

School of Pharmacy / School of Pharmacy (English)

2024 - 2025 Academic Year

PHARMACEUTICAL TECHNOLOGY LAB.III

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
PHARMACEUTICAL TECHNOLOGY LAB.III	PHA4114869	Fall Semester	0+3	1,5	3
Prerequisites Courses					
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 be intended the design, preparation and quality controls of the sterile dosage forms.				
Course Content	This course contains; Demonstration,The ampoules that are prepared under normally conditions,The ampoules that are prepared under inert gase,The preparation of sterile neutral olive oil,The preparation of hormone formulations using sterile neutral olive oil,The preparation of multi-dose parenteral formulations,Perfusion and Ringer's solutions,The preparation of eye drops,Eye wash and lens solutions,Ear drops,Nasal drops,The quality controls of the parenteral dosage forms,The working principle of the autoclave.,Make-up.				
Course Learning Outcomes		Teaching Methods		Assessment Methods	
At the end of this course, the students;					
1. will be assessed the calculation methods used in the preparation of isotonic solutions.		10, 12, 17, 19, 9		A, D	
1.1. recognize the packaging materials used in the preparation of isotonic solutions.		10, 12, 17, 19, 9		A, D	
1.2. prepare isotonic solutions.		10, 12, 17, 19, 9		A, D	
2. will be prepared parenteral preparations.		10, 12, 17, 19, 9		A, D	
2.1. design ampoule and vial formulations.		10, 12, 17, 19, 9		A, D	
2.2. evaluate the quality controls of the parenteral dosage forms.		10, 12, 17, 19, 9		A, D	
2.3. categorize the parenteral dosage forms that filling under different conditions (inert gase etc.).		10, 12, 17, 19, 9		A, D	
2.4. define the excipients of the parenteral dosage forms.		10, 12, 17, 19, 9		A, D	
3. will be defined the critical issues about the preparation of ocular, otic and nasal formulations.		10, 12, 17, 19, 9		A, D	
3.1. recognise the excipients of ocular, otic and nasal formulations.		10, 12, 17, 19, 9		A, D	
3.2. explain the quality conditions related to ocular, otic and nasal formulations.		10, 12, 17, 19, 9		A, D	
4. will be defined the devices used for the preparations and sterilizations of parenteral formulations.		10, 12, 17, 19, 9		A, D	
4.1. explain the working principle of the autoclave.		10, 12, 17, 19, 9		A, D	
4.2. list the materials that are sterilized in the oven.		10, 12, 17, 19, 9		A, D	
Teaching Methods	10: Discussion Method, 12: Problem Solving Method, 17: Experimental Technique, 19: Brainstorming Technique, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, D: Oral Exam				
Lecture Schedule					
Sequenc e	Topics	Preliminary Preparation			
1	Demonstration	1,2,3,4,5,6,7,8			
2	The ampoules that are prepared under normally conditions	1,2,3,4,5,6,7,8			
3	The ampoules that are prepared under inert gase	1,2,3,4,5,6,7,8			
4	The preparation of sterile neutral olive oil	1,2,3,4,5,6,7,8			
5	The preparation of hormone formulations using sterile neutral olive oil	1,2,3,4,5,6,7,8			
6	The preparation of multi-dose parenteral formulations	1,2,3,4,5,6,7,8			
7	Perfusion and Ringer's solutions	1,2,3,4,5,6,7,8			
8	The preparation of eye drops	1,2,3,4,5,6,7,8			
9	Eye wash and lens solutions	1,2,3,4,5,6,7,8			
10	Ear drops	1,2,3,4,5,6,7,8			
11	Nasal drops	1,2,3,4,5,6,7,8			
12	The quality controls of the parenteral dosage forms	1,2,3,4,5,6,7,8			
13	The working principle of the autoclave.	1,2,3,4,5,6,7,8			
14	Make-up	1,2,3,4,5,6,7,8			
Evaluation Methods		Weight(%)			
Midterm Exam		60			
General Exam		40			

Resources	
1-Lecture notes, powerpoint presentations, relevant web pages will be given to students. 2)	Alpmen G, Altinkurt T, Bergışadi N, Topalođlu Y, Tunçel T, Araman A, Yener G, Özsoy Y,'Farmasötik Teknoloji ve Kozmetoloji Laboratuvar Kitabı' AB Ofset, İstanbul, 2000.Bozkır A,
3)	Karataş A, Haşççek C, Canefe K, Kılıçarslan M, Tarıncı N, Yüksel N, Gönül N,Özdemir N, Baykara T, Kılınc-Şen T, Çomođlu T, 'Farmasötik Teknoloji Deneysel Uygulamalar Kitabı' Ankara Üniversitesi Eczacılık Fakültesi Yayınları.
4)	Türk Farmakopesi (TF 2017)
5)	Tıbbi ve Kozmetik Formüller (Prof. Dr. Kasım Cemal Güven) 2020
6)	Martindale-the Extra Pharmacopoeia
7)	USP United States Pharmacopoeia 32
8)	European Pharmacopoeia 10