

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

CPE 4700 (3)

Senior Design I

Semester/year

Course Category and Related Student Learning Outcomes:

1. Integrate and apply the knowledge gained in the CPE education to develop, design, and document a technology based project with completion in CPE 4800 Senior Design II
2. Create a formal presentation of the project technology, projected cost and design implementation
3. Work together as a team

ABET	Competency Area	Data Collection
c	an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	
d	an ability to function on multidisciplinary teams	
h	the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	
i	a recognition of the need for, and an ability to engage in life-long learning	
j	a knowledge of contemporary issues	

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 c: an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability				
	Unsatisfactory	Developing	Satisfactory	Exemplary
Establish criteria for engineering technology design problems	Unable to develop or understand design criteria	Understand the design criteria but unable to develop	Understand and developed some criteria in assigned problem	Proper solutions obtained
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
Take into account the social, economic, or environmental constraints on the design	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

ABET d: an ability to function on multidisciplinary teams				
	Unsatisfactory	Developing	Satisfactory	Exemplary
Fulfill Team Role's Duties	Does not perform any duties of assigned team role.	Performs very little duties.	Performs nearly all duties.	Performs all duties of assigned team role.
Share in work of team	Always relies on others to do the work.	Rarely does the assigned work-- often needs reminding.	Usually does the assigned work-- rarely needs reminding.	Always does the assigned work without having to be reminded.
Listen to Other Teammates	Is always talking-- never allows anyone else to speak.	Usually doing most of the talking— rarely allows others to speak.	Listens, but sometimes talks too much.	Listens and speaks a fair amount.

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ABET h: the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal 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

ABET i: a recognition of the need for, and an ability to engage in life-long learning				
	Unsatisfactory	Developing	Satisfactory	Exemplary
Acknowledge the importance of professional development	Unaware of the needs for continuing professional development	Understand the needs, but show no interests in	Interested	Actively searching for the opportunities of continuing professional development
Participate in continuous education in technical specialty related subjects	Unaware of continuous education opportunities in related technical subjects	Unable to attend	Attending when ordered	Actively participating in continuing educations

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ABET j: a knowledge of contemporary issues				
	Unsatisfactory	Developing	Satisfactory	Exemplary