



Course Regime

Course: **Basic Microbiology and Immunology**

Study Programme:

Medicine Dental Medicine

Year of the Course: 1 2 3 4 5 6

Semester:

Winter Summer

Course type:

COMPULSORY ELECTIVE

Number of ECTS credits: **6**

Lecturer(s):

Prof. Alojz Ihan, MD, Assoc. Prof. Miroslav Petrovec, MD, Prof. Mario Poljak, MD, Prof. Manica Mueller Premru, MD, Prof. Katja Seme, MD, Prof. Eva Ružić Sabljic, MD, Assist. Prof. Tadeja Matos, MD, Assist. Prof. Mateja Pirš, MD.

Participating Organisational Units (Departments and Institutes):

Chair of Microbiology and Immunology and Institute of Microbiology and Immunology, University of Ljubljana, Faculty of Medicine.

Parts (Modules) of the Course

- 1:
- 2:
- 3:
- 4:

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A. General part (*applies to compulsory and elective courses*)

1. Course objectives

Students are familiarized with basic characteristics of human microbiology, immunology and parasitology. In seminars they acquire additional knowledge on subjects of particular importance for the epidemiological characteristics of infectious diseases in Slovenia. In practical lessons they are acquainted with basic microbiological techniques, and get a sense of the duration and the significance of microbiological testing.

2. Comprehensive outline of the course organisation

Lectures and seminars

Winter semester, Monday 13:00-15:00, the big lecture room at the Faculty of Medicine, Korytkova 2, and Tuesday 10:00-12:00, the lecture room at the Institute of Physiology, Zaloška 4.

The dates and titles of lectures are published in the timetable on the website <https://www.mf.uni-lj.si/> and in the web classroom of the Faculty of Medicine.

Lectures are an elective part of the course but are nevertheless strongly recommended to students as they cover over 95% of exam topics and examine points of emphasis, novelties and practical experiences which are not included in textbooks and are of great help during studies and later work.

With regular class attendance (at least 70% attendance) and continuous participation in classes students can receive a bonus for the final grade which amounts to a maximum of a 7% in the final sum of partial grades (practical exam, Turning Point and written/oral exam).

Seminars are integrated in lectures.

Practical lessons

Winter semester, practice room at the Institute for Microbiology and Immunology UL FM, Zaloška 4, Tuesday 13:00-19:00 and Wednesday 16:00-19:00, 4 study hours per group. Practical lessons are conducted in groups on Tuesday and Wednesday afternoon. There are 7 practical lessons in total. The aim of practical work is to familiarize students with practical procedures, methods and techniques used in an immunological and microbiological laboratory.

The schedule for practical work groups is posted at the beginning of each semester in the web classroom.

Practical lessons are a compulsory part of the course and a prerequisite for entering the final assessment. Changes between groups are not possible as a permanent sitting arrangement is necessary due to on-going assessment of knowledge using Turning Point. In case of illness or other legitimate reasons an appropriate justification must be submitted. Whenever possible, you can instead attend a practical lesson in another group.

3. On-going assessment of knowledge and skills

On-going assessment of knowledge before the lecture (entry exam), answering questions during the lecture and/or assessing knowledge after the lecture (exit exam).

With each weekly assessment of knowledge a student can receive **1 point at most**, no more than 14 points in total, which amounts to a maximum of a **7% bonus** in the final sum of partial grades (a practical exam, on-going preliminary exams during practical lessons and a written) in case of an

at least 70% class attendance. The bonus is taken into account only in case of a positive grade in the 1st trial of the current academic year.

Entry exam: questions can be accessed in the web classroom from 00:00 on Thursday before lectures until 13:00 on Monday. The entry exam is comprised of 5 questions a student has to answer within 10 minutes of its opening. The exam can be taken only once. The student sees the correct answers alongside results collected to date after the conclusion of all assessments of knowledge on the topic of the lecture.

Assessment of knowledge during lectures: students can use mobile phones, laptops/tablets or paper forms (papers in the lecture room) to vote on the questions the lecturer poses during the lecture itself. The lecturer posts questions in the web classroom, enables responses and sets the voting time. When voting closes the lecturer and the students can see correct answers and the percentage of successful solutions to individual questions. The voting during the lecture is technically accessible only to those present in the lecture room.

Assessment of knowledge after lectures: questions can be accessed in the web classroom after the lectures from 12:00 on Tuesday until 24:00 Friday of the same week. The preliminary exam is comprised of 5 questions a student has to answer within 10 minutes of their opening (as in the entry exam). The test can be taken only once.

The student can see the results of his participation in individual lecture segments in the web classroom following the conclusion of post-lecture question solving (on Friday from 24:00 onwards).

On-going assessment of knowledge within practical lessons:

Theoretical preliminary exams are conducted using the interactive system Turning Point after each practical lesson.

4. Required conditions for the final examination (Course Exam)

The conditions for entering the final assessment of knowledge are at least an 85.7% attendance at practical lessons (the student can miss only one practical lesson due to a justifiable reason), successful completion of on-going preliminary exams within practical lessons (theoretical preliminary exam) and successful completion of the practical exam.

Conditions for taking the exam from the 1st and 2nd year: a student who wants to take the Basic Microbiology and Immunology exam has had to pass the following exams in the 1st and 2nd year:
Biochemistry 1 and 2,
Anatomy 1 and 2,
Histology and Embryology,
Physiology,
Biophysics,
Cell Biology and
Emergency Medical Aid.

5. Final assessment and examination of knowledge and skills (Course Exam)

In an academic year there are 4 exam dates, **3 regular** and **1 extraordinary**. The **extraordinary** exam date in November/December is intended for students from previous generations who fulfilled all class requirements except the exam. Three regular exam dates are set in examination periods: two in the winter period and one in the autumn period.

The final exam consists of a written and an oral part. In the written exam, which covers exam topics, questions are organised into three thematic segments. The written exam is comprised of 70 questions and is 70 minutes long.

Number of questions according to segments:

Bacteriology with Mycology	40% i.e. 28 questions
Virology	30% i.e. 21 questions
Immunology and Parasitology	30% i.e. 21 questions

Grading scale:

unsatisfactory (1 to 5):	0.00% to 59.99%
satisfactory (6):	60.00% to 67.99%
good (7):	68.00% to 75.99%
very good (8):	76.00% to 83.99%
very good (9):	84.00% to 91.99%
excellent (10):	92.00% to 100%

A positive written exam grade (60%) is a prerequisite for taking the oral exam.

A student attaining an overall grade under 60% in the written exam has to retake the written exam.

In case of a positive oral exam grade the examiner can confirm the final exam grade (theoretical and practical preliminary exam at practical lessons, the written test, bonus) or mark it higher or lower by one grade.

In case of a negative oral exam grade the test is negative.

If a student does not take the oral exam, the student fails the exam.

In line with Article 29 of the Regulations the oral part of the exam is taken in the third and further possible exam trials even if the written part of the exam was negative.

The final exam grade consists of:

- the knowledge assessment grade using the interactive system 'Turning Point' – the theoretical preliminary exam (10%),
- the practical preliminary exam grade in practical lessons (10%),
- written test grade (80%),
- bonus attained with on-going assessment of knowledge (maximum of 7%).

The bonus is taken into account only at the 1st trial of the current academic year. Both preliminary exams in practical lessons have to be independently graded as positive.

Exam applications and cancellations: submitted via the VIS information system, the exam application no later than 5 working days and its cancellation by noon the day before the exam date.

A student has the right to personally access one's written part of the exam in line with Article 39 of the Regulations.

6. Other provisions

Article 34 of the Regulations for the Assessment of Knowledge and Skills for the Single-Cycle Master Study Programmes Medicine and Dental Medicine applies.

A committee exam consisting of a written and oral part is held in line with Article 30 of the Regulations.

People with special needs can have up to 50% more time for all forms of on-going and final assessment of knowledge.

7. Fundamental study material and Supplement reading

Gubina M, Ihan A (ed.). Medicinska bakteriologija z imunologijo in mikologijo. Ljubljana: Medicinski razgledi, 2002 (in the web classroom).

Koren S, Avšič-Županc T, Drinovec B, Marin J, Poljak M. Splošna medicinska virologija. Ljubljana: Medicinski razgledi, 1998 (in the web classroom).

Poljak M, Petrovec M (ed.). Medicinska virologija, Ljubljana: Medicinski razgledi, 2011.

Logar J. Parazitologija človeka. Radovljica: Didakta, 2010.

Kotnik V, Petrovec M, Ihan A, Glinšek Biškup U (ed.). Praktikum iz mikrobiologije in imunologije za študente medicine, Ljubljana: Katedra za mikrobiologijo in imunologijo, 2018.

Ihan A. Osnove medicinske imunologije, Ljubljana: Medicinski razgledi, 2016, in the press (in the web classroom).

8. Exam topics, clinical presentations and skills

Go to the web classroom.

9. Other information