Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
New Energy Sources	FZK398	6. Semester	2 + 2	3.0	7.0

Prerequisites	None

Language of Instruction	Turkish
Course Level	Bacheclor's Degree (First Cycle)
Course Type	Elective
Mode of delivery	Face to face
Course Coordinator	Prof. Dr. İsmail TARHAN
Instructors	
Assistants	
Course Objectives	This course is an introduction to new energy sources. In this course, energy concept, new types of energy, mechanisms of energy production, energy sources and classification, production of solar and wind energies and utilization of their technologies will be discussed.
Course Content	Topics to be covered in this course include are energy concept and types, new energy sources and classification, new fuel types and ecological relations, the national potential for new energy sources, international potential for new energy sources, potential role and importance of national energy resources to world, alternative fuel research application in new energy sources, storage of renewable energies, efficient and conscious use of energy resources, efficient and conscious use of energy sources, energy safety and austerity, energy transmission and energy losses, the new energy sources and the importance in national progress, applications of different energy source.
Course Learning Outcomes	1) Interpret energy resources 2) Evaluate informations and applications related to advanced energy technologies 3) Administer utilizing energy resource consciously 4) Analyze on new energy sources and their properties. 5) Evaluate the effective use of different energy resources.

WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Energy concept and types	Oral lectures with interactive discussions, research, homework	

Quick Access

Physics
- Qualification Awarded
- Level of Qualification
- Qualification Requirements and Regulations
- Specific Admission Requirements
- Recognition of Prior Learning
- Profile of the Program
- Program Key Learning Outcomes
- Occupational Profile of Graduates
- Access to Further Studies
- Course Structure & Credits
- Exam Regulations & Assessment & Grading
- Graduation Requirements
- Mode of Study
- Programme Director(or Equivalent)
- Evaluation Questionnaire
- TYYÇ

Course Information
- Course Information
- Weekly Course Content
- Resources
- Course Category
- CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES
- ECTS credits and course workload

2. Week	new energy sources and classification	Oral lectures with interactive discussions, research, homework	
3. Week	New fuel types and ecological relations	Oral lectures with interactive discussions, research, homework	
4. Week	the national potential for new energy sources	Oral lectures with interactive discussions, research, homework	
5. Week	international potential for new energy sources	Oral lectures with interactive discussions, research, homework	
6. Week	Potential role and importance of national energy resources to world	Oral lectures with interactive discussions, research, homework	
7. Week	alternative fuel research application in new energy sources	Oral lectures with interactive discussions, research, homework	
8. Week	Mid-term exam	Written exam	
9. Week	Storage of renewable energies	Oral lectures with interactive discussions, research, homework	
10. Week	Efficient and conscious use of energy resources	Oral lectures with interactive discussions, research, homework	
11. Week	Efficient and conscious use of energy sources	Oral lectures with interactive discussions, research, homework	
12. Week	Energy safety and austerity	Oral lectures with interactive discussions, research, homework	
13. Week	Energy transmission and energy losses	Oral lectures with interactive discussions, research, homework	
14. Week	The new energy sources and the importance in national progress	Oral lectures with interactive discussions, research, homework	
15. Week	Applications of different energy source	Oral lectures with interactive discussions, research, homework	
16. Week	Final exam	Written exam	

RESOURCES

Recommended Sources
Hordeski,M.F., (2002). New Technologies for Energy Efficiency. Fairmont Press.
Christopher, H., Armsted, H., and Jefferson, W., (1987). A New Source of Energy. Chapman & Hall
Sitwell, O.F.G., (1997). The Search for a New Energy Source. Manhattan, Kansas: Johnson Energy Corp
Chnadler, G., and Graham, K., (1997). Alternative Energy Sources. 21st Century

ASSESSMENT

Measurement and Evaluation Methods and Techniques
Mid-term exam + Assignment + Research & Project and Presentation 40%, Final Exam 60%

COURSE CATEGORY

Course Category	Percentage
Support Courses	% 100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2	DK3	DK4	DK5
PY1	4	5	5	5	5	5
PY2	5	5	5	3	5	5
PY3	4	5	5	5	5	5
PY4	3	4	4	3	4	4
PY5	4	4	4	4	4	4
PY6	5	5	5	5	5	4
PY7	4	4	5	5	4	4
PY8	5	4	4	5	5	4
PY9	4	5	5	4	5	4
PY10	5	4	4	4	4	4
PY11	5	5	5	4	4	4
PY12	5	5	5	4	4	4
PY13	4	4	4	4	5	5
PY14	4	4	5	4	5	5
PY15	5	4	5	4	5	4

*DK = Course's Contrubution.

	0	1	2	3	4	5
Level of contribution	None	Very Low	Low	Fair	High	Very High

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ECTS CREDITS AND COURSE WORKLOAD

Event	Quantity	Duration (Hour)	Total Workload (Hour)
Class Hours (14 weeks)	14	4	56
Presentation/Seminar	8	1	8

Final Exam Preparation	1	17	17
Mid Term Exam Preparation	1	15	15
Further Study	10	4	40
Assignment 1	14	2	28
Case Study	5	2	10
Final Exam	1	3	3
Total Workload			177
Total Workload / 25.5 (s)			6.94
ECTS Credit of the Course			7