School of Pharmacy / School of Pharmacy (English)

2024 - 2025 Academic Year

PHARMACEUTICAL TECHNOLOGY IV

Syllabus

Course Description					
Name	**Code**	**Semester**	**T+A Hour**	**Credit**	**ECTS**
PHARMACEUTICAL TECHNOLOGY IV	PHA4214878	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 the preparation and quality controls of solid dosage forms, the stability tests and the licensing of drugs.
Course Content	This course contains; Powder preparation and micromeritic, adsorption isoterms,Capsules, granule and tablets,Tablets, tablet types,The coating of tablets,Micropellets,Extended release systems and modern therapeutic systems,Extended release systems and modern therapeutic systems,Extended release systems and modern therapeutic systems,Extended release systems and modern therapeutic systems,Veterinary and agricultural drugs,The drug licensing,The drug licensing,Stability,Radiopharmacy.

Course Learning Outcomes	**Teaching Methods**	**Assessment Methods**
At the and of this course, the students;		
1. Will be evaluated powder preparations and micromeritic.	16, 9	A
1.1. Categorize powder preparations.	16, 9	A
1.2. Debate the importance of particle size and distribution for powder preparations.	16, 9	A
2. Will be defined granule, tablets, the coating of tablets and capsules.	16, 9	A
2.1. Plan granulation process and the controls on granule.	16, 9	A
2.2. Categorize the excipients of tablets.	16, 9	A
2.3. Assess the preparation methods of tablets.	16, 9	A
3. Will be evaluated micropellets, extended release systems and modern therapeutic systems.	16, 9	A
3.1. Debate the preparation methods of micropellets.	16, 9	A
3.2. Categorize extended release systems.	16, 9	A
3.3. Design modern therapeutic systems.	16, 9	A
4. Will be explained the stability of dosage forms.	16, 9	A
4.1. Define active ingredient and drug stability.	16, 9	A
4.2. Debate the current approaches about stability regulation, and the reaction kinetics of stability.	16, 9	A
5. Will be defined veterinary and agricultural drugs.	16, 9	A
5.1. Categorize veterinary drugs.	16, 9	A
6. Will be evaluated the key issues related to the licensing of drugs.	16, 9	A
6.1. Debate the issues about the licensing of drugs in Europaen Union and shortened license applications.	16, 9	A
6.2. Interpret the drug licensing flowchart.	16, 9	A

Teaching Methods	16: Question - Answer Technique, 9: Lecture Method
Assessment Methods	A: Traditional Written Exam

Lecture Schedule

Sequence	**Topics**	**Preliminary Preparation**
1	Powder preparation and micromeritic, adsorption isoterms	1,2,3
2	Capsules, granule and tablets	1,2,3
3	Tablets, tablet types	1,2,3
4	The coating of tablets	1,2,3
5	Micropellets	1,2,3
6	Extended release systems and modern therapeutic systems	1,2,3
7	Extended release systems and modern therapeutic systems	1,2,3
8	Extended release systems and modern therapeutic systems	1,2,3
9	Extended release systems and modern therapeutic systems	1,2,3
10	Veterinary and agricultural drugs	1,2,3
11	The drug licensing	1,2,3
12	The drug licensing	1,2,3
13	Stability	1,2,3
14	Radiopharmacy	1,2,3

Evaluation Methods	**Weight(%)**
Midterm Exam	40
General Exam	60

Resources

1. Ders notu derste öğrencilere verilecektir.
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, 2012.