



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Fertilizer Analysis							
Course Code		LBT208		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	2	Practice	1	Laboratory	0
Objectives of the Course		It is aimed to learn the types of fertilizer, usage patterns, benefits, analyzes.							
Course Content		Determination of soil fertilizer needs, Determination methods of fertilizer need, Biological methods, Chemical (Extraction) Methods, Some laws related to soil fertility, TDetermination of fertilizer amount to be applied to oprah.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	Gübre Bilgisi Ders Notları, Prof. Dr. Süleyman Taban, Ankara Üniversitesi Ziraat Fakültesi Toprak Bölümü, Ankara
2	Değişik Organik Kökenli Gübrelerin Kimyasal Özellikleri, Işıl Demirtaş, Nuri Arı, Ahmet Arpacioğlu, Harun Kaya, Cevdet Özkan, Batı Akdeniz Tarımsal Araştırma Enstitüsü Müdürlüğü, 07100 Antalya
3	Gübre analizleri, Kaçar, B. ve Kütük, C., , Nobel Yayın, 2010, Ankara.
4	Toprak Bilgisi Ders Notu,Yrd. Doç. Dr. Hidayet Oğuz, 2008
5	Sağlam, M.T., 2005. Gübreler ve Gübreleme (Yedinci Baskı). Trakya Üniv. Tekirdağ Ziraat Fak. Yayın No: 149, Ders Kitabı No: 74, 363 sayfa, Tekirdağ
6	Toprak Bilgisi Ve Bitki Besleme, Abdulcebar ÖZDEMİR Seznur KAHRAMAN
7	Bitki Besleme Ve Gübreleme, Prof. Dr. Aydın Güneş, Prof. Dr. Mehmet Alpaslan, Prof. Dr. Ali İnal
8	Bahçecilik, Gübreleme, Milli Eğitim Bakanlığı, Ankara 2008
9	Bitki Besleme ve Gübreler, Rasim Arslan, Gıda Tarım Ve Hayvancılık Bakanlığı
10	Samsun Valiliği, İl Tarım Müdürlüğü, Organik Gübreler Ve Önemi, Mehmet Ali İnal
11	Millî Eğitim Bakanlığı, Kimya Teknolojisi, Ticari Gübre Analizleri, Ankara, 2012
12	Tarımda Kullanılan Kimyevi Gübrelere Dair Yönetmelik

Week	Weekly Detailed Course Contents	
1	Theoretical	Advancement and classification of fertilizers
	Practice	Investigation of Fertilizer Varieties
	Preparation Work	Supply of visual materials
2	Theoretical	Preparation of organic and chemical fertilizers for sampling
	Practice	Examination of Sampling Methods
	Preparation Work	Supply of visual materials
3	Theoretical	Introduction to Fertilizer Analyzes
	Practice	Examination of Analysis and Analysis Methods
	Preparation Work	Supply of visual materials
4	Theoretical	Moisture determination in fertilizers
	Practice	Examination of moisture determinations in fertilizer
	Preparation Work	Supply of visual materials
5	Theoretical	Determination of organic matter in fertilizers
	Practice	Examination of Organic Substance in Fertilizers
	Preparation Work	Supply of visual materials
6	Theoretical	Burning loss in fertilizers
	Practice	Investigation of combustion loss test with experimental examples
	Preparation Work	Supply of visual materials



7	Theoretical	Determination of free acidity and sieve analysis in fertilizers
	Practice	Free Acidity Determination and Analysis of Sieve Analysis by Examples
	Preparation Work	Supply of visual materials
8	Intermediate Exam	Mid-term Exam
9	Theoretical	Elemental analysis in fertilizers
	Practice	Sample Analysis of Fertilizer Element Analysis
	Preparation Work	Supply of visual materials
10	Theoretical	Determination of soil fertilizer needs
	Practice	Investigation of Soil Fertilizer Needs
	Preparation Work	Supply of visual materials
11	Theoretical	Determination methods of fertilizer need
	Practice	Examination of fertilizer needing methods by examples
	Preparation Work	Supply of visual materials
12	Theoretical	Chemical (Extraction) Methods, Biological methods
	Practice	Explanation of Chemical and Biological Methods
	Preparation Work	Supply of visual materials
13	Theoretical	Some laws related to soil fertility
	Practice	Examination of soil fertility laws
	Preparation Work	Supply of visual materials
14	Theoretical	Determination of fertilizer amount to be applied to soil
	Practice	The calculation of fertilizer amount to be applied to the soil
	Preparation Work	Supply of visual materials
15	Theoretical	Determination of fertilizer amount to be applied to soil
	Practice	Making the necessary fertilizer amount calculation with sample questions
	Preparation Work	Supply of visual materials
16	Final Exam	Final Exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Lecture - Practice	14	0	1	14
Midterm Examination	1	10	1	11
Final Examination	1	20	2	22
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Explain the types and importance of fertilizers
2	Basic fertilizer will be able to define analysis applications.
3	Determine the amount of fertilizer applied to the soil
4	The analysis will be able to make appropriate sampling.
5	He will be able to explain the methods of determining fertilizer needs.

Programme Outcomes (Laboratory Technology)

1	To be able to comprehend social, cultural and social responsibilities, to be able to follow national and international contemporary problems and developments
2	Atatürk is bound to Atatürk nationalism in the direction of principles and reforms; Adopting the national, moral, spiritual and cultural values of the Turkish people, open to universal and contemporary developments, the Turkish language is a rich, rooted and productive language; Have a love of language and a consciousness; To have the ability to use as much of a foreign language as he would need to read, taste and habit and professionally.
3	To be able to recognize the basic hardware units and operating systems of a computer, having information about internet usage and preparing documents, spreadsheets and presentations on computer by using office programs.
4	Acquires theoretical and practical knowledge at the basic level in mathematics, science and vocational field.
5	With the knowledge of laboratory technology in the field, he knows and analyzes problems, brings interpretation of data and suggests solutions.



6	In laboratories, according to the prepared business plan and program, necessary work can be done to obtain the desired quality products.
7	To have professional and ethical responsibility in business life.
8	Development and change are open, follow scientific social and cultural innovations, and develop themselves constantly.

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P4	4	4	4	4	4
P5	5	5	5	5	5
P6	5	5	5	5	5
P7	4	4	4	4	4
P8	4	4	4	4	4

