

**School of Pharmacy / School of Pharmacy (English)**

**2024 - 2025 Academic Year**

**PHARMACEUTICAL CHEMISTRY LAB. II**

**Syllabus**

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
PHARMACEUTICAL CHEMISTRY LAB. II	PHA3214154	Spring Semester	0+3	1,5	3
<b>Prerequisites Courses</b>					
<b>Recommended Elective Courses</b>					
<b>Language of Instruction</b>	English				
<b>Course Level</b>	First Cycle (Bachelor's Degree)				
<b>Course Type</b>	Required				
<b>Course Coordinator</b>	Prof.Dr. Mine YARIM YÜKSEL				
<b>Name of Lecturer(s)</b>	Prof.Dr. Mine YARIM YÜKSEL				
<b>Assistant(s)</b>					
<b>Aim</b>	The aims of this course to synthesize of certain organic and pharmaceutical active substances, to study of mechanisms of organic reactions, separation and purification procedures, to show computational drug design methods				
<b>Course Content</b>	This course contains; Introduction of Separation and purification process, The extraction, distillation and crystallization, Physical separation methods, electrophoresis, chromatography, Some organic and drug Separation and purification of the active substance, Some organic and drug separation and purification of the active substance, Separation of Cannizaro reaction products, Polarimetric and refractometric methods, Isolation of the active agent formulation in use, Isolation of active ingredient from the formulations in use, Column chromatography, Column chromatography application, Recognition of computerized drug design methods, Molecular modeling study, Molecular modeling study.				
<b>Course Learning Outcomes</b>			<b>Teaching Methods</b>	<b>Assessment Methods</b>	
At the end of this course, students; 1. will be able to analyse the separation and purification methods of the synthesized compounds. 1.1. describe the necessary equipment for the separation and purification methods 1.2. use the necessary equipment for the separation and purification methods. 2. will be able to apply polarimetric and refractometric methods 2.1. describe the necessary equipment for polarimetric and refractometric methods. 2.2. use the necessary equipment for polarimetric and refractometric methods. 3. will be able to apply column chromatography 3.1. describe the necessary equipment for the column chromatography 3.2. use the necessary equipment for the column chromatography 4. will be able to analyse computer drug design methods. 4.1. describe the molecular modelling technique 4.2. use the molecular modelling technique			12, 14, 16, 17, 9	A	
<b>Teaching Methods</b>	12: Problem Solving Method, 14: Self Study Method, 16: Question - Answer Technique, 17: Experimental Technique, 9: Lecture Method				
<b>Assessment Methods</b>	A: Traditional Written Exam				
<b>Lecture Schedule</b>					
<b>Sequence</b>	<b>Topics</b>	<b>Preliminary Preparation</b>			
1	Introduction of Separation and purification process	Reading the references			
2	The extraction, distillation and crystallization	Reading the references			
3	Physical separation methods, electrophoresis, chromatography	Reading the references			
4	Some organic and drug Separation and purification of the active substance	Reading the references			
5	Some organic and drug separation and purification of the active substance	Reading the references			
6	Separation of Cannizaro reaction products	Reading the references			
7	Polarimetric and refractometric methods	Reading the references			
8	Isolation of the active agent formulation in use	Reading the references			
9	Isolation of active ingredient from the formulations in use	Reading the references			
10	Column chromatography	Reading the references			
11	Column chromatography application	Reading the references			
12	Recognition of computerized drug design methods	Reading the references			
13	Molecular modeling study	Reading the references			
14	Molecular modeling study	Reading the references			
<b>Evaluation Methods</b>		<b>Weight(%)</b>			
Midterm Exam		60			
General Exam		40			

**Resources**

The laboratory notes will be given to the students.