EVS 110 Environmental Science: Conservation and Cleanup

Course Description: A course on environmental science as it affects human activity and the environment. Topics include: drinking water and wastewater treatment, air pollution, energy, conservation, solid and hazardous waste management, and risk assessment. Students provide transportation to off-campus field trips.

Prerequisites(s): AFL 085 or appropriate placement test score

Corequisite(s): No corequisite

Lecture Hours: 3	Lab Hours: 2	Credit Hours: 4
Lab Fee: 70	Supplemental Fee: 0	Purpose:
☐ Transfer Assurance Guide Course (TAG)	☒ Transfer Module Course (TM)	
Course Format: Lec/Lab	Grading: A/B/C/D/F/I	
Delivery Method: □ Web	□ Hybrid	x Classroom
Semesters Offered: □x Fall	x Spring	x□ Summer

Course Primary Text:

Title: Environmental Science,	Edition: 13th edition
Author(s): Wright & Boorse	
Publisher: Pearson	

Supplemental Materials:

Course Outcomes:

1	Students will perform standard tests, measurements and experiments then analyze and interpret the results.
2	Students will perform effectively as a member of a technical team
3	Students will apply written, oral and graphical communication in well-defined technical and non-technical environments, while identifying and using appropriate technical literature
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Course Topics:

Week 1	Introduction Groundwater Hydrologic Cycle Contamination activity
Week 2	History of D.W. Treatment Water Treatment Plant Design Color Removal by Carbon
Week 3	Water Use & Conservation Water Conservation Lab
Week 4	Tour: Taylor Creek Wastewater Treatment Plant Wastewater Treatment Plant Design
Week 5	Video: Wealth in Wetlands; Water's Journey (DVD) PUR Demo/filter lab
Week 6	Wetlands & Eutrophication Tour: St. Anne Wetlands Education Center Water Quality Parameters Water Testing w/ HACH Kits (Evaluation of results, decision making)
Week 7	Stormwater Management Tour of campus stormwater projects Video: Water Ethics
Week 8	Tour: SD#1 Stormwater projects Agriculture, Food Supply, Soil Fertility Energy: Fossil Fuels, Nuclear Energy Lifestyles Change project Sustainability Discussion
Week 9	Renewable Energy Tour: Earth Connection Renewable Energy lab (visit MSD LEED Engineering Building)
Week 10	Air Pollutants & Concern Air Pollution Effects

	Air Pollution Control Scientific Method Acid Rain Lab (Form Hypothesis, Set-up experiment, initial measurements)
Week 11	Solid Waste Management Video: Beginner's Guide to Garbage Acid Rain Lab conti. (observations, final measurements, conclusions) Dispersion of Air Pollutants (factors influencing rate, etc.)
Week 12	Hazardous Waste Management (CERCLA, RCRA) Composting Lab (Develop hypothesis, set-up experiment, make initial observations)
Week 13	Composting Lab (observations, conclusions) Rumpke Recycling presentation
Week 14	Pest and Pest Control Video: Blue Vinyl Determining Threshold Limits lab (No observable adverse effects levels or NOAEL in "lab rats")
Week 15	Risk Assessment Video: Civil Action

Methods of Evaluation/Assessment

x□ Formative: □x Summative

List assessment activities (e.g. quizzes, discussions, essays, research papers, debates, oral presentations, exams):

Tests
homework
quizzes
Lab assignments
Lifestyles Change project - journals or research paper

CENTER FOR INNOVATIVE TECHNOLOGIES
MASTER COURSE DOCUMENT

Course Keeper: Dr. Ann Gunkel

Date Completed: 07/07/20