

Course description

Course abbreviation:	KAZ/IMU1N	Page:	1 / 2
Course name:	Immunology 1		
Academic Year:	2023/2024	Printed:	26.05.2024 06:35

Department/Unit /	KAZ / IMU1N			Academic Year	2023/2024
Title	Immunology 1			Type of completion	Pre-Exam Credit
Accredited/Credits	Yes, 4 Cred.			Type of completion	Combined
Number of hours	Lecture 3 [Hours/Week] Tutorial 2 [Hours/Week]			Course credit prior to	NO
Occ/max	Status A	Status B	Status C	Counted into average	NO
Summer semester	0 / -	0 / -	0 / -	Min. (B+C) students	10
Winter semester	25 / -	0 / -	0 / -	Repeated registration	NO
Timetable	Yes			Semester taught	Winter semester
Language of instruction	Czech			Internship duration	0
Optional course	Yes				
Evaluation scale	S\N				
No. of hours of on-premise					
Auto acc. of credit	Yes in the case of a previous evaluation 4 nebo nic.				
Periodicity	K				
Substituted course	None				
Preclusive courses	N/A				
Prerequisite courses	N/A				
Informally recommended courses	N/A				
Courses depending on this Course	N/A				

Course objectives:

The aim of the course is to provide the basics of the structure and function of the human immune system, specifics and importance in the defense against infectious diseases and cancer, the causes and mechanisms in the development of diseases of the immune system is essential for practical applications. The lectures are gradually being discussed mechanisms of nonspecific and specific immune defense mechanisms in infectious and non-infectious processes and the causes and mechanisms of immune pathological states with regulations and cooperation of the individual components of defense mechanisms under physiological conditions and pathological conditions.

Requirements on student

Credit test, satisfied the requirements of practical exercises.

Content

1. Immune system.
2. Nonspecific and specific immunity.
3. Cells of the immune system
4. Humoral immunity
5. Barrier functions of the body and mucosal immunity
6. Cytokines and inflammation
7. Complement, antigen presentation, HLA
8. Flow cytometry
9. T-lymphocyte reaction Th1 / Th2 / Tc
10. B-lymphocytes
- 11th Immunoglobulins. Immune response based on antibodies.
12. Regulation of the immune system
13. Revision WS Immunology

Fields of study

Guarantors and lecturers

- **Guarantors:** Ing. Bc. Tomáš Vlas (100%)
- **Lecturer:** Ing. Bc. Tomáš Vlas (100%)
- **Tutorial lecturer:** Ing. Bc. Tomáš Vlas (100%)

Literature

- **Basic:** Barůňková J., Paulík, M. a kol. *Vyšetřovací metody v imunologii*. Praha: Grada Publishing, 2005.
- **Basic:** Hořejší V., Bartůňková J. *Základy imunologie, 4. vydání*. Praha: Triton, 2009.
- **Recommended:** Špičák, V., Panzner, P. a kol. *Alergologie*. Praha: Galén, 2004.
- **Recommended:** Bartůňková, J. Šedivá A., Janda, A. *Imunodeficiency, 2. vydání*. Praha: Grada Publishing, 2007.
- **Recommended:** Krejsek, J. Kopecký O. *Klinická imunologie*. Hradec Králové: Nukleus HK, 2004.

Time requirements

All forms of study

Activities	Time requirements for activity [h]
Preparation for comprehensive test (10-40)	38
Contact hours	65
Total:	103

assessment methods

Knowledge - knowledge achieved by taking this course are verified by the following means:

Oral exam

Test

prerequisite

Knowledge - students are expected to possess the following knowledge before the course commences to finish it successfully:

No particular prerequisites specified.

teaching methods

Knowledge - the following training methods are used to achieve the required knowledge:

Lecture

Practicum

learning outcomes

Knowledge - knowledge resulting from the course:

Students will be able to investigate humoral and cellular components of the immune system.

Basic immune mechanisms, basics of clinical immunology, diagnostic methods.

Course is included in study programmes:

Study Programme	Type of	Form of	Branch	Stage	St. plan v.	Year	Block	Status	R.year	R.
Laboratory diagnostics in healthcare	Bachelor	Full-time	Medical laboratory technician	1	2019	2023	Povinné předměty	A	2	ZS