



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

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|--|---|--|------------|----------------------------|---|---------------------------------|---|------------|---|
| Course Title | | Agricultural Ecology | | | | | | | |
| Course Code | | TB108 | | Course Level | | First Cycle (Bachelor's Degree) | | | |
| ECTS Credit | 3 | Workload | 75 (Hours) | Theory | 2 | Practice | 0 | Laboratory | 0 |
| Objectives of the Course | | Understanding of natural and agricultural ecosystems with the system and the ecosystem, learning in effective environmental factors and alternative production systems on agricultural ecosystems | | | | | | | |
| Course Content | | The definition and development of ecology as a science, system, model and the bounding basic concepts, ecosystem structure and function, ecosystem energy flow and chemical matter cycles, agricultural ecosystems, light and temperature characteristics and the effect on plants, characteristics of the atmosphere and importance of the agricultural aspects, air movements, effect on plants of water and its of different states, soil and soil characteristics, biological factors, conventional and alternative farming systems, environmental problems caused by agriculture, sustainability. | | | | | | | |
| Work Placement | | N/A | | | | | | | |
| Planned Learning Activities and Teaching Methods | | | | Explanation (Presentation) | | | | | |
| Name of Lecturer(s) | | Prof. Mustafa SÜRMEN, Prof. Olcay ARABACI, Prof. Osman EREKUL | | | | | | | |

Assessment Methods and Criteria

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

Recommended or Required Reading

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| 1 | Turgut, İ., 2006. Tarımsal Ekoloji, ADÜ Yayınları No:12 |
| 2 | Boşgelmez, A., Boşgelmez, İ.İ., Savaşçı, S., Paslı, N., Kaynaş, S., 2000. Ekoloji I, ISVAK Yayın No: 6 |
| 3 | Boşgelmez, A., Boşgelmez, İ.İ., Savaşçı, S., Paslı, N., Kaynaş, S., 2000. Ekoloji II-Toprak, ISVAK Yayın No: 6 |
| 4 | 4. Farklı Kaynaklardan Derlenmiş Sunumlar ve Ders Notları İnternet Kaynakları |

| Week | Weekly Detailed Course Contents | |
|------|---------------------------------|--|
| 1 | Theoretical | The importance of environment, definition of ecology, natural resources |
| 2 | Theoretical | Systems models and limiting factors influence laws |
| 3 | Theoretical | Ecosystem, ecosystems and functions of the items |
| 4 | Theoretical | Ecosystem energy, photosynthesis |
| 5 | Theoretical | Primary and secondary production in ecosystem and flow of energy |
| 6 | Theoretical | Chemical cycles in ecosystems |
| 7 | Theoretical | Agricultural ecosystems |
| 8 | Intermediate Exam | Midterm exam |
| 9 | Theoretical | Environmental conditions in agricultural ecosystems, climatic factors, light |
| 10 | Theoretical | Temperature, the factors of affecting changes in temperature, thermoperiodism |
| 11 | Theoretical | The atmosphere, layers of atmosphere, composition of the atmosphere, the importance of the agricultural aspect |
| 12 | Theoretical | Water, air humidity, air humidity importance to plants, rainfall |
| 13 | Theoretical | Soil factors, soil texture, structure, plant nutrient elements, Biological Factors |
| 14 | Theoretical | Traditional and alternative farming systems |
| 15 | Theoretical | Environmental problems caused by agriculture, sustainability |
| 16 | Theoretical | Final Exam |

Workload Calculation

| Activity | Quantity | Preparation | Duration | Total Workload |
|---------------------|----------|-------------|----------|----------------|
| Lecture - Theory | 14 | 1 | 1 | 28 |
| Lecture - Practice | 14 | 1 | 1 | 28 |
| Midterm Examination | 1 | 5 | 1 | 6 |



| | | | | |
|---|---|----|---|----|
| Final Examination | 1 | 12 | 1 | 13 |
| Total Workload (Hours) | | | | 75 |
| [Total Workload (Hours) / 25*] = ECTS | | | | 3 |
| *25 hour workload is accepted as 1 ECTS | | | | |

Learning Outcomes

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|---|--|
| 1 | To understand the importance of environment and natural resources |
| 2 | To learn the principles of sustainability in natural and agricultural ecosystems |
| 3 | Acquiring informations about the environmental conditions of agricultural ecosystems |
| 4 | To compare conventional and alternative farming systems |
| 5 | . Finding solutions to environmental problems caused by agriculture |

Programme Outcomes (Dairy Technology)

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| 1 | Having sufficient infrastructure in basic sciences and engineering subjects and ability to use the theoretical and applied info instantly in this field. |
| 2 | Determining the modern techniques, tools and information technologies required for applications related with his field and ability to use them efficiently |
| 3 | Ability for planning, projecting, and designing, following up, analyzing and finding target-driven solutions related with his field |
| 4 | Ability to have professional ethic and awareness. |
| 5 | Ability to work, decide, express opinions orally and in written individually |
| 6 | Ability to participate team studies, taking responsibility, making leadership. |
| 7 | Ability to conceive Atatürk's principles and reforms, to communicate in Turkish and foreign language. |
| 8 | Ability to comprehend the necessity to learn for a life time, to monitor developments in science and technology and continuously renew himself. |
| 9 | Having sufficient level of information about production and quality control of milk and dairy products and also product development, increasing product quality and food security fields. |
| 10 | Ability to detect, define, solve problems related with his field and to select and apply suitable methods and modeling techniques for this purpose. |
| 11 | To be conscious about workplace applications, worker health, work security and environment subjects, to have knowledge about legal results of the engineering applications related with his subject. |

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

| | L1 | L2 | L3 | L4 | L5 |
|-----|----|----|----|----|----|
| P8 | 4 | 4 | 4 | 4 | 4 |
| P10 | 4 | 4 | 4 | 4 | 4 |

