School of Pharmacy / School of Pharmacy (English)

2024 - 2025 Academic Year

PHARMACOGNOSY III

Syllabus

Course Description					
Name	**Code**	**Semester**	**T+A Hour**	**Credit**	**ECTS**
PHARMACOGNOSY III	PHA4114866	Fall Semester	2+0	2	4

Prerequisites Courses	
Recommended Elective Courses	
Language of Instruction	English
Course Level	First Cycle (Bachelor's Degree)
Course Type	Required
Course Coordinator	Assist.Prof. Ayşe Esra KARADAĞ
Name of Lecturer(s)	Assist.Prof. Ayşe Esra KARADAĞ
Assistant(s)	
Aim	The aim of this course is to provide information about the lipids and essential oils; summarize their chemical properties, biological activities and uses. Lipids, terpenoids and lipid and essential oil containing drugs are the subject of Pharmacognosy III.
Course Content	This course contains; Lipids ,Drugs containing lipids,Definition, biosynthetic pathway and properties of terpenoids ,Distribution and structure of monoterpenes and sesquiterpenes,Definition, physical properties, chemical composition and functions ofessential oils,Methods of production for essential oils, quality control for drugs containingessential oils and quality control of essential oils.,Pharmacological properties and uses of drugs containing essentialoils.,Acyclic monoterpene containing-drugs,Monocyclic monoterpene and bicyclic monoterpene containing drugs,Sesquiterpene containing-drugs,Aromatic compounds containing-essential oil drugs,Resin, oleoresin, oleogumresin and balsam-containing drugs,Diterpenoids, Triterpenoids and Tetraterpenes-Carotenoids,Aromatherapy.

Course Learning Outcomes	**Teaching Methods**	**Assessment Methods**
1. Will be able to classify chief drugs containing lipids.	10, 16, 9	A, D, E
1.1. Define the biosynthetic pathway of terpenoids.	10, 16, 9	A, D, E
1.2. Classify terpenic compounds.	10, 16, 9	A, D, E
1.3. Explain physical and chemical properties of essential oils.	10, 16, 9	A, D, E
1.4. Evaluate the isolation technics of essential oils.	10, 16, 9	A, D, E
2. Will be able to summarize biological activity of drugs containing essential oils.	10, 16, 9	A, D, E
2.1. Discuss pharmacological effects of essential oils.	10, 16, 9	A, D, E
2.2. Define toxicological effects of essential oils.	10, 16, 9	A, D, E
2.3. Express uses of essential oils.	10, 16, 9	A, D, E
3. Will be able to summarize biological activity of drugs containing resins.	10, 16, 9	A, D, E
3.1. Will be able to summarize biological activity of drugs containing balsam.	10, 16, 9	A, D, E
3.2. Evaluate the isolation methods of resins, oleoresins and balsams.	10, 16, 9	A, D, E
3.3. Will be able to summarize biological activity of carotenoids.	10, 16, 9	A, D, E

Teaching Methods	10: Discussion Method, 16: Question - Answer Technique, 9: Lecture Method
Assessment Methods	A: Traditional Written Exam, D: Oral Exam, E: Homework

Lecture Schedule

Sequence	**Topics**	**Preliminary Preparation**
1	Lipids	1.2.3.4
2	Drugs containing lipids	1,2,3,4
3	Definition, biosynthetic pathway and properties of terpenoids	1,2,3,4
4	Distribution and structure of monoterpenes and sesquiterpenes	1,2,3,4
5	Definition, physical properties, chemical composition and functions ofessential oils	1,2,3,4
6	Methods of production for essential oils, quality control for drugs containingessential oils and quality control of essential oils.	1,2,3,4
7	Pharmacological properties and uses of drugs containing essentialoils.	1,2,3,4
8	Acyclic monoterpene containing-drugs	1,2,3,4
9	Monocyclic monoterpene and bicyclic monoterpene containing drugs	1,2,3,4
10	Sesquiterpene containing-drugs	1,2,3,4
11	Aromatic compounds containing-essential oil drugs	1,2,3,4
12	Resin, oleoresin, oleogumresin and balsam-containing drugs	1,2,3,4
13	Diterpenoids, Triterpenoids and Tetraterpenes-Carotenoids	1,2,3,4
14	Aromatherapy	1,2,3,4

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

Resources
1-Pharmacognosy III lecture notes will be provided. 2- Fundamentals of Pharmacognosy and Phytotherapy, M. Heinrich, J. Barns, S. Gibbons, E.M. Williamson, Churchill Livingstone, London, 2004. 3- Pharmacognosy, Phytochemistry, Medicinal Plants, J. Bruneton, Lavousier Publishing, London, New York, 1999. 4- Trease and Evans Pharmacognosy, William C. Evans, Elsevier, 16th Edition, 2009.