



Çanakkale Onsekiz Mart University

Education Information System

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Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Wind Energy Applications I	FZ 5069		3 + 0	3.0	7.5

Prerequisites	None
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Language of Instruction	Turkish
Course Level	Second Cycle
Course Type	Elective
Mode of delivery	Face to face
Course Coordinator	Prof. Dr. İsmail TARHAN
Instructors	Prof. Dr. İsmail TARHAN
Assistants	
Course Objectives	This course aims to enable the students to implement required techniques for the wind measurement by acquiring the scientific application, data analysis, final evaluation and examination skills
Course Content	The main topics of the course intent are wind energy meteorology, wind statistics, wind distribution applications, wind measurements techniques, wind measurements systems and selection of wind measurement systems, wind measurements systems and selection of wind measurement systems, wind data analysis and software used for wind data analysis, wind atlas and determination of the potential, wind energy estimation studies, models used to estimate wind energy, wind power prediction applications, wind energy estimation studies, wind turbines and the structures, wind turbine types and properties.
Course Learning Outcomes	<ol style="list-style-type: none"> 1) Explain wind generation and measurement systems 2) Evaluate data analysis and software used for data analysis. 3) Interpret the wind atlas 4) Write wind energy systems, structures and features 5) Apply the methods for estimating wind energy 6) Analyze wind data

Quick Access

Physics (Master)

- 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

WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Wind energy meteorology	Oral lectures with interactive discussions, research, homework	
2. Week	Wind statistics	Oral lectures with	

		interactive discussions, research, homework	
3. Week	Wind distribution applications	Oral lectures with interactive discussions, research, homework,	
4. Week	Wind measurements techniques	Oral lectures with interactive discussions, research, homework	
5. Week	Wind measurements systems and selection of wind measurement systems	Oral lectures with interactive discussions, research, homework,	
6. Week	Wind measurements systems and selection of wind measurement systems	Oral lectures with interactive discussions, research, homework,	
7. Week	Wind data analysis and software used for wind data analysis	Oral lectures with interactive discussions, research, homework,	
8. Week	Mid-term exam	Oral lectures with interactive discussions, research, homework,	
9. Week	Wind atlas and determination of the potential	Oral lectures with interactive discussions, research, homework,	
10. Week	Wind energy estimation studies	Oral lectures with interactive discussions, research, homework,	
11. Week	Models used to estimate wind energy	Oral lectures with interactive discussions, research, homework,	
12. Week	Wind power prediction applications	Oral lectures with interactive discussions, research, homework,	
13. Week	Wind energy estimation studies	Oral lectures with interactive discussions, research, homework,	
14. Week	Wind turbines and the structures	Oral lectures with interactive discussions, research, homework,	
15. Week	Wind turbine types and properties	Oral lectures with interactive discussions, research, homework,	

16. Week	Final exam	Exam	
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RESOURCES

Recommended Sources
Durak, M., Özer, S., (2008). Rüzgar Enerjisi: Teori ve Uygulama/Tutorial (hours per week). TÜREP, EİEİ. Ankara.
Manwell, J.F., McGowan, J.G., Rogers, A.L., (2010). Wind Energy Explained: Theory and Application. John Wiley & Sons, UK.

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	% 50
Transferable Skills Courses	% 50

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2	DK3	DK4	DK5	DK6
<u>PY1</u>	5	5	5	5	5	5	4
<u>PY2</u>	5	5	5	4	4	5	5
<u>PY3</u>	4	5	5	4	5	4	4
<u>PY4</u>	4	4	4	4	4	4	5
<u>PY5</u>	5	4	4	4	4	4	3
<u>PY6</u>	4	4	4	4	4	4	4
<u>PY7</u>	5	5	4	5	4	5	5
<u>PY8</u>	4	4	4	4	4	5	3
<u>PY9</u>	5	5	5	5	5	4	4
<u>PY10</u>	3	3	3	3	3	3	4
<u>PY11</u>	4	4	4	4	4	4	3
<u>PY12</u>	4	4	4	4	4	4	0
<u>PY13</u>	4	4	4	4	4	4	3
<u>PY14</u>	4	4	4	3	4	4	3
<u>PY15</u>	4	4	4	4	5	4	3

*DK = Course's Contribution.

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

ECTS CREDITS AND COURSE WORKLOAD

Event	Quantity	Duration (Hour)	Total Workload (Hour)
Final Exam	1	2	2

Presentation/Seminar	1	15	15
Class Hours (14 weeks)	14	3	42
Mid Term Exam 1	1	2	2
Preliminary Study	14	3	42
Further Study	14	4	56
Assignment 1	3	5	15
Final Exam Preparation	1	10	10
Mid Term Exam Preparation	1	8	8
Total Workload			192
Total Workload / 25.5 (s)			7.53
ECTS Credit of the Course			8

