|  |  |
| --- | --- |
| **Assurance of Student Learning**  **2020-2021** | |
| Ogden College of Science & Engineering | School of Engineering & Applied Sciences |
| Engineering Technology Managment | |

|  |  |  |  |
| --- | --- | --- | --- |
| **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:** The Association of Technology, Management and Applied Engineering (ATMAE) Certified Technology Managment (CTM) Certification Exam. (Sections specific to Leadership and management) | | |
| **Instrument 2** | **Indirect:** Employer Insternship Survey | | |
| **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 from AMS 490 | | |
| **Instrument 2** | **Indirect:** Employer Insternship Survey | | |
| **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:**  The Association of Technology, Management and Applied Engineering (ATMAE) Certified Technology Managament (CTM) Certification Exam. (Sections specific to process and operations) | | |
| **Instrument 2** | **Indirect:** Employer Insternship Survey | | |
| **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.)** | | | |
| . | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **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: Atmae exam  Graduates from the ETM program take the Certified Technology Managment (CTM) exam at the end of their studies at WKU. The ATMAE exam is a 165 question online standardized exam offerered by the Association of Technologys Manufacturing and Applied Engineering. It assesses students in ten categories related to the compatensies taught in the ETM program. Students must correctly answer 95 questions to pass the exam.  The national pass rate is 76.34% of students taking the exam the first time pass. | | | | | | |
| **Criteria for Student Success** | 70% or more of the ETM students will achieve at least a 70% on the systems and process sections of the Atmae CTM test. | | | | | | |
| **Program Success Target for this Measurement** | | | 70% of students will meet or exceed the national average. | | **Percent of Program Achieving Target** | 100% | |
| **Methods** | ETM students in the program took the ATMAE’s CTM exam in spring 2021. | | | | | | |
| **Measurement Instrument 2** | INDIRECT measures of student learning: Employers were given an online survey measuring their satisfaction of student learning related to the ETM program outcome one. | | | | | | |
| **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** | | 3.0 | | **Percent of Program Achieving Target** | | 100% | |
| **Methods** | Employers completed the Employer Insternship Survey for students enrolled in AMS 367 during the 2020/2021 academic year. All students scored 3.0 or higher on a 4-point likert scale for the Technical Comptency outcome. The average score was 3.71. | | | | | | |
| **Measurement Instrument 3** |  | | | | | | |
| **Criteria for Student Success** |  | | | | | | |
| **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.) | | | | | | | |
| The Atmae CTM exam is separated into specific catagories covering management and leadership as well as process and operations. We will evaluate our performance on this item by reviewing the oppertiona and prcoses sections. | | | | | | | |
| **Follow-Up** We will follow up on this outcome every spring after students complete the exam | | | | | | | |
|  | | | | | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **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:  Students in the ETM program are required to take AMS 490 F as a cap stone course. This course consist of students choosing a real world project in their field. All students in the ETM program for the past several years are employed and very often choose to take on a project at work. Students submit a formal proposal at the start of class outlining the project. Thoughout the semester students are required to submit written progress reports to update faculty on their progress. Finally students submit a summary of their work. The summary must provide a written report and a power point with graph and photographs that summarizes in detail the outcomes of the project.  The reports are graded by faculty according to policies and rubirics outlined in the course sylibus. | | | | | | |
| **Criteria for Student Success** | Students should score 80% or higher on AMS 490 lab reports to show their competency in writing and graphic communication skills. | | | | | | |
| **Program Success Target for this Measurement** | | | 70% of students will score 80% or above on reports | | **Percent of Program Achieving Target** | 100% | |
| **Methods** | Evaluation/grading of student submitted reports in the Fall of 2020 and the spring of 2021 | | | | | | |
| **Measurement Instrument 2** | INDIRECT measures of student learning: Employers were given an online surveys measuring their satisfaction of student learning related to the MET program outcome two. | | | | | | |
| **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** | | **3.0** | | **Percent of Program Achieving Target** | | **100%** | |
| **Methods** | Employers completed an Employer Insternship Survey for students enrolled in AMS 367 during the 2020/2021 academic year. All students scored 3.0 or higher on a 4-point likert scale for the Technical Comptency outcome. The average score was 3.71 | | | | | | |
| **Measurement Instrument 3** |  | | | | | | |
| **Criteria for Student Success** |  | | | | | | |
| **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**  We will continue to assist students in obtaining meaningful work in their carrer field. We also work with students and their employers to slect a research project that will allow students to lean processes and techniques in a real world environment. Our goal is to maintain our current level of success. | | | | | | | |
|  | | | | | | | |
| **Follow-Up** We will follow up on this item at the end of every semester we offer MFGE 490 | | | | | | | |
|  | | | | | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **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: Atmae exam  Graduates from the ETM program take the Certified Technology Managment (CTM) exam at the end of their studies at WKU. The ATMAE exam is a 165 question online standardized exam offerered by the Association of Technologys Manufacturing and Applied Engineering. It assesses students in various categories related to the compatensies taught in the ETM program. Students must correctly answer 95 questions to pass the exam.  The national pass rate is 76.34% of students taking the exam the first time pass. | | | | | | |
| **Criteria for Student Success** | 70% or more of the ETM students will achieve at least a 70% on the management and leadership sections of the Atmae CTM test. | | | | | | |
| **Program Success Target for this Measurement** | | | 70% of students will meet or exceed the national average | | **Percent of Program Achieving Target** | **100%** | |
| **Methods** | Students in the program took the ATMAE’s CTM exam in spring 2021. | | | | | | |
| **Measurement Instrument 2** | INDIRECT measures of student learning: Employers were given an online surveys measuring their satisfaction of student learning related to the MET program outcome three. | | | | | | |
| **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** | | **3.0** | | **Percent of Program Achieving Target** | | **91.7%** | |
| **Methods** | Employers completed the Employer Insternship Survey for students enrolled in AMS 367 during the 2020/2021 academic year. All students scored 3.0 or higher on a 4-point likert scale for the Technical Comptency outcome. The average score was 3.71 | | | | | | |
| **Measurement Instrument 3** |  | | | | | | |
| **Criteria for Student Success** |  | | | | | | |
| **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** The Atmae CTM exam is separated into specific catagories covering management and leadership as well as process and operations. We will evaluate our performance on this item by reviewing the 14 leadership and management sections. | | | | | | | |
|  | | | | | | | |
| **Follow-Up**  We will follow up at the end of every year when students have completed the exam. | | | | | | | |
|  | | | | | | | |