

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

**2024 - 2025 Academic Year**

**PHARMACOGNOSY I**

**Syllabus**

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
PHARMACOGNOSY I	PHA3114147	Fall Semester	2+0	2	4
<b>Prerequisites Courses</b>	FARMASÖTİK BOTANİK; FARMASÖTİK BOTANİK UYGULAMA				
<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>	Assist.Prof. Şule Nur KARAVUŞ				
<b>Name of Lecturer(s)</b>	Assist.Prof. Şule Nur KARAVUŞ				
<b>Assistant(s)</b>					
<b>Aim</b>	To provide information about the biologically active compounds and drug excipients from plants and other biological resources, as well as explanation of their classification, pharmacological activities and usage.				
<b>Course Content</b>	This course contains; 1. Introduction to Pharmacognosy,2. Carbohydrates, monosaccharides,3. Oligosaccharides, homogeneous polysaccharides,4. Heterogeneous polysaccharides,5. Glycosides, Cardiotonic glycosides,6. Saponins,7. Phenolics-Shikimates-Phenylpropane derivatives, Phenols, Phenolic acids,Coumarins,8. Lignans, neolignans,9. Phenylpropane chain elongation derivatives,10. Flavonoids,11. Anthocyanins,12. Tannins,13. Polyketides-Quinones, phloroglucinols,14. Glucosinolates, cyanogenic glycosides, iridoids.				
<b>Course Learning Outcomes</b>				<b>Teaching Methods</b>	<b>Assessment Methods</b>
1. Define basic principles of Pharmacognosy				10, 14, 16, 18, 19, 9	A, D, E
1.1. Explain history of pharmacognosy.				14, 19, 9	A, D, E
1.2. Explain importance of Pharmacognosy				10, 14, 16, 19, 9	A, D, E
1.3. Define research techniques in Pharmacognosy				10, 14, 16, 19, 9	A, D, E
2. Define simple and complex carbohydrate compounds.				10, 14, 16, 19, 9	A, D, E
2.1. Explain mono- and oligosaccharides found in medicinal plants.				10, 14, 16, 19, 9	A, D, E
2.2. Define polisaccharides (homogeneous) and their biological activities.				10, 14, 16, 19, 9	A, E
2.3. Explain structures of polysaccharides (heterogeneous) that form mucilaginous substances, gum and pectin.				10, 14, 16, 19, 9	A, D, E
3. Define glycosides and phenolic substances.				10, 14, 16, 19, 9	A, D, E
3.1. Explain structures of carbon-, nitrogen-, sulfur-, simple alcohol glycosides.				10, 14, 16, 19, 9	A, D, E
3.2. Define anthracene, flavonoid, anthocyanin and other phenolic glycosides.				10, 14, 16, 19, 9	A, D, E
3.3. Interpret biological activities of cardiotonic glycosides and saponins.				10, 14, 16, 19, 9	A, D, E
<b>Teaching Methods</b>	10: Discussion Method, 14: Self Study Method, 16: Question - Answer Technique, 18: Micro Teaching Technique, 19: Brainstorming Technique, 9: Lecture Method				
<b>Assessment Methods</b>	A: Traditional Written Exam, D: Oral Exam, E: Homework				
<b>Lecture Schedule</b>					
<b>Sequence</b>	<b>Topics</b>	<b>Preliminary Preparation</b>			
1	1. Introduction to Pharmacognosy	1, 2, 3, 4,5			
2	2. Carbohydrates, monosaccharides	1, 2, 3, 4,5			
3	3. Oligosaccharides, homogeneous polysaccharides	1, 2, 3, 4,5			
4	4. Heterogeneous polysaccharides	1, 2, 3, 4,5			
5	5. Glycosides, Cardiotonic glycosides	1, 2, 3, 4,5			
6	6. Saponins	1, 2, 3, 4,5			
7	7. Phenolics-Shikimates-Phenylpropane derivatives, Phenols, Phenolic acids,Coumarins	1, 2, 3, 4, 5			
8	8. Lignans, neolignans	1, 2, 3, 4, 5			
9	9. Phenylpropane chain elongation derivatives	1, 2, 3, 4, 5			
10	10. Flavonoids	1, 2, 3, 4, 5			
11	11. Anthocyanins	1, 2, 3, 4, 5			
12	12. Tannins	1, 2, 3, 4, 5			
13	13. Polyketides-Quinones, phloroglucinols	1, 2, 3, 4, 5			
14	14. Glucosinolates, cyanogenic glycosides, iridoids	1, 2, 3, 4, 5			
<b>Evaluation Methods</b>		<b>Weight(%)</b>			
Midterm Exam		40			
General Exam		60			

Resources	
1-Pharmacognosy I lecture notes will be provided. 2- Pharmacognosy, Phytochemistry, Medicinal Plants, Jean Bruneton, Intercept Ltd., 2nd Edition, 1999. 3- Trease and Evans Pharmacognosy, William C. Evans, Elsevier, 16th Edition, 2009. 4- Farmakognozî -1, M. Tanker ve N. Tanker, Ankara Üniversitesi Basımevi, Yayın no. 66, 1991. 5- Heinrich, M. (2012) Fundamentals of Pharmacognosy and Phytotherapy 2Ed. Elsevier Health Sciences	