

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

**EET 4110 (3)**

**SENIOR PROJECT II**

**Semester/year**

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

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

1. Complete and test a design project.
2. Write a technical report on actual design work.
3. Orally present a technical report.

ABET	Competency Area	Data Collection
a	an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities	
d	an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives	
e	an ability to function effectively as a member or leader on a technical team	
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	
h	an understanding of the need for and an ability to engage in self-directed continuing professional development	
i	an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity	
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>

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 <Date>

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

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ABET a: an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities				
	Unsatisfactory	Developing	Satisfactory	Exemplary
Identify, formulate, and solve engineering technology problems	Unable to identify the engineering problem	Able to identify and formulate but unable to obtain a solution	70% partial solutions or better	Proper solution and discussions for the solution
Use appropriate skills of the profession to conduct qualitative analysis	Unaware of needs for qualitative analysis	Working on the skills to properly use the identified tools	Use proper skills to obtain 70% partial solution or better	Proficient in using selected skills for qualitative analysis
Use appropriate tools of the profession to conduct quantitative analysis	Unable to identify tool for the needed analysis	Working on the skills to properly use the identified tools	Use proper tools to obtain 70% partial solution or better	Proficient in using selected tools for quantitative analysis

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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

ABET e: an ability to function effectively as a member or leader on a technical team				
	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 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 h: an understanding of the need for and an ability to engage in self-directed continuing professional development				
	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

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 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