

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

Lectures, question and answer

Recommended Optional Programme Components

Students are required to have their aprons and equipment with them before coming to class.

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	Preparation Info	Laboratory	Teaching Methods	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		Slideshow, 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		Slideshow, explanation of terms, topic explanation and question and answer	Concepts in cytology (Endoplasmic Reticulum, Mitochondria, Ribosomes, Nucleus, plastids).	
3		Laboratory practice on Organic Macromolecules (Presence of Starch and Fat) in Living Organisms.			

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4	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005.S. YENTÜR, Plant Anatomy, İstanbul Univ.Faculty ofScience-Ed. Publishing House, 1984. Ö.SEÇMEN, Y. GEMİCİ,E.LEBLEBİCİ, G. GÖRK,L. BEKAT,Systematics ofSeed 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		Slideshow, 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 ofScience-Ed. Publishing House, 1984. Ö.SEÇMEN, Y. GEMİCİ,E.LEBLEBİCİ, G. GÖRK,L. BEKAT,Systematics ofSeed 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		Slideshow, explanation of terms, topic explanation and question and answer	Cell Wall concept.	
6		General Cell Properties, Comparison of Plant and Animal Cells			
7	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005.S. YENTÜR, Plant Anatomy, İstanbul Univ.Faculty ofScience-Ed. Publishing House, 1984. Ö.SEÇMEN, Y. GEMİCİ,E.LEBLEBİCİ, G. GÖRK,L. BEKAT,Systematics ofSeed 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		Slideshow, 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 ofScience-Ed. Publishing House, 1984. Ö.SEÇMEN, Y. GEMİCİ,E.LEBLEBİCİ, G. GÖRK,L. BEKAT,Systematics ofSeed 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		Slideshow, 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 ofScience-Ed. Publishing House, 1984. Ö.SEÇMEN, Y. GEMİCİ,E.LEBLEBİCİ, G. GÖRK,L. BEKAT,Systematics ofSeed 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		Slideshow, 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 ofScience-Ed. Publishing House, 1984. Ö.SEÇMEN, Y. GEMİCİ,E.LEBLEBİCİ, G. GÖRK,L. BEKAT,Systematics ofSeed 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		Slideshow, explanation of terms, topic explanation and question and answer	Organography: Generative organs; Flower (formula, diagram, inflorescences, pollen and embryo sac formation).	
13		Examination of the Male and Female Reproductive Organs in the Flower of a Plant			
14	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005.S. YENTÜR, Plant Anatomy, İstanbul Univ.Faculty ofScience-Ed. Publishing House, 1984. Ö.SEÇMEN, Y. GEMİCİ,E.LEBLEBİCİ, G. GÖRK,L. BEKAT,Systematics ofSeed 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		Slideshow, explanation of terms, topic explanation and question and answer	Examination of the Male and Female Reproductive Organs in the Flower of a Plant	

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15	Y. AKMAN, K. GÜNEY, Botany, Palme Publishing, 2005.S. YENTÜR, Plant Anatomy, İstanbul Univ.Faculty ofScience-Ed. Publishing House, 1984. Ö.SEÇMEN, Y. GEMİCİ,E.LEBLEBİCİ, G. GÖRK,L. BEKAT,Systematics ofSeed 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		Slideshow, explanation of terms, topic explanation and question and answer	Examination of the Male and Female Reproductive Organs in the Flower of a Plant	

Workload

Activities	Number	PLEASE SELECT TWO DISTINCT LANGUAGES
Vize	1	1,00
Final	1	1,00
Bütünleme	1	1,00
Teorik Ders Anlatım	14	2,00
Uygulama / Pratik	3	3,00
Rapor	3	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	P.O. 15
L.O. 1	1								2						1
L.O. 2			2						2						1
L.O. 3									2						1
L.O. 4			4						2						1
L.O. 5									2						1

Table :

- P.O. 1 :** Organik tarım amaçlı üretimi yapılan bitkileri temel düzeydeki bilgi ve becerileri kullanarak tanıyabilme ve değerlendirme.
- P.O. 2 :** Organik tarımda üretim aşamasındaki ekolojik koşulları da dikkate alarak en uygun yetiştirme tekniğini uygulamak.
- P.O. 3 :** Bitki türlerinde genetik ve ıslah konularını öğrenebilme.
- P.O. 4 :** Bitki üretim materyallerini (tohum, çelik) üretim tekniklerini öğrenebilme ve uygulayabilme.
- P.O. 5 :** Alanı ile ilgili modern tarım tekniklerini takip eder ve pratiğe aktarır.
- P.O. 6 :** Bitki besleme, organik gübreleme ve sulama yöntemlerini öğrenebilme ve uygulayabilme
- P.O. 7 :** Bitkilerde, hastalık ve zararlılarla mücadele yöntemlerini öğrenebilme ve uygulayabilme.
- P.O. 8 :** Tarımdan elde edilen ürünlerin kalite kontrolü, muhafazası ve pazara hazırlanması konusunda bilgi sahibi olabilmek.
- P.O. 9 :** 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 :** Organik Tarım Kanunu ve Organik Tarımın Esasları ve Uygulamasına İlişkin Yönetmelik hükümleri doğrultusunda organik tarım işlemlerini sürdürebilme, yapabilmek, üretim yapabilmek
- 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.
- P.O. 15 :** Organik tarıma başlama, sürdürme, organik ürün sertifikası ve logosu almaya ilişkin gerekli başvuru işlemlerini bilebilme ve uygulayabilme
- L.O. 1 :** Bitkiler alemi ve bitki isimlendirilmesini yapar.
- L.O. 2 :** Bitki ve hayvan hücresini 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.