

Construction and Development Cluster



Renewable Energies/Electrical Program

PROGRAM OF STUDY OVERVIEW:

Wind farms are located in really windy places, where machines known as wind turbines are used to harness the wind. Did you know that the energy from wind can be captured to generate electricity in a way that is safe for the environment? Solar energy, like wind energy, is renewable, and we don't need to worry about it running out any time soon. Every day enough solar energy reaches the Earth to supply our nation's energy needs for a year! Do you know how we actually capture solar energy to generate electricity? The Renewable Energies/Electrical Program offers students in-depth, hands-on knowledge of the electrical trade, green technologies, and environmental impacts.



Entrance Grades	Renewable Energies / Green Technology 1 Credit	Wind Energy Technology 1 Credit	Solar Energy Technology 1 Credit	Advanced Solar and Wind Energy Generation 1 Credit COMPLETER	Field Experience or Civic Engagement Activity (optional)
10 th Grade Entrance	Fall Sophomore	Spring Sophomore	Fall Junior	Spring Junior	Senior
11 th Grade Entrance	Fall Junior	Spring Junior	Fall Senior	Spring Senior	Senior PM

IN THIS PROGRAM

Students will learn:

- fundamentals of green construction practices and green building rating systems (LEED);
- the materials and techniques used in constructing buildings to reduce thermal loss; and
- wind energy and turbine safety, electrical theory, alternating current and three-phase systems.

COURSE SEQUENCE

- Foundations of Renewable Energies/Green Technology (A)
- Wind Energy Technology (A)
- Solar Energy Technology (A)
- Advanced Solar and Wind Energy Generation (A)
- Renewable Energies Field Experience or Civic Engagement Activity (optional)

(A) articulates college credit

For course descriptions, please see the WCPS Course Catalog @ <https://www.worcesterk12.com/>

STUDENT ORGANIZATION



CERTIFICATIONS

- Building Auditor
- Wind Turbine Maintenance
- Solar PV Installer
- Electrical I

EARLY COLLEGE CREDIT PARTNERS

