



# Wayne County Community College District

## COURSE SYLLABUS

### WET 215 Water Quality Analysis and WET Instrumentation

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**CREDIT HOURS:** 3.00

**CONTACT HOURS:** 45.00

**COURSE DESCRIPTION:**

Investigates conventional water and wastewater laboratory test procedures, with particular emphasis on those analytical techniques that require an understanding and practical use of laboratory instrumentation. Water Quality Lab tests include BOD, TSS, temperature, DO, pH, conductivity, TDS, total and volatile solids, alkalinity, TRC, and others common to the daily operation of both drinking water and wastewater plants; includes discussions of basic stream ecology and applied environmental science principles. Instrumentation Lab includes the use of pH, millivolt and specific ion meters and probes and an introduction to Spectrophotometer, atomic absorption (AA), and gas chromatography/mass spectrometry (GC/MS). Includes field tours of municipal water, wastewater treatment facility labs and related field study discussions.

**PREREQUISITES:** NONE

**EXPECTED COMPETENCIES:**

Upon completion of this course, the student will be familiar with:

- Understand the basic equipment and instruments required for and water/wastewater analysis
- Understand the basic physical and chemical aspects of water/wastewater analysis
- Understand the physical, chemical and microbiological tests for compliance monitoring
- Understand the following aspects of laboratory safety, CHP, MSDS, OSHA, MIOSHA

**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