory examination.
- Basic principles of work in the laboratory - work safety, work in a sterile environment, work with biological material.
- Isolation methods.
- Electrophoretic methods.
- Hybridization methods.
- Amplification methods.
- PCR.
- PCR variants.
- Immunohistochemical methods.
- Flow cytometry.

Recommended literature :

Odporúčaná literatúra:

PROCHÁZKOVÁ, J. a kol.: Vybrané diagnostické metódy lekárskej imunológie, Avicenum, Praha 1986;

BUC, M.: Praktické cvičenia z imunológie, UK, Bratislava, 1993;

KOKINČÁKOVÁ, T. a kol.: Laboratórne metódy v genetike. Prešov: Ústav sociálnych vied a zdravotníctva P.P.Gojdiča, 2009. ISBN 978-80-89271-77-1.

PENKA, M. a kol.: Hematologie a transfúzní lékařství I. Praha: Grada, 2011. ISBN 978-80-247-3459-0

BARTUŇKOVÁ J. a kol.: Vyušetrovací metódy v imunológii; Grada, Praha 2004;

ŠMARDA a kol.: Metódy molekulárnej biológie. Brno: Masarykova univerzita, 2005. 194 s. 1. vyd. ISBN 80-210-3841-1.

SANGER SEQUENCING METHOD. 2014 [online]. In: Lifetechnologies [cit. 2014-03-04]. Dostupné na internete: http://www.lifetechnologies.com/sk/en/home/life-science/sequencing/sanger-sequencing/sanger_sequencing_method.html

BUC, M., BUCOVÁ, M.: Základná a klinická imunológia pre ošetrovateľstvo a iné nelekárske odbory. 1. vyd. Bratislava : Vydavateľstvo UK, 2006.

Language which is necessary to complete the course: Slovak

Notes:

An individualized approach is provided for students with special needs based on the recommendation of the faculty coordinator for students with special needs.

Course evaluation:

Total number of students evaluated: 176

A	B	C	D	E	FX
49%	18%	14%	10%	2%	7%

Lecturers:

prof. MUDr. Mgr. Milan Jirsa, CSc., guarantor RNDr. Soňa Kalafutová, PhD., lecturer, examiner, instructor, seminary supervisor
Mgr. Martina Kepeňová, PhD., lecturer, examiner, instructor, seminary supervisor RNDr. Ivana Večurková, PhD., lecturer, examiner, instructor, seminary supervisor

Date of last change: 01.09.2025

Approved by: prof. MUDr. Mgr. Milan Jirsa, CSc.