

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

MET 3000 (8)

MANUFACTURING ANALYSIS

Semester/year

Specific, Measurable Student Behavioral Learning Objectives:

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

1. Plan production systems, including forecasts, resource allocation, and scheduling.
2. Analyze production systems in terms of labor needs, layout, job sequencing, and materials requirements.
3. Control production systems in terms of progress charts, quality control, and productivity measurements.
4. Economic analyses to establish production quantity requirements and breakeven points.
5. Establish production flow analogy through PERT and similar control techniques.
6. Balance production using machine loading and manufacturing sequencing studies.
7. Conduct person/machine work studies to establish person/machine charts.
8. Maintain material controls to coordinate productivity, inventory and quality control.

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	
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 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

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