

Student Outcomes and Performance Indicators – **Faculty Assessment**
 Department of Engineering & Engineering Technology
 College of Professional Studies
 Metropolitan State University of Denver

CET 3330 (4)

ENVIRONMENTAL TECHNOLOGY PROCESS

Semester/year

Specific, Measurable Student Behavioral Learning Objectives:

Upon completion of this course the student should be able to:

1. Identify the nature of ecosystems, the components and response to changes in the environment.
2. Examine both mass and materials balances around a treatment process, estimate the quantities of given substances at each stage and judge whether the process will meet regulatory criteria.
3. Examine oxidation-reduction reactions and write overall balanced relationships.
4. Compare the role of microorganisms and plants in maintaining aquatic balance and in the degradation of nutrients, pollutants and toxins.

ABET	Competency Area	Data Collection
b	an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies	
i	an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity	
j	a knowledge of the impact of engineering technology solutions in a societal and global context	

ADDITIONAL COMMENTS:

PLEASE:

1. MAKE SURE ALL REFERENCES ARE IN Y DRIVE;
2. SAVE THIS FILE UNDER THE COURSE NUMBER, FOR EXAMPLE: CET1000 SPRING 2018.DOC;
3. SEND YOUR REPORT TO LINDA;

 <Name>

 <Date>

Following tables define the Performance Indicators for each of the Student Outcomes a through k

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ABET b: an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies				
	Unsatisfactory	Developing	Satisfactory	Exemplary
Use science, math, and engineering concepts to conduct qualitative analysis	Unaware of needs for qualitative analysis	Working on the knowledge and skills for qualitative analysis	Proper analysis with 70% partial solution or better	Proficient in using selected tools for qualitative analysis
Use science, math, and engineering concepts to conduct quantitative analysis	Unable to identify tool for the needed quantitative analysis	Working on the knowledge and skills for quantitative analysis	Proper analysis with 70% partial solution or better	Proficient in using selected tools for quantitative analysis
Develop designs of products, systems, or processes that respond to authentic needs	Unaware of or not understanding the needs	Knowledge or skill set not enough for solving the engineering technology problem	70% partial solution or better	Proper solutions obtained

ABET i: an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity				
	Unsatisfactory	Developing	Satisfactory	Exemplary
Know the code of ethics for the related profession	Unaware of the code of conduct in profession	In progress of learning	Understand	Apply properly
Demonstrate positive attitude towards others	Show no respect to others	Understanding the importance of proper professional conduct	Proper professional conduct	Demonstrate positive attitude towards others
Show awareness for diverse ideas and cultural differences	Unaware of diversity and cultural differences	Learning in progress such as taking MC courses	Successfully completed some MC and diversity related courses	Fully aware and respectable for diversity and cultural differences

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ABET j: a knowledge of the impact of engineering technology solutions in a societal and global context				
	Unsatisfactory	Developing	Satisfactory	Exemplary
Take into account the social, economic, or environmental constraints on the engineering technology problem solving	Unaware of the impacts the issues	Some awareness, but not clear	Understand the issues but unable to incorporate into the design problem	Proper considerations discussed and planned ahead
Be familiar with national and international research/publications that describe the impact of technology on society	Unaware of such ongoing research	Some understanding	Understand the impact of technology on society	Participating the research and publications