



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

| | | | | | | | | | |
|--|---|---|------------|--|---|----------------------------------|---|------------|---|
| Course Title | | Energy Sources | | | | | | | |
| Course Code | | ÇS211 | | Course Level | | Short Cycle (Associate's Degree) | | | |
| ECTS Credit | 2 | Workload | 50 (Hours) | Theory | 2 | Practice | 0 | Laboratory | 0 |
| Objectives of the Course | | To provide information about the energy, is one of the decisive factors economic, cultural and social development of Countries, and the use of energy with the kinds of energy. | | | | | | | |
| Course Content | | Definition and types of energy. Renewable and non-renewable energy sources, and their importance in terms of human health and the environment . | | | | | | | |
| Work Placement | | N/A | | | | | | | |
| Planned Learning Activities and Teaching Methods | | | | Explanation (Presentation), Discussion, Case Study, Individual Study | | | | | |
| Name of Lecturer(s) | | Lec. Sevil ÖZCAN | | | | | | | |

Assessment Methods and Criteria

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

Recommended or Required Reading

| | |
|---|---|
| 1 | . Yarman, T. (2009), Enerji Kaynakları, Okan Üniv. Yayınları no. 6 |
| 2 | Acaroğlu, M. (2007), Alternatif Enerji Kaynakları, Nobel Yayınevi, Ankara. |
| 3 | Madra, Ö. (2007), Niçin daha Fazla Bekleyemeyiz: Küresel Isınma ve İklim Krizi, Agorakitaplığı, İstanbul. |
| 4 | Denhez, F. (2007), Küresel Isınma Atlası, çeviren: Özgür Adadağ, NTV yayınları, no: 8. |
| 5 | Saraçoğlu, N. (2010) Küresel İklim Değişimi, Biyoenerji ve Enerji Ormanlığı, Efil Yayınevi, Ankara. |

| Week | Weekly Detailed Course Contents | |
|------|---------------------------------|--|
| 1 | Theoretical | Definition of the energy and it's importance for living things. |
| | Preparation Work | Projection apparatus, slate, supporter books |
| 2 | Theoretical | Basic energy resource of the living things on earth, and the energy cycle. |
| | Preparation Work | Projection apparatus, slate, supporter books |
| 3 | Theoretical | Thermodynamic concepts and its laws. Classification of the energy. |
| | Preparation Work | Projection apparatus, slate, supporter books |
| 4 | Theoretical | Energy resources and the electricity energy. |
| | Preparation Work | Projection apparatus, slate, supporter books |
| 5 | Theoretical | Energy problem on the world. |
| | Preparation Work | Projection apparatus, slate, supporter books |
| 6 | Theoretical | Classical energy resources. |
| | Preparation Work | Projection apparatus, slate, supporter books |
| 7 | Theoretical | Nuclear energy |
| | Preparation Work | Projection apparatus, slate, supporter books |
| 8 | Intermediate Exam | Midterm |
| 9 | Theoretical | Unconventional energy sources. |
| | Preparation Work | Projection apparatus, slate, supporter books |
| 10 | Theoretical | Solar energy, its technologies and applications. |
| | Preparation Work | Projection apparatus, slate, supporter books |
| 11 | Theoretical | Biomass energy |
| | Preparation Work | Projection apparatus, slate, supporter books |
| 12 | Theoretical | Biogas energy |
| | Preparation Work | Projection apparatus, slate, supporter books |
| 13 | Theoretical | The wind energy and its source |
| | Preparation Work | Projection apparatus, slate, supporter books |
| 14 | Theoretical | Alternative fuels, used in engines. |



| | | |
|----|------------------|--|
| 14 | Preparation Work | Projection apparatus, slate, supporter books |
| 15 | Theoretical | Boron and energy. |
| | Preparation Work | Projection apparatus, slate, supporter books |

Workload Calculation

| Activity | Quantity | Preparation | Duration | Total Workload |
|---------------------------------------|----------|-------------|----------|----------------|
| Lecture - Theory | 14 | 0 | 2 | 28 |
| Assignment | 1 | 11 | 1 | 12 |
| Midterm Examination | 1 | 4 | 1 | 5 |
| Final Examination | 1 | 4 | 1 | 5 |
| Total Workload (Hours) | | | | 50 |
| [Total Workload (Hours) / 25*] = ECTS | | | | 2 |

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

| | |
|---|---|
| 1 | 1. To understand the importance of the energy for living organisms and Human life. |
| 2 | 2. To learn the basic energy source of the earth and the energy transformation |
| 3 | 3. To gain knowledge about the different energy types on the earth, and their characteristics |
| 4 | 4. Coupling renewable energy sources and the importance of them. |
| 5 | Explain the positive and negative aspects of different energy sources. |

Programme Outcomes (Environmental Health)

| | |
|----|--|
| 1 | They have the appropriate level of knowledge about the basic sciences which has an interaction with the environment and the environment itself. |
| 2 | They have gained the basic concepts, skills and qualifications in the Environmental health theoretical and practical lessons. And then they can establish the connections that are necessary to protect the environment and people's health in the light of these competencies. |
| 3 | They can use the approaches and the information of basic and applied research in different disciplines. They can follow the innovations and developments in their field, and have self-development competency with the terms of the day. |
| 4 | They know and apply the analysis methods used in the evaluation of environmental factors (drinking water, waste water treatment, air pollution, meteorological data, land values, food control, radiation measurement, etc.). |
| 5 | They have a professional and ethical consciousness, and have the ability to recognize the environmental problems and also can formulate a solution to these problems. They apply the gained knowledges and skills faced in real life situations, transfers the knowledge to individuals around, and wins the life-long learning behavior. |
| 6 | They are able to use their professional knowledge in their lives and behave sensitively toward the local and global environmental problems and effectively uses to the legislation and management tools the necessary for the solution. |
| 7 | Gained the ability to adapt the changing in a positive way themselves, to understand the core values and cultures of the society which are living. Sensitive to the universal and the social values, interests of the country, have adopted the concept of sustainable development, environmentally conscious, productive, behaves aware of the ethical and professional responsibility. |
| 8 | Provides a healthy interact of individual, society and the environment and take responsibility in the necessary situations for the continuity. |
| 9 | They gain the ecologically-based solving skills the problems and the delays that may arise in interaction with each other of living and nonliving environment. Interests of local and national, and Ecological and historical values of our country, and contribute to the protection and the development of them. |
| 10 | Exhibits the appropriate behaviours for the protection and the development of plants, animals, and inanimate environment, and the especially human health. |
| 11 | Knows the value of energy for life, recognizes the types of energy, and have conscious of the importance, using and dissemination of renewable energy sources. |
| 12 | Knows the properties of information and communication technologies, and uses them in the process efficiently and professionally. |
| 13 | They aware of the democracy, rule of law, human rights, the national and universal cultural characteristics, and sensitive towards to the nature, society and people. |
| 14 | Knows the importance of Atatürk's principles and reforms, make them a way of life. |
| 15 | Uses effectively the Turkish in speaking and writing. |
| 16 | Has at least one foreign language ability to be able to follow the knowledge in their profession and to communicate with colleagues. |
| 17 | To have the appropriate knowledge of medical sciences at the level of interest, to use specific medical terms and terminology of field |

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 |
| P2 | 4 | 4 | 4 | 4 | 5 |
| P3 | 4 | 4 | 4 | 4 | 5 |
| P4 | 3 | 3 | 3 | 3 | 5 |
| P5 | 3 | 3 | 3 | 3 | 5 |
| P6 | 3 | 3 | 3 | 3 | 5 |
| P7 | 3 | 3 | 3 | 3 | 4 |
| P8 | 3 | 3 | 3 | 3 | 4 |
| P9 | 3 | 3 | 3 | 3 | 3 |
| P10 | 4 | 4 | 4 | 4 | 5 |
| P11 | 5 | 5 | 5 | 5 | 5 |
| P12 | 3 | 3 | 3 | 3 | 3 |
| P13 | 3 | 3 | 3 | 3 | 3 |
| P14 | 3 | 3 | 3 | 3 | 3 |
| P15 | 5 | 5 | 5 | 5 | 5 |
| P16 | 5 | 5 | 5 | 5 | 5 |

