Course Syllabus

Code - Course Title	**ECZ248 - Introduction to Pharmacognosy and Phytopharmacy**
Course Type	IV. SEMESTER
Laboratory + Practice	4+1
ECTS	**5.0**
Language of Instruction	Türkçe
Course Type	Required Courses
Course Instructor(s)	PROF. DR. FATİH DEMİRCİ, PROF. DR. GÜLMİRA ÖZEK

Mode of Delivery	The mode of delivery of this course is Face to face
Prerequisites	There is no prerequisite or co-requisite for this course.
Courses Recomended	There is no recommended optional programme component for this course.
Work Placement	Not Applicable

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 1		Introduction to Pharmacognosy/Organoleptic, Macroscopic and Microscopic Examination of Herbal Drugs I: Starch and Leaf	
Week - 2		The cultivation and trade of herbal drugs./Organoleptic, Macroscopic and Microscopic Examination of Herbal Drugs II: Leaf and flowers	
Week - 3		Pharmacognosy and biosynthesis. / Organoleptic, Macroscopic and Microscopic Examination of Herbal Drugs II: Fruit and seed.	
Week - 4		Biotechnology in Pharmacognosy. / Organoleptic, Macroscopic and Microscopic Examination of Herbal Drugs IV: Unknown Sample Study	
Week - 5		Pharmacognosy methods in Pharmacopeia / Organoleptic, Macroscopic and Microscopic Examination of Herbal Drugs V: Root, Bark, Rhizome and Tuber	
Week - 6		The other analysis methods in Pharmacognosy. / Organoleptic, Macroscopic and Microscopic Examination of Herbal Drugs IV: Unknown Sample Study	
Week - 7		Extraction and distillation. / Selection of Solvent for Extractions	
Week - 8		The separation and purification of natural products and structure determination of natural drug raw materials. / Principles of Thin Layer Chromatography and Separation of Atropine and Papaverine by TLC	
Week - 9		Phytochemical (active) substances: carbohydrates and their derivatives, enzymes and other proteins and their drugs. / Identification reactions of Carbohydrates, identification reactions of gums, identification reactions of agar-agar.	
Week - 10		Phytochemical (active) substances: carbohydrates and their derivatives, enzymes and other proteins and their drugs. / Wheat Starch Production, Dextrin Production, Gravimetric Water Quantity Determination	

Course Syllabus

Weeks	Learning Outcomes	Topics	Teaching Methods
Week - 11		Phytochemical (active) substances: glycosides and their drugs. / Identification reactions of Cyanogenetic Glycosides, Identification reactions of Flavon Glycosides	
Week - 12		Phytochemical (active) substances: glycosides and their drugs. / Identification reactions of Cardiotonic Glycosides, Total Flavonoid Quantification	
Week - 13		Phytochemical (active) substances: glycosides and their drugs. / Identification reactions of saponins, determination of foaming index	
Week - 14		Phytochemical (Active) Substances: glycosides and drugs. / Saponin Diagnostic Reactions Foaming Index Determination	

Learning Outcomes

#	Learning Outcome
1	Will be able to evaluate the definition and history of pharmacognosy will be discussed, and its relevance to other branches of science.
2	Will be able to evaluate the place of pharmacognosy in pharmacy and its current importance.
3	will be able to evaluate the supply and collection of herbal drugs from the natural environment.
4	Will be able to evaluate the culture of medicinal plants.
5	Will be able to evaluate the post-harvest processes applied to herbal drugs.
6	Will be able to evaluate packaging and storage of herbal drugs.
7	will be able to evaluate the market and trade of herbal drugs.
8	Will be able to evaluate the importance of biosynthesis in pharmacognosy.
9	Will be able to evaluate primary metabolites.
10	Will be able to evaluate secondary metabolites.
11	Will be able to evaluated the biotransformation methods used in pharmacognosy.
12	Will be able to evaluate cell and tissue culture in secondary metabolite production.
13	Will be able to evaluate the concept of pharmacopoeia.
14	Will be able to evaluate the macroscopic and organoleptic methods applied to herbal drugs.
15	Will be able to evaluate the microscopic methods applied to herbal drugs.
16	Will be able to evaluate the determination of foreign matter amount in herbal drugs.
17	Will be able to evaluate the controls applied to essential oils.
18	Will be able to evaluate pesticide and exotoxin controls in herbal drugs.
19	Will be able to evaluate adulteration in herbal drugs.
20	Will be able to evaluate biological methods applied to herbal drugs.
21	Will be able to evaluate the extract and extraction.
22	Will be able to evaluate the extraction methods.
23	Will be able to evaluate distillation definitions and methods.
24	Will be able to evaluate separation and purification methods in natural products

Learning Outcomes

#	Learning Outcome
25	Will be able to evaluate spectroscopic methods in the determination of the structure of natural drug raw materials.
26	Will be able to evaluate carbohydrates and their derivatives.
27	Will be able to evaluate Enzymes and other proteins
28	Will be able to evaluate glycosides
29	Will be able to evaluate macroscopic and organoleptic methods.
30	Will be able to evaluate microscopic methods.
31	Will be able to evaluate extraction methods.
32	Will be able to evaluate Carbohydrates and Derivatives, Enzymes and Other Proteins
33	Will be able to evaluate glycosides.

Sustainable Development Goals

No content has been provided.

Course Theme

No content has been provided.

AKTS Workload

Activity	Duration (Hour)	Count	Workload
Teorik Derse Katılım	0	0	0
Sınıf Dışı Çalışma (Ön Hazırlık & Pekiştirme Amaçlı)	0	0	0
Ödevler	0	0	0
Proje - Rapor - Sunum Hazırlama	0	0	0
Ara Sınav Hazırlığı (sınav süresi dahil)	0	0	0
Final Sınavı Hazırlığı (sınav süresi dahil)	0	0	0
Uygulama (Laboratuvar, Müzik/Enstrüman Uygulaması, Atölye/Saha Çalışması vb.)	0	0	0
Staj Uygulaması	0	0	0
		Calculated ECTS	**0**

Assessment Method and Passing Requirements

No content has been provided.