MICROORGANISMS, IMMUNITY AND TUMORS

The third year of studies

INTRODUCTION TO CLINICAL PRACTICE

School year 2024/2025.

The course is evaluated with 3 **ECTS** – European Credit Transfer System. There are 3 hours of active teaching per week (2 hours of lectures and 1 hour of work in a small group).

TEACHERS AND ASSISTANTS:

Number	Name and surname	Email adresse	Title
1.	Vojislav Cupurdija	vojacup@gmail.com	Assistant professor
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The structure of the subject:

Modul	Name of module	Study week	Weekly lecture	Work in group	The head of the module
1	Introductory chapter	5	2	1	Prof. dr Vojislav Cupurdija
2	Patient secretions, laboratory analysis, application of drugs, patient nutrition, basics of disinfection and sterilization	5	2	1	Prof.dr Vojislav Cupurdija
3	Organization of health care, health care, treatment of injured persons and the procedure for determining death	5	2	1	Prof. dr Vojislav Cupurdija
∑ 15+15=30					

ASSESSMENT:

ACTIVITY DURING THE LESSON: In this way, the student can earn up to 30 points. In the last class of work in a small group, the student answers 2 exam questions from that week of classes and, following the demonstrated knowledge, gains 0-2 points. Attendance at lectures is mandatory.

FINAL TEST: In this way, the student solves a test with 35 questions where each question carries 2 points, and in this way, he can gain up to 70 points.

CONSULTATIVE TEACHING: Consultations can be scheduled with the head of the subject, prof. Dr. Natašom Zdravković (natasasilvester@gmail.com)

The final grade is formed as follows:

To pass the course, the student must obtain a minimum of 51 points
1. Acquires more than 50% of the points provided for the activity in class
2. pass the module test, i.e. have more than 50% correct answers.

Number of points	mark
0 - 50	**5**
51 - 60	**6**
61 - 70	**7**
71 - 80	**8**
81 - 90	**9**
91 - 100	**10**

Final test

Final test
0-70 POINTS

Assessment of the Final test

The test has 35 questions

Each question is worth 2 points

Literature:

The name of the class book	Authors	Publisher	The Library
Internal medicine	Harrison's Principles of Internal Medicine, 20th Edition Textbook	Jameson JL, Fauci AS, Kasper DL, Hauser SL, Longo DL, Loscalzo J, eds.	Yes, we have in the library
All lectures are available on the website of the Faculty of Medical Sciences: www.medf.kg.ac.rs			

Program:

Unit one (I weeks)

Admission of patients for hospital treatment

Lectures 2 hours

• Acquaintance of the student with the procedure of admission of patients to the department and the administrative opening of the medical history.

What a student should know:

• The attitude of health workers and medical students towards the patient
• The procedure for admitting patients to the ward
• Administrative formation of medical history
• Temperature list
• Anamnesis and objective findings.

Exercises 1 hour

• Training students in the procedure of admitting a patient to the department and opening a medical history

What a student should know:

• The procedure for admitting a patient to the ward
• Registration of disorders that are present at admission (whether the patient is mobile or not, whether he controls the sphincters or not, whether he has a urinary catheter placed, whether he complains of pain)
• Administrative formation of medical history
• Registration of medicines that the patient used regularly at home or in another hospital

Unit two (II week):

General examination of the patient

Lectures 2 hours

• Acquaintance of the student with the assessment of the patient's condition upon admission

What a student should know:

• Patient observation
• Recognizing symptoms and signs of illness
• Signs of illness (position of the patient, mental state and state of consciousness, observation of the external appearance of the patient - constitution, growth, nutrition, gait, speech, observation of the head, neck, chest, abdomen)
• State of consciousness (normal, impaired)
Types of consciousness disorders (qualitative and quantitative)
• Assessment of the patient's mobility
• Measurement of body weight and height of patients. Body mass index. Measurement of trunk and limb circumference of patients
• Criteria of central and peripheral obesity
• Assessment of skin appearance (registration striking changes in the colour and appearance of the skin or possible changes in the skin)

Exercises 1 hour

• Acquaintance of the student with the assessment of the patient's condition upon admission

What a student should know:

• Getting to know the concept of disease
• Getting to know the term observation or observation
• Getting to know the symptoms and signs of the disease
• Acquaintance with the basic general examination of the patient
• Basic assessment of the patient's condition upon admission to the ward and during the patient's stay in the ward: state of consciousness (normal/impaired), measurement of the patient's body weight and height, measurement of the circumference of the patient's trunk and limbs

Unit three (III week):

The vital function

Lectures 2 hours
• Acquaintance of the student with the evaluation of the patient's vital functions
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What a student should know:
• Getting to know vital signs, body temperature, pulse, breathing, blood pressure
• Regulation of body temperature. Body temperature measurement. Temperature curves
• Palpation of the pulse on accessible arteries. Pulse characteristics. Characteristics of the pulse in certain diseases
• Breathing characteristics. Measurement of frequency and quality of breathing. Breathing disorders. Pathological forms of breathing
• Measurement of blood pressure. Standardization blood pressure measurements

Exercises 1 hour
• Training students to assess the patient's vital functions

What a student should know:
• Determination of vital functions: measurement of oral and axillary temperature, measurement of pulse, measurement of arterial blood pressure, measurement of frequency and quality of breathing

Unit four (IV week):

The basic principles of diagnostic disease

Lectures 2 hours
• Introducing the student to modern imaging diagnostics. X-ray diagnostics. Ultrasound diagnostics.

What a student should know:
• Getting to know the basics of X-ray and ultrasound diagnostics

Exercises 1 hour
• Introducing the student to modern imaging diagnostics. X-ray diagnostics. Ultrasound diagnostics.

What a student should know:
• Get to know devices for X-ray and ultrasound diagnostics
• Familiarize yourself with protection measures in radiological and ultrasound diagnostic techniques
• Familiarize yourself with the basic indications for X-ray and ultrasound diagnostics

Unit five (V week):

Endoscopic examinations and patient preparation for examinations

Lectures 2 hours
• Acquaintance the student with the basics of endoscopic examination and patient preparation for radiological and endoscopic examinations

What a student should know:
• Getting to know the basics of endoscopic examination
• Familiarization with the preparation of patients for radiological examinations
• Familiarization with patient preparation for contrast radiological examinations
• Acquaintance with patient preparation for

Exercises 1 hour
• Familiarizing the student with the basics of endoscopic examination and patient preparation for radiological and endoscopic examinations

What a student should know:
• Get to know devices for endoscopic diagnostics
• Familiarize yourself with the basic indications for endoscopic diagnostics
• Familiarize yourself with patient preparation for endoscopic and radiological examinations

endoscopic examinations

Unit six (VI week):

Excreta of the patient

Lectures 2 hours

• Acquaintance of the student with the process of taking blood and other bodily secretions and sending them for a laboratory examination

What a student should know:
• Getting to know the concept of cough, types of cough, sputum, urine, defecation and faecal masses
• Getting to know the types of enemas and application
• Taking bodily secretions for examination
• Taking urine samples for laboratory examination. Taking urine samples for urine culture. 24h urine collection
• Taking a stool sample for the laboratory review. Taking a stool sample for coproculture
• Observing and registering the appearance of the patient's bodily secretions (urine, stool, sputum)
• Reading and interpreting the patient (temperature) list and patient care list related to body secretions

Exercises 1 hour

• Familiarizing the student with the basics of taking body excreta for examination

What a student should know:
• Getting to know the concept of cough, types of cough, sputum, urine, defecation and faecal masses
• Getting to know the types of enemas and application
• Taking bodily secretions for examination
• Taking urine samples for laboratory examination. Taking urine samples for urine culture. Collection of 24-hour urine
• Taking a stool sample for the laboratory review. Taking a stool sample for coproculture
• Observing and registering the appearance of the patient's bodily secretions (urine, stool, sputum)

Unit seven (VII week):

The laboratory diagnostics

Lectures 2 hours

• Acquaintance of the student with laboratory analyses, types of analyses, normal values of the most important parameters, indications for making analyses

What a student should know:
• Acquaintance by taking blood samples for laboratory examination
• Familiarization with taking blood samples for blood culture
• Acquaintance by taking stomach contents for laboratory analyses, taking stools for examination, taking tissue samples
• Importance of stool examination
• Taking swabs for laboratory examination. Seeding and finding swabs
• Preparation of materials and documentation for laboratory examination
• Sending materials for laboratory examination

Exercises 1 hour

• Familiarization with laboratory analyses of blood and urine.

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What a student should know:
• Familiarize yourself with fundamental laboratory analyses
• Collection of bodily excreta for examination: blood collection, urine collection, stool collection, swabs, material and documentation samples, sending material for laboratory examination
• Learn the reference values of basic laboratory findings.
• Learn the clinical interpretation of pathological laboratory findings.

Unit eight (VIII week):

The application of medicaments

Lectures 2 hours

• Acquaintance of the student with the application of therapy in patients

What a student should know:

• Method of drug administration: oral, sublingual, rectal
• Getting to know how to take medicine by mouth (tablets, capsules, lingual tablets)
• Familiarity with parenteral administration of drugs
• Getting to know the administration of drugs by intradermal, subcutaneous, intramuscular and intravenous injection
• Getting to know the introduction of drugs through the respiratory system. Oxygen therapy.
• Application of prescribed therapy.
• Getting to know the preparation of drugs for oral and parenteral administration
• Preparation of infusion solutions. Control of the rate of infusion solutions (calculation of the amount introduced by infusion solutions)
• Help with the distribution of medicines.
• Medical and therapeutic actions (types, use, storage and administration of drugs)

Exercises 1 hour

• Acquaintance of the student with the procedure of administering the prescribed therapy

What a student should know:

• Administration of prescribed therapy
• Interpretation of the therapeutic list
• Preparation of medicines: for oral administration, for parenteral administration
• Preparation of infusion solutions
• Help with drug distribution
• Administration of the drug by mouth, administration of the drug by parenteral route, administration of the drug by intradermal, subcutaneous, intramuscular and intravenous injection

Unit nine (IX week):

The regular feeding of a patient

Lectures 2 hours

• Introducing the student to the basics of normal patient nutrition

What a student should know:

• Getting to know the concept of normal nutrition
• Getting to know the basic types of diets

Exercises 1 hour

• Introducing the student to the basics of normal patient nutrition

What a student should know:

• Basic guideline types of diets
• Help with food distribution

Unit ten (X week):

The artificial nutrition of patients

Lectures 2 hours
• Acquaintance the student with the basics of artificial nutrition of the patient

What a student should know:
• Familiarization with artificial nutrition of the patient
• Feeding patients orally
• Registering fluid intake
• Feeding the patient through a nasogastric tube
• Feeding the patient through a gastrostomy

Exercises 1 hour
• Acquaintance the student with the basics of artificial nutrition of the patient

What a student should know:
• Feeding the patient orally
• Registering fluid intake

Unit eleven (XI week):

The disinfection and sterilisation

Lectures 2 hours
• Introducing students to the basics of disinfection and sterilization
What a student should know:
• Getting to know disinfection techniques and methods
• Familiarity with sterilization techniques
• Getting to know the type and application of antiseptic agents
• Acquaintance with personal protection in the medical field
• Familiarization with hand disinfection of doctors and nurses
• Getting to know the disinfection of hospital rooms
• Familiarization with the disinfection of patient excreta
• Preparation of tweezers, peans and other ambulatory instrumentation for sterilization

Exercises 1 hour
• Introducing students to the basics of disinfection and sterilization
What a student should know:
• Learn techniques and methods of disinfection
• Learn sterilization techniques
• Learn the types and applications of antiseptics

Unit twelve (XII week):
The organisation of healthcare

Lectures 2 hours
• Acquaintance the student with the basics of healthcare organization
What a student should know:
• Definition and content of healthcare
• Primary health care
• Secondary health care
• Tertiary health care

Exercises 1 hour

• Acquaintance the student with the basics of healthcare organization

What a student should know:
• Definition and content of healthcare
• Primary health care

• Health care organizations (types of health care organizations - health care institute, health centre, institutes and institutes, hospital, natural spa, medical centre, clinical centre)

• Secondary health care
• Tertiary health care
• Health care organization (types of health care organizations - health care institute, health centre, institutes and institutes, hospital, natural spa, medical centre, clinical centre)

Unit thirteen (XIII week):
The type and organisation of medical care

Lectures 2 hours
• Introducing the student to the basics of the type and organization of healthcare

What a student should know:
• Getting to know the concept of general care, semi-intensive care, intensive care, special intensive care, special care, home care, self-care, terminal care
• Classification of patients according to the system of progressive healthcare
• Daily needs of the patient

Exercises 1 hour

• Introducing the student to the basics of the type and organization of healthcare

What a student should know:
• Getting to know the concept of general care, semi-intensive care, intensive care, special intensive care, special care, home care, self-care, terminal care
• Classification of patients according to the system of progressive healthcare
• Daily needs of the patient

Unit fourteen (XIV week):
The medical care of a patient

Lectures 2 hours
• Acquaintance the student with the basics of patient health care (care, care and hygiene of the patient in bed)

What a student should know:
• Morning care and patient care. Local hygiene of the patient (toilet of the cavity, axillary and groin area, pubic area)
• Hygiene of the patient. Washing the immobile patient. Bathing and washing the hair of an immobile patient
• Prevention of decubitus in an immobile patient
• Changing the patient's clothes
• Placement of goose and shovel. Sphincter control. Enema of the patient
• Urinary bag replacement

Exercises 1 hour
• Acquaintance the student with the basics of patient health care (care, care and hygiene of the patient in bed)

What a student should know:
• Morning treatment and care of the patient: checking the general condition of the patient, local hygiene of the patient, changing the patient's clothes, placing the goose and shovel, enema of the patient, changing the urinary bag, observing and registering the appearance of the patient's bodily secretions

Unit fifteen (XV week):

The transport of patient

Lectures 2 hours

• Acquaintance of the student with patient monitoring and transport

What a student should know:
• Patient monitoring and transport. Transportation of the patient to consultative examinations and X-rays.
• Transferring an immobile or partially mobile patient

Exercises 1 hour

• Acquaintance of the student with patient monitoring and transport

What a student should know:
• Patient transport for consultative examinations and X-rays
• Transferring an immobile or partially mobile patient
• Registration of vital functions during patient transport

WEEKLY COURSE SCHEDULE

COURSE	THURSDAY
INTRODUCTION TO CLINICAL PRACTICE	**LECTURES AND SEMINAR** **16:30 - 18:45** (Hall at the Internal Clinic)

LESSON SCHEDULE FOR THE COURSE INTRODUCTION TO CLINICAL PRACTICE

module	week	type	The names of the units	Teacher
1	**1**	**Presentation**	Admission of patients for hospital treatment	Assist. Prof. Miodrag Sreckovic
1	**1**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
1	**2**	**Presentation**	General examination of the patient	Assist. Prof. Miodrag Sreckovic
1	**2**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
1	**3**	**Presentation**	The vital functions	Assist. Prof. Miodrag Sreckovic
1	**3**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
1	**4**	**Presentation**	The basic principles for diagnostic disease	Assist. Prof. Rada Vucic
1	**4**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
1	**5**	**Presentation**	Endoscopic examinations and patient preparation for examinations	Assist. Prof. Vojislav Cupurdija
1	**5**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
2	**6**	**Presentation**	Excreta of the patient	Assist. Prof. Vojislav Cupurdija
2	**6**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)

LESSON SCHEDULE FOR THE COURSE INTRODUCTION TO CLINICAL PRACTICE

module	week	type	The names of the units	Teacher
2	**7**	**Presentation**	The laboratory diagnostics	Assist. Prof. Vojislav Cupurdija
2	**7**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
2	**8**	**Presentation**	Tapplicationion of medicaments	Assist. Prof. Vojislav Cupurdija
2	**8**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
2	**9**	**Presentation**	The normal nutrition of patients	Assist. Prof. Rada Vucic
2	**9**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
2	**10**	**Presentation**	Artificialcial nutrition of patients	Assist. Prof. Rada Vucic
2	**10**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
3	**11**	**Presentation**	Disinfection and sterilisations	Assist. Prof. Vojislav Cupurdija
3	**11**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
3	**12**	**Presentation**	The organisation of healthcare	Assist. Prof. Rada Vucic
3	**12**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)

LESSON SCHEDULE FOR THE COURSE INTRODUCTION TO CLINICAL PRACTICE

module	week	type	The names of the units	Teacher
3	**13**	**Presentation**	The type and organisation of medical care	Assist. Prof. Rada Vucic
3	**13**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
3	**14**	**Presentation**	Medical care of patients	Assist. Prof. Vojislav Cupurdija
3	**14**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
3	**15**	**Presentation**	The transport of patients	Assist. Prof. Vojislav Cupurdija
3	**15**	**Practice**		dr Zeljko Todorovic (x2) dr Stefan Simovic (x2) dr Tomislav Nikolic (2)
		The Final test	**The Final test**	
		Exam	**THE EXAM**	