Assurance of Student Learning 2019-2020	
Ogden College	SEAS
Manufacturing Engineering Technology (Ref. #. 5006)	

Use this page to list learning outcomes, measurements, and summarize results for your program. Detailed information must be completed in the subsequent pages.			
Student Learning Outcome 1: **Graduates will possess/ demonstrate the ability to identify, formulate strategies and solve technical problems.**			
Instrument 1	**Direct:** Senior AMS490 Capstone Course Final Report		
Instrument 2	**Indirect:** Employer Insternship Survey		
Instrument 3	**Indirect:** Student Insternship Survey (Self-reported Data)		
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.		**Met**	**Not Met**
Student Learning Outcome 2: **Graduates will demonstrate an ability to communicate effectively in pertinent areas, both written and graphic.**			
Instrument 1	**Direct:** Lab reports of AMS 217: Industrial Materials class		
Instrument 2	**Indirect:** Employer Insternship Survey		
Instrument 3	**Indirect:** Student Insternship Survey (Self-reported Data)		
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.		**Met**	**Not Met**
Student Learning Outcome 3: **Graduates will demonstrate the knowledge and capacity to apply managerial/ leadership principles and practices to appropriate situations.**			
Instrument 1	**Direct:** AMS390 Project Management Plan Report		
Instrument 2	**Indirect:** Employer Insternship Survey		
Instrument 3	**Indirect:** Student Insternship Survey (Self-reported Data)		
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.		**Met**	**Not Met**
Program Summary **(Briefly summarize the action and follow up items from your detailed responses on subsequent pages.)**			
Overall, the results from this assessment indicate that SLOs one, two, and three are either met or exceeded the the program success targets.			

Student Learning Outcome 1				
Student Learning Outcome	**Graduates will possess/ demonstrate the ability to identify, formulate strategies and solve technical problems.**			
Measurement Instrument 1	**NOTE: Each student learning outcome should have at least one direct measure of student learning . Indirect measures are not required.** DIRECT measures of student learning: The graduates from the MET program are required to take the AMS490 Capstone Course offered by the MET program before their final graduation. Students in the AMS490 capstone course submitted the final report in Spring 2020. The final report required the students to address questions about the the program's core courses. The following question catagories of the final report were used to evaluate SLO1: computer integrated manufacturing (CIM), Electronics, Industrial Materials, Machining, Manufacturing Philosophies, Metrology, Non-traditional Machining, and Technical Drafting.			
Criteria for Student Success	Seventy percent (70%) students should score 70% or more on the selected categories of the final report.			
Program Success Target for this Measurement	70%	**Percent of Program Achieving Target**	70%	
Methods	All students (N = 20) in the capstone course took the submitted thefinal report in spring 2020. Seventy percent of students (14/20= 70%) scored 70% or more on the selected categories of the final report.			
Measurement Instrument 2	INDIRECT measures of student learning: Employers were given an online surveys measuring their satisfaction of student learning related to the three programmatic outcomes.			
Criteria for Student Success	Indirect: Self-reported data ranged from 1-4 on a 4-point Likert scale. The overall target means for combined categories was *M* = 3.0			
Program Success Target for this Measurement		**Percent of Program Achieving Target**		
Methods				
Measurement Instrument 3	INDIRECT measures of student learning: Students were given an online student surveys measuring their self-reported satisfaction of learning in the program related to the three programmatic outcomes.			
Criteria for Student Success	Indirect: Self-reported data ranged from 1-4 on a 4-point Likert scale. The overall target means for combined categories was *M* = 3.0			
Program Success Target for this Measurement		**Percent of Program Achieving Target**		
Methods				
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.			**Met**	**Not Met**
Actions (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)				
For 2019/2020, the MET program established more explicit guidelines for the capstone course project.				
Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)				

Based on results from previous assessment, the guidelines for the capstone project were updated so instructions and expectations are much clearer.

Student Learning Outcome 2				
Student Learning Outcome	**Graduates will demonstrate an ability to communicate effectively in pertinent areas, both written and graphic.**			
Measurement Instrument 1	DIRECT measures of student learning: Lab reports of AMS 217: Industrial Materials class The written and graphical presentation competences were evaluated from the lab reports of AMS 217 Industrial Materials class. Dr. Rezasoltani collected and analyzed the reports for AMS 217 class based on developed rubrics. Scores on the rubric item for this SLO ranged from "Excellent (90-100)," "Very Good (80-89)," "Satisfactory (70-79)," and "Poor (60-69)."			
Criteria for Student Success	Seventy (70%) of students should score 80% or higher on the AMS 217 lab reports to show their competency in writing and graphic communication skills.			
Program Success Target for this Measurement	70%	**Percent of Program Achieving Target**	79.45%	
Methods	All students (N = 39) in the AMS217 submitted the lab reports in Fall 2019 and Spring 2020. Almost 80% of the students (31/39= 79.45%) scored 80% or higher on the lab reports.			
Measurement Instrument 2	INDIRECT measures of student learning: Employers were given an online surveys measuring their satisfaction of student learning related to the three programmatic outcomes.			
Criteria for Student Success	Indirect: Self-reported data ranged from 1-4 on a 4-point Likert scale. The overall target means for combined categories was *M* = 3.0			
Program Success Target for this Measurement		**Percent of Program Achieving Target**		
Methods				
Measurement Instrument 3	INDIRECT measures of student learning: Students were given an online student surveys measuring their self-reported satisfaction of learning in the program related to the three programmatic outcomes.			
Criteria for Student Success	Indirect: Self-reported data ranged from 1-4 on a 4-point Likert scale. The overall target means for combined categories was *M* = 3.0			
Program Success Target for this Measurement		**Percent of Program Achieving Target**		
Methods				
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.			**Met**	**Not Met**
Actions (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)				
For 2019/2020, the instructor has followed a new instructional methodology for the AMS 217: Industrial Materials course. In AMS 217 course, students are supposed to do several lab activities and submit their lab reports. The course used to focus more on the lab activities by offering too many different labs and fewer lectures to train more hands-on students. Two very time-consuming and irrelevant lab activities were eliminated and thus, more lecture time was added where the instructor explained the theory behind the activities. The theory/lecture helps students to gain knowledge about what they are doing and have a judgment about their results. The order of the lab activities was changed based on the lectures and the activities were used to support the lecture materials.				
Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)				

Based on results from previous assessment, a new instructional methodology for the AMS 217 was followed. Therefore, the pass rate on the AMS217 submitted the lab reports was higher than the program success target for this measurement (70%).

Student Learning Outcome 3				
Student Learning Outcome	**Graduates will demonstrate the knowledge and capacity to apply managerial/ leadership principles and practices to appropriate situations.**			
Measurement Instrument 1	DIRECT measures of student learning: The graduates from the MET program are required to take the AMS390-Project Management course before their final graduation. Students in the AMS390 course submitted their Project Management Plan Report in Fall 2019 and Spring 2020. The Project Management Plan required the students to address questions about the the program's core courses. The following catagories of the Project Management Plan were used to evaluate SLO3: Production Planning, Quality, and Supervision/Management			
Criteria for Student Success	Seventy percent (70%) students should score 80% or higher on the selected categories of the Project Management Plan.			
Program Success Target for this Measurement	70%	**Percent of Program Achieving Target**	76%	
Methods	All students (N = 25) in the AMS390 course submitted the project management plan report. Ninteen students (19/25= 76%) scored 70% or higher on the selected categories of the project management plan.			
Measurement Instrument 2	INDIRECT measures of student learning: Employers were given an online surveys measuring their satisfaction of student learning related to the three programmatic outcomes.			
Criteria for Student Success	Indirect: Self-reported data ranged from 1-4 on a 4-point Likert scale. The overall target means for combined categories was *M* = 3.0			
Program Success Target for this Measurement		**Percent of Program Achieving Target**		
Methods				
Measurement Instrument 3	INDIRECT measures of student learning: Students were given an online student surveys measuring their self-reported satisfaction of learning in the program related to the three programmatic outcomes.			
Criteria for Student Success	Indirect: Self-reported data ranged from 1-4 on a 4-point Likert scale. The overall target means for combined categories was *M* = 3.0			
Program Success Target for this Measurement		**Percent of Program Achieving Target**		
Methods				
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.			**Met**	**Not Met**
Actions (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)				

None
Follow-Up (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)