



Pharmacy - Integrated Academic Studies

SECOND YEAR

2023/2024

PHARMACEUTICAL TECHNOLOGY 1

Subject:

PHARMACEUTICAL TECHNOLOGY 1

The course is evaluated with 7 ECTS. There are 4 classes of active teaching per week (2 classes of lectures and 2 classes of work in a small group)

TEACHERS AND ASSOCIATES:

RB	Name and surname	E-mail address	Title
1.	Jovana Bradic	jovanabradickg@gmail.com	Assistant Professor
2.	Anica Petrovic	petkovicanica0@gmail.com	Assistant Professor
3.	Marijana Andjic	marinapop@gmail.com	Research fellow
4.	Andjela Ustevic	andjela.ust@gmail.com	Research fellow
5.			
6.			

COURSE STRUCTURE:

Module	Module name	Weeks	Lectures	Work in a small group	Teacher-supervisor module
1	Practices in laboratory. Introduction to biopharmacy. Powders. Liquid dosage forms. Decocta, infusa, tinctures	8	2	2	Asst. prof Jovana Bradic
2	Solid dosage forms. Semi-solid dosage forms. Sterilization and preparation of aseptic and parenteral pharmaceutical products. Pharmaceutical excipients.	7	2	2	Asst. prof Jovana Bradic
					$\Sigma 30 + 30 = 60$

EVALUATION:

STUDENT'S PRE-EXAM ACTIVITY: 50 points

FINAL EXAM (Written): 50 points

Student must pass pre-exam activity as well as the final exam. Students must achieve more than 50 percent of points on each of them in order to receive the passing grade. Passing the pre-exam activity is the requirement for taking the final exam.

Assessment method based on points earned :

Grading system		
Grade	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:

Textbook title	Authors	Publisher	the Library
Pharmaceutical Compounding and Dispensing	Marriott JF, Wilson KA, Langley CA, Belcher D	Pharmaceutical Press, London, 2006	
Handbook of pharmaceutical manufacturing formulations	Fleeger C	Washington: CRC Press, 2004	
Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems, 11th Edition	Loyd A	LWW Lippincott Williams and Wilkins. 2017	
Pharmaceutical Calculations	Ansel H, Stockton J	LWW Lippincott Williams and Wilkins. 2016	
A Practical Guide to Contemporary Pharmacy Practice and Compounding, 4th Edition	Lester Elder D	LWW Lippincott Williams and Wilkins. 2017.	
All lectures can be found on the website of the Faculty of Medicine: www.medf.kg.ac.rs			

THE PROGRAM:

FIRST MODULE

TEACHING UNIT 1 (FIRST WEEK):

Lectures: 2 classes	Practice: 3 classes
Practices in laboratory. Measuring, scales, the introduction of prescriptions. Compounding and Dispensing.	Practices in laboratory. Measuring, scales, the introduction of prescriptions. Compounding and Dispensing.

TEACHING UNIT 2 (SECOND WEEK):

Lectures: 2 classes	Practice: 2 classes
Introduction to biopharmacy. Physicochemical and pharmaceutical factors affecting drug absorption.	Factors affecting drug absorption.

TEACHING UNIT 3 (THIRD WEEK):

Lectures: 2 classes	Practice: 2 classes
Powders. Dose checking, pharmaceutical calculations and preparation methods.	Powders. Dose checking, pharmaceutical calculations and preparation methods.

TEACHING UNIT 4 (FOURTH WEEK):

Lectures: 2 classes	Practice: 2 classes
Liquid dosage forms (solutions). Dose checking, pharmaceutical calculations and preparation methods.	Liquid dosage forms (solutions). Dose checking, pharmaceutical calculations and preparation methods.

TEACHING UNIT 5 (FIFTH WEEK):

Lectures: 2 classes	Practice: 2 classes
Liquid dosage forms (suspensions). Dose checking, pharmaceutical calculations and preparation methods.	Liquid dosage forms (suspensions). Dose checking, pharmaceutical calculations and preparation methods.

TEACHING UNIT 6 (SIXTH WEEK):

Lectures: 2 classes	Practice: 3 classes
Liquid dosage forms (emulsions). Dose checking, pharmaceutical calculations and preparation methods.	Liquid dosage forms (emulsions). Dose checking, pharmaceutical calculations and preparation methods.

TEACHING UNIT 7 (SEVENTH WEEK):

Lectures: 2 classes	Practice: 3 classes
Nasal drops, ear-drops, drops for internal use. Dose checking and methods of preparation.	Nasal drops, ear-drops, drops for internal use. Dose checking and methods of preparation.

TEACHING UNIT 8 (EIGHTH WEEK):

Lectures: 2 classes	Practice: 3 classes
Decocta, infusa, tinctures.	Decocta, infusa, tinctures.

SECOND MODULE

TEACHING UNIT 9 (NINTH WEEK):

Lectures: 2 classes	Practice: 3 classes
Solid dosage forms (tablets).	Solid dosage forms (tablets).

TEACHING UNIT 10 (TENTH WEEK):

Lectures: 2 classes	Practice: 3 classes
Solid dosage forms (capsules).	Solid dosage forms (capsules).

TEACHING UNIT 11 (ELEVENTH WEEK):

Lectures: 2 classes	Practice: 3 classes
Semi-solid dosage forms – ointments, creams.	Semi-solid dosage forms – ointments, creams.

TEACHING UNIT 12 (TWELFTH WEEK):

Lectures: 2 classes	Practice: 3 classes
Semi-solid dosage forms – gels, pastes.	Semi-solid dosage forms – gels, pastes.

TEACHING UNIT 13 (THIRTEENTH WEEK):

Lectures: 2 classes	Practice: 3 classes
Sterilization, depyrogenation.	Sterilization, depyrogenation.

TEACHING UNIT 14 (SIXTEENTH WEEK):

Lectures: 2 classes	Practice: 3 classes
Aseptic and parenteral pharmaceutical products.	Aseptic and parenteral pharmaceutical products.

TEACHING UNIT 15 (FIFTEENTH WEEK):

Lectures: 2 classes	Practice: 3 classes
Pharmaceutical Excipients. Physicochemical and microbiological stability of pharmaceutical products.	Pharmaceutical Excipients. Physicochemical and microbiological stability of pharmaceutical products.