DISEASES OF FRUIT AND VINEYARDS

1	Course Title:	DISEASES OF FRUIT AND VINEYARDS
2	Course Code:	BTK4602-S
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	4
6	Semester:	8
7	ECTS Credits Allocated:	3.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	2.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. ÖZGÜR AKGÜN KARABULUT
15	Course Lecturers:	Prof. Dr. Özgür Akgün Karabulut
16	Contact information of the Course Coordinator:	E-posta: ozgurk@uludag.edu.tr Tel: 90.224.2941572 Adres: Uludağ Üni., Ziraat Fak. Bitki Koruma Bölümü Görükle Kampüsü, Bursa 16059, Türkiye
17	Website:	
18	Objective of the Course:	This course is designed to teach students the pre-postharvest symptoms of fruits and vineyards diseases, their economic importance, host plants, biology and control methods
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	

	1	To understand abiotic diseases factors and its symptoms
	2	To understand biotic diseases factors and its symptoms methods.
	3	To know cancer, root rot diseases and rust fungi in fruit , their economic importance, host plants, symptoms, biology and control methods
	4	To learn important stone fruit diseases, their economic importance, host plants, symptoms, biology and control methods
	5	To learn chestnut and walnut diseases, their economic importance, host plants, symptoms, biology and control methods
	6	To learn important citrus diseases in orchard, their economic importance, host plants, symptoms, biology and control
	7	To learn olive and olive tree diseases, their economic importance, host plants, symptoms, biology and control methods
	8	To learn important vineyard diseases, their economic importance, host plants, symptoms, biology and control methods
	9	To learn strawberry diseases, their economic importance, host plants, symptoms, biology and control methods
	10	To learn important postharvest diseases of fruits and vineyards

21	Course Content:	
	Course Content:	
Week	Theoretical	Practice
1	Abiotic diseases factors and its symptoms in fruits and vineyards	Introduction
2	Important apple diseases, their economic importance, host plants, symptoms, biology and control methods	Examination of apple scab and powdery mildew disease symptoms in apple and their microscopic examination of conidia and cleistothecium
3	Important pear and quince, their economic importance, host plants, symptoms, biology and control methods	Microscopic examination of Monilinia spp. conidia
4	Cancer, root rot diseases and rust fungi in fruit , their economic importance, host plants, symptoms, biology and control methods	Microscopic examination of rust fungi uredospores
5	Important apricot and plum diseases, their economic importance, host plants, symptoms, biology and control methods	Examination of Coryneum blight symptoms in apricot
6	Important peach and cherry diseases, their economic importance, host plants, symptoms, biology and control methods	Examination of Taphrina deformans symptoms in peach
7	Repeating courses and midterm exam	-
8	Chestnut and walnut diseases, their economic importance, host plants, symptoms, biology and control methods	Examination of Cryphonectria parasitica symptoms in chestnut trees
9	Citrus diseases in orchard, their economic importance, host plants, symptoms, biology and control methods	Examination of Alternaria spp. symptoms in citrus fruits
10	Important vineyard diseases, their economic importance, host plants, symptoms, biology and control methods	Macroscopic and microscopic examination of downy mildew in grapevine and powdery mildew in strawberry
11	Important postharvest diseases of grapes and stone fruits	Macroscopic and microscopic examination of P. italicum expansum in apple and Monilinia sp. in stone fruits
12	Important postharvest diseases of grapes and stone fruits	Macroscopic and microscopic examination of P. italicum expansum in apple and Monilinia sp. in stone fruits
13	Important postharvest diseases of grapes and stone fruits	Macroscopic and microscopic examination of P. italicum expansum in apple and Monilinia sp. in stone fruits
14	Important postharvest diseases of grapes and stone fruits	Macroscopic and microscopic examination of P. italicum expansum in apple and Monilinia sp. in stone fruits

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	0	0.00	0.00
Homeworks	1	9.00	9.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	6.00	6.00
Others	1	9.00	9.00
Final Exams	1	10.00	10.00
Total Work Load			90.00
Total work load/ 30 hr			3.00
ECTS Credit of the Course			3.00

22	Textbooks, References and/or Other Materials:	König, H., Unden, G., Fröhlich, J. 2009. Biology of Microorganisms on Grapes, in Must and in Wine. ISBN: 978-3-540-85462-3. 2009 Springer-Verlag Berlin Heidelberg. Horst, K., R. 2008. Westcott's Plant Disease Handbook, Seventh Edition. ISBN: 978-1-4020-4585-1. Springer-Verlag Berlin Heidelberg New York, 2008. Agrios, G.N. 2005. Plant Pathology. Fifth Edition, Academic Press, Inc. p952. K.G. Mukerji. Fruit And Vegetable Diseases. 2004. Kluwer Academic Publishers. Vidhyasekaran, P. 2004. Concise Encyclopedia of Plant Pathology. Published by Food Products Press. Thompson, A., K. 2003. Fruit and Vegetables Harvesting, Handling and Storage. Published by Blackwell Publishing Ltd. Baykal, N. 1994. Bahçe Bitkileri Hastalıkları. U.Ü. Zir. Fak. Ders Notları. No:2, s85. Anonim, 1995. Zirai Mücadele Teknik Talimatları. Tarım Bakanlığı. Koruma ve Kontrol Genel Müdürlüğü.
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	30.00
Quiz	1	5.00
Home work-project	1	5.00
Final Exam	1	60.00
Total	4	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		

24 ECTS / WORK LOAD TABLE

25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS

	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0

ÖK7	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK8	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK9	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK10	0	3	3	0	3	0	0	0	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**