



Wayne County Community College District

COURSE SYLLABUS

WET 220 Water Quality Analysis and Microbiology

CREDIT HOURS: 3.00

CONTACT HOURS: 45.00

COURSE DESCRIPTION:

Investigates more advanced water quality analytical techniques and the microbiology of water, including microscopic examination and identification of microorganisms commonly found in water supplies, water and wastewater treatment processes and polluted bodies of water. Water Quality Analysis lab work involves more advanced analytical procedures to determine nutrients, heavy metals and toxic materials. Focuses on lab health and safety, proper lab technique, representative sampling procedures, record keeping, data preparation and handling and report writing. Continues field studies and analysis using Atomic Absorption and/or Gas Chromatography/ Mass Spectrometer instruments. Includes lab work involving organisms commonly found in water and wastewater samples with specific bacteriological analytical techniques.

PREREQUISITES:

None

EXPECTED COMPETENCIES:

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

1. Understand the laboratory aspect of data-based troubleshooting procedures
2. Perform physical, chemical, microbiological and toxicological tests for evaluating treatment processes.
3. Understand the laboratory aspect of process optimization
4. Evaluate laboratory data and provide reports and recommendations

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