

General Info

Objectives of the Course

The aim of the course is to provide students with the basic concepts of Botany and to enable them to recognize plants.

Course Contents

Botany and its importance. Structures of cells, tissues, and organs in plants. Structure and functions of vegetative (root, stem, leaf) and reproductive (flower, fruit, seed) organs. Reproduction and alternation of generations.

Recommended or Required Reading

Y. AKMAN, K. GÜNEY, Botanik, Palme Yayın, 2005. S. YENTÜR, Bitki Anatomisi, İstanbul Üniv. Fen-Ed. Fak. Basımevi, 1984. Ö. SEÇMEN, Y. GEMİCİ, E. LEBLEBİCİ, G. GÖRK, L. BEKAT, Tohumlu Bitkiler Sistematigi, Ege Üniv. Basımevi, 1989. H. MALYER, Z. GENÇ, Botanik Uygulamaları Morfolojisi, Uludağ Üniv. Basımevi, 1994.

Planned Learning Activities and Teaching Methods

There is no assistant.

Recommended Optional Programme Components

The theory topics are covered in lectures with the help of PowerPoint presentations and the chalkboard. Students are encouraged to ask questions. The objects to be examined are sectioned together and examined under a microscope.

Instructor's Assistants

There is no assistant.

Presentation Of Course

Theoretical topics are covered in face-to-face lessons using PowerPoint presentations and whiteboards. Students are encouraged to ask questions. In practical lessons, the objects to be examined are sectioned together and examined under a microscope.

Dersi Veren Öğretim Elemanları

Assoc. Prof. Dr. Ata Eskin

Program Outcomes

1. Makes the plant kingdom and plant naming.
2. Distinguish between plant and animal cells.
3. Recognizes the cell.
4. Understand the vegetative and generative organs of plants and their functions.
5. Understands the relationship between plants and their environment.

Weekly Contents

Order	PreparationInfo	Laboratory	TeachingMethods	Theoretical	Practise
1	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005. S. YENTÜR, Plant Anatomy, İstanbul Univ. Faculty of Science-Ed. Publishing House, 1984. Ö. SEÇMEN, Y. GEMİCİ, E. LEBLEBİCİ, G. GÖRK, L. BEKAT, Systematics of Seed Plants, Ege Univ. Publishing House, 1989. H. MALYER, Z. GENÇ, Morphology of Botanical Applications, Uludağ Univ. Publishing House, 1994. Weekly lecture notes given to students.		Slide show, explanation of terms, topic explanation and question and answer.	General botany sections, concepts in cytology (protoplasm, cytoplasm, vacuole).	
2	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005. S. YENTÜR, Plant Anatomy, İstanbul Univ. Faculty of Science-Ed. Publishing House, 1984. Ö. SEÇMEN, Y. GEMİCİ, E. LEBLEBİCİ, G. GÖRK, L. BEKAT, Systematics of Seed Plants, Ege Univ. Publishing House, 1989. H. MALYER, Z. GENÇ, Morphology of Botanical Applications, Uludağ Univ. Publishing House, 1994. Weekly lecture notes given to students.		Slide show, explanation of terms, topic explanation and question and answer.	Concepts in cytology (Endoplasmic Reticulum, Mitochondria, Ribosomes, Nucleus, plastids).	
3		Laboratory practice on Organic Macromolecules in Living Organisms (Presence of Starch and Fat).			

Order	PreparationInfo	Laboratory	TeachingMethods	Theoretical	Practise
4	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005. S. YENTÜR, Plant Anatomy, İstanbul Univ. Faculty of Science-Ed. Publishing House, 1984. Ö. SEÇMEN, Y. GEMİCİ, E. LEBLEBİCİ, G. GÖRK, L. BEKAT, Systematics of Seed Plants, Ege Univ. Publishing House, 1989. H. MALYER, Z. GENÇ, Morphology of Botanical Applications, Uludağ Univ. Publishing House, 1994. Weekly lecture notes given to students.		Slide show, explanation of terms, topic explanation and question and answer.	Essential oils, Resins and Balsams, Tannins and Crystals.	
5	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005. S. YENTÜR, Plant Anatomy, İstanbul Univ. Faculty of Science-Ed. Publishing House, 1984. Ö. SEÇMEN, Y. GEMİCİ, E. LEBLEBİCİ, G. GÖRK, L. BEKAT, Systematics of Seed Plants, Ege Univ. Publishing House, 1989. H. MALYER, Z. GENÇ, Morphology of Botanical Applications, Uludağ Univ. Publishing House, 1994. Weekly lecture notes given to students.		Slide show, explanation of terms, topic explanation and question and answer.	Cell Wall concept.	
6		General Characteristics of the Cell, Comparison of Plant and Animal Cells			
7	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005. S. YENTÜR, Plant Anatomy, İstanbul Univ. Faculty of Science-Ed. Publishing House, 1984. Ö. SEÇMEN, Y. GEMİCİ, E. LEBLEBİCİ, G. GÖRK, L. BEKAT, Systematics of Seed Plants, Ege Univ. Publishing House, 1989. H. MALYER, Z. GENÇ, Morphology of Botanical Applications, Uludağ Univ. Publishing House, 1994. Weekly lecture notes given to students.		Slide show, explanation of terms, topic explanation and question and answer.	The concept of physiology (metabolism, development and movement physiology).	
8				Midterm Exam.	
9	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005. S. YENTÜR, Plant Anatomy, İstanbul Univ. Faculty of Science-Ed. Publishing House, 1984. Ö. SEÇMEN, Y. GEMİCİ, E. LEBLEBİCİ, G. GÖRK, L. BEKAT, Systematics of Seed Plants, Ege Univ. Publishing House, 1989. H. MALYER, Z. GENÇ, Morphology of Botanical Applications, Uludağ Univ. Publishing House, 1994. Weekly lecture notes given to students.		Slide show, explanation of terms, topic explanation and question and answer.	Organography: Vegetative organs; Root (morphology, anatomy, metamorphosis).	
10		Observation of Mitosis in Germinated Root Tips of Onion Plants			
11	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005. S. YENTÜR, Plant Anatomy, İstanbul Univ. Faculty of Science-Ed. Publishing House, 1984. Ö. SEÇMEN, Y. GEMİCİ, E. LEBLEBİCİ, G. GÖRK, L. BEKAT, Systematics of Seed Plants, Ege Univ. Publishing House, 1989. H. MALYER, Z. GENÇ, Morphology of Botanical Applications, Uludağ Univ. Publishing House, 1994. Weekly lecture notes given to students.		Slide show, explanation of terms, topic explanation and question and answer.	Organography: Vegetative organs; Leaf (morphology, anatomy, metamorphosis).	
12	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005. S. YENTÜR, Plant Anatomy, İstanbul Univ. Faculty of Science-Ed. Publishing House, 1984. Ö. SEÇMEN, Y. GEMİCİ, E. LEBLEBİCİ, G. GÖRK, L. BEKAT, Systematics of Seed Plants, Ege Univ. Publishing House, 1989. H. MALYER, Z. GENÇ, Morphology of Botanical Applications, Uludağ Univ. Publishing House, 1994. Weekly lecture notes given to students.		Slide show, explanation of terms, topic explanation and question and answer.	Organography: Generative organs; Flower (formula, diagram, inflorescences, pollen and embryo sac formation).	
13		Examination of Male and Female Reproductive Organs in the Flower of a Plant			

Order	PreparationInfo	Laboratory	TeachingMethods	Theoretical	Practise
14	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005. S. YENTÜR, Plant Anatomy, İstanbul Univ. Faculty of Science-Ed. Publishing House, 1984. Ö. SEÇMEN, Y. GEMİCİ, E. LEBLEBİCİ, G. GÖRK, L. BEKAT, Systematics of Seed Plants, Ege Univ. Publishing House, 1989. H. MALYER, Z. GENÇ, Morphology of Botanical Applications, Uludağ Univ. Publishing House, 1994. Weekly lecture notes given to students.		Slide show, explanation of terms, topic explanation and question and answer.	Seed, definition, monocot and dicot seed structure, active and passive dispersal modes of seeds, reproduction and types of reproduction (vegetative and generative reproduction).	
15	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005. S. YENTÜR, Plant Anatomy, İstanbul Univ. Faculty of Science-Ed. Publishing House, 1984. Ö. SEÇMEN, Y. GEMİCİ, E. LEBLEBİCİ, G. GÖRK, L. BEKAT, Systematics of Seed Plants, Ege Univ. Publishing House, 1989. H. MALYER, Z. GENÇ, Morphology of Botanical Applications, Uludağ Univ. Publishing House, 1994. Weekly lecture notes given to students.		Slide show, explanation of terms, topic explanation and question and answer.	Seed, definition, monocot and dicot seed structure, active and passive dispersal modes of seeds, reproduction and types of reproduction (vegetative and generative reproduction).	

Workload

Activities	Number	PLEASE SELECT TWO DISTINCT LANGUAGES
Final	1	1,00
Bütünleme	1	1,00
Teorik Ders Anlatım	14	2,00
Tartışmalı Ders	1	3,00
Rapor	4	3,00
Ders Öncesi Bireysel Çalışma	14	2,00
Ders Sonrası Bireysel Çalışma	14	1,00
Ev Ödevi	8	1,00
Derse Katılım	3	1,00
Laboratuvar	14	1,00

Assesments

Activities	Weight (%)
Ara Sınav	40,00
Final	60,00

	P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14
L.O. 1	0	1							2					1
L.O. 2	0			2					2					1
L.O. 3	0								2					1
L.O. 4	0			4					2					1
L.O. 5									2					

Table :

- P.O. 1 :** Tıbbi ve Aromatik bitkiler tarımı için gerekli temel bilim konularını öğrenebilme.
- P.O. 2 :** Alanıyla ilgili bitkileri doğadan toplamayı, tarımsal yetiştiriciliği, üretim ve çoğaltım yöntemlerini açıklar ve uygular.
- P.O. 3 :** Tıbbi ve Aromatik bitki türlerinde genetik ve ıslah konularını öğrenebilme.
- P.O. 4 :** Tıbbi ve Aromatik bitki üretim materyallerini (tohum, çelik) üretim tekniklerini öğrenebilme ve uygulayabilme.
- P.O. 5 :** Tıbbi ve Aromatik bitkilerin değerlendirme teknolojilerini öğrenebilme ve uygulayabilme
- P.O. 6 :** Tıbbi ve Aromatik bitkilerde bitki besleme, organik gübreleme ve sulama yöntemlerini öğrenebilme ve uygulayabilme
- P.O. 7 :** Tıbbi ve Aromatik bitkilerde, hastalık ve zararlılarla mücadele yöntemlerini öğrenebilme ve uygulayabilme.
- P.O. 8 :** Tıbbi ve Aromatik bitkilerden elde edilen ürünlerin kalite kontrolü, muhafazası ve pazara hazırlanması konusunda bilgi sahibi olabilmek.
- P.O. 9 :** Tıbbi ve Aromatik bitkilerin kültürü için gerekli temel konuları öğrenebilme
- P.O. 10 :** Yeni tarımsal teknolojilerin üreticiye benimsetilmesinde kullanılacak araç ve yöntemler konusunda bilgi sahibi olabilmek.
- P.O. 11 :** Mesleki etik ve sorumluluk bilincine sahip olma
- P.O. 12 :** Sağlık, tarım, gıda, çevre ve enerji gibi insan hayatı için kritik öneme sahip alanlardaki ihtiyaç ve sorunlara biyoteknolojinin sunduğu imkanlardan yararlanarak çözüm üretebilmek
- P.O. 13 :** Alanında karşılaştığı sorunları ve konuları bağımsız olarak analitik ve eleştirel bir yaklaşımla değerlendirir ve çözüm önerisi sunar.
- P.O. 14 :** Bilgisayar ve internet teknolojilerini kullanarak, her türlü bilimsel bilgiye ulaşabilme becerisine sahip olabilmek.
- L.O. 1 :** Bitkiler alemi ve bitki isimlendirilmesini yapar.
- L.O. 2 :** Bitki ve hayvan hücrelerini ayırt eder.
- L.O. 3 :** Hücreyi tanıır.
- L.O. 4 :** Bitkilerdeki vejetatif ve generatif organlarını ve görevlerini kavrar.
- L.O. 5 :** Bitkinin çevreyle olan ilişkilerini kavrar.