



**AYDIN ADNAN MENDERES UNIVERSITY
SULTANHISAR VOCATIONAL SCHOOL
PLANT AND ANIMAL PRODUCTION
SEEDLING PRODUCTION
COURSE INFORMATION FORM**

Course Title	In Nursery Micro-Fabrication Techniques								
Course Code	FY220			Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	2	Workload	50 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	Have knowledge for clonal seedling production and commercial matters through the use of tissue culture techniques.								
Course Content	Having knowledge about introduction to plant tissue culture techniques applications, general laboratory method, the importance of the nutrient media and culture conditions, tissue culture techniques, the clonal propagation and commercial production and gene transfers.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Individual Study, Problem Solving								
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Course notes of Lecturers
2	Internet

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to tissue culture techniques, definitions and the application fields
2	Theoretical	Establishment of general laboratory layout
3	Theoretical	Preparation of the nutrient media, sterilization and culture conditions
4	Theoretical	Plant regeneration
5	Theoretical	Callus Culture
6	Theoretical	Production of haploid plant
7	Theoretical	Diploiditaion ve doubled plant production
8	Intermediate Exam	Mid-term-exam
9	Theoretical	Embryo, protoplast and anther culture
10	Theoretical	To compose fringed root culture by means of Agrobacterium
11	Theoretical	In vitro plant abnormalities
12	Theoretical	Clonal reproduction and commercial production (in pome fruit).
13	Theoretical	Clonal reproduction and commercial production (in stone fruits).
14	Theoretical	Clonal reproduction and commercial production (in the berries et.al.).
15	Theoretical	Gene transfer to plants

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	2	3	1	8
Midterm Examination	1	6	1	7
Final Examination	1	6	1	7
Total Workload (Hours)				50
[Total Workload (Hours) / 25*] = ECTS				2

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	To learn basic concepts of tissue culture
2	Doku kültürü teknikleri ile klonal fidan üretim metodlarını öğrenmek
3	To gain the ability to prepare the nutrient medium
4	Having knowledge about the potential of tissue culture techniques in plant breeding
5	In vitro plant abnormalities

Programme Outcomes (Seedling Production)

1	Having knowledge of physiology and morphology characteristics, growth, development and biochemical events occurred in fruits, vegetables and ornamentals plants
2	Having knowledge of soil, climate and irrigation conditions grown fruits, vegetables and ornamentals plants
3	Having knowledge of identification, classification and the use areas of fruits, vegetables and ornamentals plants
4	Having practical and theoretical knowledge of production techniques of fruits, vegetables and ornamentals plants
5	Having ability to identify and to maintain diseases and pests of fruits, vegetables and ornamentals plants
6	Having knowledge of marketing techniques, standards, contributions to the economy of fruits, vegetables and ornamentals plants, legal issues
7	Having knowledge of facilities and builds grown fruits, vegetables and ornamentals plants, and tools and materials used.
8	Having ability to use effective own language and having knowledge of language in order to communicate own colleagues and own customers,
9	Having knowledge of Atatürk Principle and Revolutions and, ability to assimilate Atatürk Principle and Revolutions
10	Having an enough foreign language to able to follow new development in relation with nursery production

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

	L1	L2	L3	L4	L5
P1	5	5	5	5	5
P4	5	5	5	5	5

