

Name of university, Name of faculty: Trnava University

Faculty of Health Care and Social Work

INFORMATION SHEET OF THE SUBJECT

Code: LMmEE18

Name: Clinical Microbiology II. (Parasitology, Mycology)

Cover: Department of Theoretical Disciplines and Laboratory Investigation Methods

Type of educational activity: Seminar, Practise

Scope of educational activity (in hours):

Weekly: -

For term of study: ZS 24,12/LS 24,12

Number of credits: 4

Recommended semester: WT, ST

Study grade:
Master

Method of educational activity:

Recommended semester

Study programme

1.year ST

Laboratory Medicine (E2-LVMvZ-23)

Underlie subjects:

Conditions for passing the course:

Method of evaluation: Completion by taking an examination

Continuous evaluation: none

Final evaluation: - Written test, which corresponds to the topics of individual exercises (max. 10% of the evaluation)

- After successfully passing the written test from practical exercises, the student is admitted to the final exam in the form of a written test (max. 80% of the evaluation). The final written exam contains the subject matter taught in the seminars.

Evaluation: A: 100 – 95%; B: 94 – 89%; C: 88 – 83%; D: 82 – 77%; E: 76 – 71%; FX: 70% and less

Finished: exam - written test

Learning outcomes:

VV1 The student will acquire a theoretical and practical knowledge in the field of Clinical parasitology and Clinical mycology

VV2 The student is able to use the acquired knowledge in clinical laboratory practice

VV3 The student is able to creatively solve problems in this field

VV4 The student is able to integrate knowledge, formulate their own decisions and communicate conclusions and justifications in the application of their knowledge

VV5 The student acquires skills for individual education, which allows them to continue in further self-education

Schedule of subject:

Seminars:

- 1) Introduction to clinical parasitology. Pathobiology and clinical manifestations of parasitic diseases.
- 2) Parasitic diseases of the digestive system caused by protozoa and laboratory diagnostics.
- 3) Parasitic diseases of the digestive system caused by helminths and laboratory diagnostics.
- 4) Parasitic diseases of the urogenital system, sexually transmitted diseases and laboratory diagnostics.
- 5) Tissue and blood parasitosis and laboratory diagnostics
- 6) Parasitic diseases caused by medically important arthropods
- 7) Introduction to clinical mycology. Superficial, mucosal and systemic mycoses – the most common agents of these diseases.
- 8) Basic microscopic and culture laboratory diagnostics of superficial, mucosal and systemic (organ, invasive) mycoses.
- 9) Diagnosis of fungal agents based on growth on special culture media, at different temperatures, or in the presence of different stimulants.
- 10) Laboratory diagnostics of fungal pathogens using basic and complementary biochemical reactions.
- 11) Monitoring the presence of candida antigen and antibodies using ELISA. Determination of the presence of Aspergillus antigen using ELISA and Aspergillus antibodies directly against Aspergillus fumigatus by indirect hemagglutination. Demonstration of cryptococcal antigen by agglutination method.
- 12) Molecular diagnostics of fungal pathogens based on the detection of protein structures using MALDI-TOF. Therapy of superficial, mucosal and systemic fungal diseases.

Practise:

- 1) Introduction to practical exercises in Clinical Microbiology II., general information, credit conditions, study materials.
- 2) Familiarization with safety principles in the biological laboratory. Principles of laboratory work organization.
- 3) Monitoring of permanent preparations of pathogens responsible for parasitic diseases of the digestive system.
- 4) Monitoring of permanent preparations of pathogens responsible for parasitic diseases of the urogenital system.
- 5) Monitoring of preparations of tissue parasitosis agents.
- 6) Monitoring of preparations of blood parasitosis agents.
- 7) Monitoring of preparations of medically important arthropods,
- 8) Basic methods and equipment used in the microscopic fibrous fungi and yeasts cultivation.
- 9) Soil preparation and inoculation for individual liquid and solid media, their cultivation and growth evaluation.
- 10) Microscopic analysis of fibrous fungi.
- 11) Microscopic analysis of yeast.
- 12) Determination of the presence of candida antigen and antibodies using ELISA.

Recommended reading:

1) BUJDÁKOVÁ, H.: Základné prístupy v identifikácii mikroskopických húb. Univerzita Komenského v Bratislave, Prírodovedecká fakulta. 2017. / online:

https://fns.uniba.sk/uploads/medi/Zakladne_pristupy_v_identifikacii_mikroskopickych_hub.pdf

2) KIBBLER, C. CH. et al.: Oxford textbook of Medical Mycology. Oxford. 2018.

- 3) ONDRISKA, F. a kol.: Atlas parazitov človeka. Veda SAV Bratislava, 2021.
4) ONDRISKA, F. a kol.: Klinická parazitológia. PRIF UK Bratislava, 2016, ISBN 978-80-223-4217-9.
5) ONDRISKA, F. a kol.: Vybrané kapitoly z klinickej parazitológie všeobecnej a špeciálnej a laboratórných vyšetrovacích metód. VEDA, Bratislava, 2019, ISBN 978-80-568-0377-6.

Language requirements: Slovak

Notes:

Full time combined method consists of: seminars / on-line, discussion groups in MS Teams/; practise /attend/
Self-study is supported by e-learning.
100% participation is required.

Course evaluation:

Assessed students in total: 15

A	B	C	D	E	FX
13%	7%	53%	7%	0%	20%

Lecturers:

prof. RNDr. František Ondriska, PhD., examiner, instructor, seminary supervisor
doc. RNDr. Soňa Kucharíková, PhD., examiner, instructor, seminary supervisor

Date of last change: 01.09.2026

Approved by: doc. Ing. Stanislava Blažíčková, PhD., MPH, univ.prof.