

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

**MET 4070 (6)**

**COMPUTER AIDED DESIGN**

**Semester/year**

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

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

1. Analyze stress factors, combine and apply principles of statics, dynamics, and material strength factors to a machine design problem.
2. Apply lubrication techniques and lubricants to meet various design applications.
3. Design brakes, clutches, gears, etc., (mechanisms) applying fundamental knowledge concepts to a particular design.
4. Analyze design problems using computer software.
5. Design, draw, and establish specifications.
6. Estimate manufacturing/processing costs.

| 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     |                 |
| c    | an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes |                 |

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 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 c: an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes |  |  |   |  |
|---|--|--|---|--|
|   | Unsatisfactory                                 | Developing                                     | Satisfactory                                | Exemplary  |
| Select, set up, and use equipment for experiments   | Unable to identify proper equipment            | Unable to use most of the identified equipment | Able to use the equipment under supervision | Conduct test and measurement properly and safely |
| Select, set up, and use data collection and analysis software   | Not understanding the needs of data collection | Unable to use most of the identified software  | Able to use the software under supervision  | Properly use of the identified software          |
| Understand the results  | Not understanding the results                  | Some understanding of the results              | Understand the results with help            | Properly interpret and present the results       |
|   |  |  |   |  |
|   |  |  |   |  |
|   |  |  |   |  |