

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

CET 4400 (4)

STEEL DESIGN I

Semester/year

Specific, Measurable Student Behavioral Learning Objectives:

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

1. Explain the fundamental analysis and design methods required for the design of structural steel members.
2. Perform analysis of steel structures.
3. Conduct design of structural steel members.
4. Participate in producing and presenting a case study on a steel project.

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

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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 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