



# Wayne County Community College District

## COURSE SYLLABUS

### RET 143 WIND POWER AND HYDROPOWER

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**CREDIT HOURS:** 3.00

**CONTACT HOURS:** 45.00

**COURSE DESCRIPTION:**

In this course, students will analyze the historical concepts, modern applications, and future utilization of wind and hydropower. The usages of small, medium, and large turbines for energy production in urban, rural and industrial settings will be examined. Students will gain general knowledge on the economic and environmental issues associated with wind and hydropower energy sources and they will also become familiar with site assessments for project planning.

**PREREQUISITE:** *RET 101*

**EXPECTED COMPETENCIES:**

Upon successful completion of this course, the student will be able to:

- Understand wind development and principals.
- Calculate load requirements to determine system sizing wind.
- Be familiar with wind system wiring.
- Illustrate the components of wind system.
- Know the types of wind systems.
- Calculate how wind can be applied for world applications.
- Work with wind data and charts to determine optimum site selection.

**ASSESSMENT METHODS:**

Student performance may be assessed by examination, quizzes, case studies, oral conversation, group discussion, oral presentations. The instructor reserves the option to employ one or more of these assessment methods during the course.

**GRADING SCALE:**

90%-100% = A  
80%-89.9%= B  
70%-79.9%= C  
60%-69.9%= D  
<60% = E