



unitar

United Nations Institute for Training and Research

Unitar Online Catalogue

CIFAL Istanbul - ESE4008 Wind Energy

People

Deadline: 23 Sep 2024

Type:	Course
Location:	Istanbul, Türkiye
Date:	23 Sep 2024 to 27 Dec 2024
Duration:	90 Days
Programme Area:	Decentralize Cooperation Programme
Website:	https://cifalistanbul.org/
Price:	\$0.00
Event Focal Point Email:	cisil.sohodol@eas.bau.edu.tr
Partnership:	CIFAL Istanbul, Bahçeşehir University

BACKGROUND

By the end of this course, students will have learned the fundamental steps of generating electricity from wind energy. The operating mechanisms of wind turbines and the impact of various parameters affecting wind speed on energy output will be examined. Additionally, the course will cover the economic aspects of wind energy systems.

EVENT OBJECTIVES

Definition of the fundamental methodologies of wind energy systems.

Presentation of rotor types and key terms used in wind energy conversion.

Explanation of aerodynamic theorems used in wind energy. Evaluation of the fundamental nature of wind and methods for measuring wind power. Analysis of wind data, including average wind speed, wind speed distribution, and statistical methods. Classification of wind energy conversion systems, such as wind generators, wind farms, and wind pumps. Calculation of the performance of wind energy conversion systems. Explanation of factors affecting the economics of wind energy.

LEARNING OBJECTIVES

Definition of the fundamental methodologies of wind energy systems.

Presentation of rotor types and key terms used in wind energy conversion.

Explanation of aerodynamic theorems used in wind energy. Evaluation of the fundamental nature of wind and methods for measuring wind power. Analysis of wind data, including average wind speed, wind speed distribution, and statistical methods. Classification of wind energy conversion systems, such as wind generators, wind farms, and wind pumps. Calculation of the performance of wind energy conversion systems. Explanation of factors affecting the economics of wind energy.

CONTENT AND STRUCTURE

This course is designed to provide students with comprehensive knowledge about wind energy systems, focusing on the technology, aerodynamics, performance, and economic aspects of wind power generation. The course will combine theoretical learning with practical applications to ensure students develop a deep understanding of wind energy systems and their real-world implications.

METHODOLOGY

The course methodology is to achieve knowledge of wind energy stepping in different aspects of the subject each week with the guidance of two books and

lecture notes provided by the teacher. The course conducts its assessment of knowledge by one midterm exam and one final exam.

TARGETED AUDIENCE

Students of Bahçeşehir University