

COURSE LIST Institute of Natural and Applied Sciences

Field : Field Crops

Course Title	Code	ECTS Credit	COMU Credit	Lecturer
Physiology of Range and Meadow Plants	ULP-21-TB001	7.5	3	Prof. Dr. Ahmet Gökkuş
Breeding in Open Pollinated Plants	ULP-21-TB002	5	3	Yrd. Doç. Dr. Cem Ömer Egesel
Plant Tissue Culture	ULP-21-TB003	5	3	Doç. Dr. Hakan Turhan
Pasture Establishment and Management (6)	ULP-21-TB004	6	3 0 3	Altıngül Özaslan Parlak
Plant Production Systems and Crop Rotation	ULP-21-TB005	5	3	Prof. Dr. Harun Baytekin

Course Code	ULP-21-TB001
Name of the Course in English	Physiology of Range and Meadow Plants
Name of the Course in Turkish	Çayır Mera Yem Bitkileri Fizyolojisi
Language of the Course	Turkish
Level of the Course	Master
Lecturer	Prof. Dr. Ahmet Gökkuş
ECTS Credit	7.5
COMU Credit	3
Description	Gas exchange and photosynthetic pathways, carbohydrate translocation in range plants, distribution and utilization of carbohydrate

	reserves, water relations of range plants, salinity effects on range plants, seed physiology, plant growth regulators, mineral cycling in range ecosystems, relations of range plant physiology and management.
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Course Code	ULP-21-TB002
Name of the Course in English	Breeding in Open Pollinated Plants
Name of the Course in Turkish	Yabancı Döllenen Bikilerin Islahı
Language of the Course	English
Level of the Course	Master
Lecturer	Yrd. Doç. Dr. Cem Ömer Egesel
ECTS Credit	5
COMU Credit	3
Description	<p>Weekly program</p> <ol style="list-style-type: none">1. History of breeding2. Importance of plant breeding3. General information on plant breeding methods4. Breeding methods in cross-pollinated plants5. Principle of heredity6. Resistance mechanisms of plants against unfavorable growth conditions7. Mid-term exam8. Resistance plant breeding approaches for drought and other environmental stresses9. Development of pests and disease

	<p>resistance cultivars</p> <p>10. Principles of hybrid variety production</p> <p>11. Modern plant breeding tools such as genetic transformation and haploid technology</p> <p>12. Variety registration procedure</p> <p>13. General evaluation and discussion in plant breeding</p> <p>14. Final exam</p>
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Course Code	ULP-21-TB003
Name of the Course in English	Plant Tissue Culture
Name of the Course in Turkish	Bitki Doku Kùltürü
Language of the Course	English
Level of the Course	Master
Lecturer	Doç. Dr. Hakan Turhan
ECTS Credit	5
COMU Credit	3
Description	<p>Weekly program</p> <p>15. History of Tissue Culture</p> <p>16. What is plant tissue culture?</p> <p>17. Plant tissue culture lab design and necessary equipments</p> <p>18. Discussion on advantages and disadvantages of plant tissue culture</p> <p>19. Lab Practice-chemical calculations and preparation of media.</p>

	<p>20. The factor influencing success of plant tissue culture</p> <p>21. Mid-term exam</p> <p>22. Sterilization methods – explant, tools, medium etc.</p> <p>23. Lab practice- Shoot tip culture of potato</p> <p>24. Callus culture</p> <p>25. Somatic embryogenesis</p> <p>26. Cell culture and bioreactors</p> <p>27. Anther culture</p> <p>28. Genetic transformation and general evaluation of lecture</p>
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Course Code	ULP-21-TB004
Name of the Course in English	Pasture Establishment and Management (6)
Name of the Course in Turkish	Mera Tesisi ve Yönetimi (3 0 3)
Language of the Course	English – Turkish
Level of the Course	Master
Lecturer	Altingül Özasan Parlak
ECTS Credit	6
COMU Credit	3 0 3
Description	<p>week 1. situations that require pasture</p> <p>week 2-3: deciding to seed</p> <p>week 4-6. species adaptation and selection</p> <p>week 6-7: meadow and range mixtures</p> <p>week 8: midexem</p>

	week 9: mixture to seed week 10-11:why range seedings fail week 12-14: management after seeding
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Course Code	ULP-21-TB005
Name of the Course in English	Plant Production Systems and Crop Rotation
Name of the Course in Turkish	Bitkisel Üretim Sistemleri ve Ekim Nöbeti
Language of the Course	Turkish
Level of the Course	Master
Lecturer	Prof. Dr. Harun Baytekin
ECTS Credit	5
COMU Credit	3
Description	Plant Production Systems used in field crops (dry, irrigated, moist, etc.), additive production models, erop rotation, second crop possibilities, fodder plants in crop rotation, allelopathic relations between cultivated plants, effects of rotation on disease, pest and weed management.