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.

<table>
<thead>
<tr>
<th>Entrance Grades</th>
<th>Renewable Energies / Green Technology</th>
<th>Wind Energy Technology</th>
<th>Solar Energy Technology</th>
<th>Advanced Solar and Wind Energy Generation</th>
<th>Field Experience or Civic Engagement Activity (optional)</th>
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</thead>
<tbody>
<tr>
<td>10th Grade Entrance</td>
<td>Fall Sophomore</td>
<td>Spring Sophomore</td>
<td>Fall Junior</td>
<td>Spring Junior</td>
<td>Senior</td>
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<tr>
<td>11th Grade Entrance</td>
<td>Fall Junior</td>
<td>Spring Junior</td>
<td>Fall Senior</td>
<td>Spring Senior</td>
<td>Senior PM</td>
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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

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

CERTIFICATIONS

- WOR-WIC Community College
- Delaware Technical College