



PHARMACY
INTEGRATED ACADEMIC STUDIES
THIRD YEAR OF STUDY

2025/2026

PHARMACOLOGY 2

Title of the course:

PHARMACOLOGY 2

This course is assigned 6 ECTS credits.

It consists of 3 active teaching hours per week: 2 hours of lectures and 1 hour of practical classes.

TEACHERS:

	Name and surname	E-mail	Title
1.	Natasa Djordjevic	natashadj2002@yahoo.com	Full professor
2.	Tamara Nikolic Turnic	tamara.nikolic@fmn.kg.ac.rs	Assoc. professor
3.	Radisa Pavlovic	r.pavlovic2407@gmail.com	Assoc. professor

COURSE STRUCTURE:

Module No	Title	No of weeks	Hours of lectures per week	Hours of practical classes per week	Responsible teacher
1.	Pharmacology 2	15	2	1	Natasa Djordjevic
					Σ 30+15=45

GRADING:

The grade will be equivalent to the number of points achieved (see the table). The points will be awarded according to the following scheme:

1. PRE-EXAM ACTIVITIES:

Based on participation in classes and demonstrated knowledge during exercises, a student can earn up to 2 points per class. In this way, a maximum of 30 points can be earned.

2. FINAL EXAM:

The student has the right to take the final exam only if they have previously earned more than 50% of the maximum number of points allocated for pre-exam activities, i.e., at least 16 points for class participation.

The final exam includes answering questions based on the material covered in the module, as follows:

- a) 10 multiple-choice or fill-in-the-blank questions, each worth 2 points
 - up to 20 points can be earned in this section,
- b) 5 open-ended questions, each worth 10 points
 - up to 50 points can be earned in this section.

FINAL GRADE

The final grade will be formed according to the following table:

Grading system		
Grade	Total No of points	Description
10	91-100	Excellent
9	81-90	Exceptionally good
8	71-80	Very good
7	61-70	Good
6	51-60	Passing
5	< 51	Failing

Literature

Atkinson AJ, et al. Principles of Clinical Pharmacology. 2nd ed. Burlington: Elsevier; 2007.
Katzung B. Basic and Clinical Pharmacology. 10th ed. New York: McGraw-Hill; 2004.
Brunton LL, editor. Goodman & Gilman's The Pharmacological Basis of Therapeutics. 11th ed. New York: McGraw-Hill; 2006.
DiPiro JT, et al. Pharmacotherapy: a pathophysiologic approach. 7th ed. New York: McGraw-Hill; 2008.
Baxter K, editor. Stockley's drug interactions. 8th ed. London, UK; Pharmaceutical Press; 2008.

Schedule

Module 1:

COURSE UNIT 1 (WEEK 1):

Lectures: 2 hours	Practical classes: 1 hour
Antiulcer drugs Pharmacotherapy of gastroesophageal reflux disease Helicobacter pylori - detection and eradication Hydrochloric acid and enzymes of the digestive tract	Peptic ulcer (clinical problem)

COURSE UNIT 2 (WEEK 2):

Lectures: 2 hours	Practical classes: 1 hour
Antiemetics and emetics Antiemetic protocols depending on the cause of vomiting Enteral and parenteral nutrition	Diarrhea (clinical problem)

COURSE UNIT 3 (WEEK 3):

Lectures: 2 hours	Practical classes: 1 hour
Laxatives and antidiarrheals Pharmacotherapy of inflammatory bowel diseases Prokinetics, spasmolytics and other drugs	Constipation (clinical problem)

COURSE UNIT 4 (WEEK 4):

Lectures: 2 hours	Practical classes: 1 hour
Medicines in the therapy of coagulation disorders, water and electrolytes and blood preparations Medicines in the treatment of anemia Hematopoietic growth factors	Anemia (clinical problem)

COURSE UNIT 5 (WEEK 5):

Lectures: 2 hours	Practical classes: 1 hour
Pharmacology of hypothalamic, pituitary, and sex hormones Thyroid hormones and antithyroid drugs Pharmacology of vitamins	Hyperthyroidism (clinical problem)

COURSE UNIT 6 (WEEK 6):

Lectures: 2 hours	Practical classes: 1 hour
Insulin and oral antidiabetics Hyperglycemic agents	Hyperglycemic coma (clinical problem)

COURSE UNIT 7 (WEEK 7):

Lectures: 2 hours	Practical classes: 1 hour
Adrenal cortex hormones Inhibitors of adrenal cortex hormone synthesis Corticosteroids for systemic and local use	Addison's disease (clinical problem)

COURSE UNIT 8 (WEEK 8):

Lectures: 2 hours	Practical classes: 1 hour
Calcium, parathyroid hormone and vitamin D Other medicines for bone metabolism disorders Bisphosphonate preparations - comparative pharmacology	Osteoporosis (clinical problem)

COURSE UNIT 9 (WEEK 9):

Lectures: 2 hours	Practical classes: 1 hour
Chemotherapy of malignant diseases Adverse effects of cytostatics and their treatment Preparation of cytotoxic drugs and protective measures	Leukemia (clinical problem)

COURSE UNIT 10 (WEEK 10):

Lectures: 2 hours	Practical classes: 1 hour
Immunosuppressive drugs Immunostimulants and monoclonal antibodies	Skin carcinoma lesion (clinical problem)

COURSE UNIT 11 (WEEK 11):

Lectures: 2 hours	Practical classes: 1 hour
Basic principles of antibiotic therapy Inhibitors of cell wall synthesis Antibiotics for local application Antiseptics and disinfectants - production and preparation	Pneumonia (clinical problem)

COURSE UNIT 12 (WEEK 12):

Lectures: 2 hours	Practical classes: 1 hour
Inhibitors of protein synthesis Sulfonamides, quinolones, uroantiseptics	Pyelonephritis (clinical problem)

COURSE UNIT 13 (WEEK 13):

Lectures: 2 hours	Practical classes: 1 hour
Other antibacterial drugs Antituberculous drugs	Osteomyelitis (clinical problem)

COURSE UNIT 14 (WEEK 14):

Lectures: 2 hours	Practical classes: 1 hour
Antiviral drugs Antifungal drugs	Candidiasis (clinical problem)

COURSE UNIT 15 (WEEK 15):

Lectures: 2 hours	Practical classes: 1 hour
Medicines against helminths Drugs against protozoa and ectoparasites	Amebiasis (clinical problem)

PHARMACOLOGY 2: COURSE SCHEDULE

Module	Week	Type	Title	Teacher
1	1	L	Antiulcer drugs Pharmacotherapy of gastroesophageal reflux disease Helicobacter pylori - detection and eradication Hydrochloric acid and enzymes of the digestive tract	Natasa Djordjevic
		P	Peptic ulcer (clinical problem)	
	2	L	Antiemetics and emetics Antiemetic protocols depending on the cause of vomiting Enteral and parenteral nutrition	Natasa Djordjevic
		P	Diarrhea (clinical problem)	
	3	L	Laxatives and antidiarrheals Pharmacotherapy of inflammatory bowel diseases Prokinetics, spasmolytics and other drugs	Tamara Nikolic Turnic
		P	Constipation (clinical problem)	
	4	L	Medicines in the therapy of coagulation disorders, water and electrolytes and blood preparations Medicines in the treatment of anemia Hematopoietic growth factors	Natasa Djordjevic
		P	Anemia (clinical problem)	
2	5	L	Pharmacology of hypothalamic, pituitary, and sex hormones Thyroid hormones and antithyroid drugs Pharmacology of vitamins	Natasa Djordjevic
		P	Hyperthyroidism (clinical problem)	

PHARMACOLOGY 2: COURSE SCHEDULE

Module	Week	Type	Title	Teacher
2	6	L	Insulin and oral antidiabetics Hyperglycemic agents	Natasa Djordjevic
		P	Hyperglycemic coma (clinical problem)	
	7	L	Adrenal cortex hormones Inhibitors of adrenal cortex hormone synthesis Corticosteroids for systemic and local use	Natasa Djordjevic
		P	Addison's disease (clinical problem)	
	8	L	Calcium, parathyroid hormone and vitamin D Other medicines for bone metabolism disorders Bisphosphonate preparations - comparative pharmacology	Natasa Djordjevic
		P	Osteoporosis (clinical problem)	
	9	L	Chemotherapy of malignant diseases Adverse effects of cytostatics and their treatment Preparation of cytotoxic drugs and protective measures	Natasa Djordjevic
		P	Leukemia (clinical problem)	
	10	L	Immunosuppressive drugs Immunostimulants and monoclonal antibodies	Tamara Nikolic Turnic
		P	Skin carcinoma lesion (clinical problem)	
3	11	L	Basic principles of antibiotic therapy Inhibitors of cell wall synthesis Antibiotics for local application Antiseptics and disinfectants - production and preparation	Natasa Djordjevic
		P	Pneumonia (clinical problem)	

PHARMACOLOGY 2: COURSE SCHEDULE

Module	Week	Type	Title	Teacher
3	12	L	Inhibitors of protein synthesis Sulfonamides, quinolones, uroantiseptics	Natasa Djordjevic
		P	Pyelonephritis (clinical problem)	
	13	L	Other antibacterial drugs Antituberculous drugs	Natasa Djordjevic
		P	Osteomyelitis (clinical problem)	
	14	L	Antiviral drugs Antifungal drugs	Natasa Djordjevic
		P	Candidiasis (clinical problem)	
	15	L	Medicines against helminths Drugs against protozoa and ectoparasites	Natasa Djordjevic
		P	Amebiasis (clinical problem)	

L-lectures; P – Practical classes, E-exam