

School of Pharmacy / School of Pharmacy (English)

2024 - 2025 Academic Year

PHARMACEUTICAL TECHNOLOGY II

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
PHARMACEUTICAL TECHNOLOGY II	PHA3214157	Spring Semester	3+0	3	5
Prerequisites Courses	FARMASÖTİK TEKNOLOJİ I				
Recommended Elective Courses					
Language of Instruction	English				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Required				
Course Coordinator	Prof.Dr. Fatma Julide AKBUĞA				
Name of Lecturer(s)	Prof.Dr. Fatma Julide AKBUĞA				
Assistant(s)					
Aim	To inform the student about rheology, the properties of two phase systems, semisolid dosage forms and their functions and quality controls.				
Course Content	This course contains; Rheology, Colloids, Interfacial properties, Suspensions, Emulsions, Semi solid dosage forms, Semi solid dosage forms, Permeability from the skin and transdermal systems, Permeability from the skin and transdermal systems, Suppositories, Aerosols, Basic pharmacokinetic.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
1. will be assessed the rheological and interfacial properties			10, 16, 9	A	
1.1. define types of rheological behaviour			16, 9	A	
1.2. evaluate the measurement of rheological properties			16, 9	A	
1.3. defines adsorption on liquid and solid interface, solid-gase interface and solid-liquid interface.			16, 9	A	
1.4. comment the effect on drug efficacy of adsorption isotherms and adsorbent matters.			16, 9	A	
1.5. classify the surface-active ingredients.			16, 9	A	
2. will be designed suspension and emulsion formulations			16, 9	A	
2.1. define suspension and emulsion formulations			16, 9	A	
2.2. list the compounds of suspension and emulsion formulations			16, 9	A	
2.3. debate the controls in suspensions and emulsions			16, 9	A	
2.4. determine the methods of suspensions and emulsions preparation			16, 9	A	
2.5. evaluate the stability of suspension and emulsion			16, 9	A	
3. will be designed aerosol systems			16, 9	A	
3.1. evaluate the respiratory drug delivery			16, 9	A	
3.2. debate the aerosol systems and it's usage			16, 9	A	
3.3. list the compounds of aerosol systems			16, 9	A	
3.4. evaluate the quality control tests in aerosols			16, 9	A	
4. will be designed semi-solid dosage forms			19, 9	A	
4.1. classify definition of semi-solid dosage forms and it's formulation types			16, 9	A	
4.2. evaluate permeability from the skin and semi-solid preparations applied to the skin			16, 9	A	
4.3. classify the ingredient of ointment, path, gel, cream, lotion and cera formulations			16, 9	A	
4.4. evaluate the forms of formulated preparations			16, 9	A	
4.5. define the suppository and ovule formulations.			16, 9	A	
4.6. debate the methods of formulated preparations			16, 9	A	
Teaching Methods	10: Discussion Method, 16: Question - Answer Technique, 19: Brainstorming Technique, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	Rheology	1,2,3			
2	Colloids	1,2,3			
3	Interfacial properties	1,2,3			
4	Suspensions	1,2,3			
5	Suspensions	1,2,3			
6	Emulsions	1,2,3			
7	Emulsions	1,2,3			
8	Semi solid dosage forms	1,2,3			
9	Semi solid dosage forms	1,2,3			
10	Permeability from the skin and transdermal systems	1,2,3			
11	Permeability from the skin and transdermal systems	1,2,3			
12	Suppositories	1,2,3			
13	Aerosols	1,2,3			
14	Basic pharmacokinetic	1,2,3			
Evaluation Methods		Weight(%)			
Midterm Exam		40			
General Exam		60			

Resources

1-Lecture notes, Powerpoint presentations, Relevant web pages will be given to students.

2-Acartürk F, Ağabeyoğlu İ, Çelebi D, Değim T, Değim Z, Doğanay T, Taka S, Tırnaksız F. Modern Farmasötik Teknoloji. Türk Eczacılar Birliği Yayını. 2.baskı. Ankara.2008

3-Zırh Gürsoy A (ed.). Farmasötik Teknoloji –Temel Konular ve Dozaj Şekilleri- Kontrollü Salım Sistemleri Derneği Yayını. 2.baskı. İstanbul. 2011