

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

**MET 4110**

**Senior Project II**

**Semester/year**

**Specific, Measurable Student Behavioral Learning Objectives:**

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

1. Revise project as needed based on Preliminary Report feedback.
2. Construct and demonstrate the functionality of the project.
3. Conduct and evaluate final cost estimating of the project.
4. Track project progress toward completion and document any unforeseen challenges encountered.
5. Identify impediments to project completion and make necessary modifications to the project and plan.
6. Demonstrate critical thinking and analysis in resolving problems encountered.
7. Create a formal presentation of the project technology, cost, and implementation.

ABET	Competency Area	Data Collection
d	an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives	
f	an ability to identify, analyze, and solve broadly-defined engineering technology problems	
g	an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature	
k	a commitment to quality, timeliness, and continuous improvement	

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 d: an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives				
	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

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ABET f: an ability to identify, analyze, and solve broadly-defined engineering technology problems				
	Unsatisfactory	Developing	Satisfactory	Exemplary
Identify and describe technical problems	Unable to understand problem	Understand the problem but unable to provide solutions	Some solutions or ideas in solving the problem	Proper solution obtained
Recognize standard procedures in solving specific technical problem	Unaware of standard procedures	Realize standard solution procedures but unable to implement	Some solutions are obtained	Properly use standard solution procedure or provide alternate ways of solutions
Manage information and solve technical problems	Unable to gather information needed	Unaware of the importance of managing and documenting information	Some management and documentation of information	Proper documentation and management of information

ABET g: an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature				
	Unsatisfactory	Developing	Satisfactory	Exemplary
Use proper format and grammar in written and oral communications	Unaware of the need of communications in engineering technology practice	Unable to use format and grammar for effective communication	Able to communicate in technical environment	Present properly to both non-technical and technical audience
Use appropriate graphics in oral and written presentations	No understanding of importance of graphics	Unable to produce all graphics needed	Some applications of graphics in presentation	Presentation with proper graphical aids
Paraphrase technical and non-technical literature satisfactorily	Unaware of the need in technical literature	Unable to identify and research for proper literature	Some literature research	Present properly to both non-technical and technical audience

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ABET k: a commitment to quality, timeliness, and continuous improvement				
	Unsatisfactory	Developing	Satisfactory	Exemplary
Identify quality requirement for a specific task	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 qualitative analysis
Develop a plan to conduct a specific task with a given time frame	Unaware of the needs of planning	Unable to plan to meet time requirement	Able to plan but sometimes unable to meet the deadlines	Use proper tools to make plans and meet the deadlines
Identify weakness and take appropriate action for improvement	Unaware of the need for continuous improvement	Unable to identify weakness for improvement	Identify needs and work on continuous improvement	Practicing engineering with continuous improvement