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| **Assurance of Student Learning Report****2021-2022** |
| *Ogden College of Science and Engineering* | *Earth, Environmental, & Atmospheric Sciences* |
| *Emergency Management Disaster Science #1748* |
| *Josh Durkee* |

***Is this an online program***? [x]  Yes [ ]  No

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| ***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:** Students completing the Emergency Management Disaster Science Certificate will be able to demonstrate an understanding of incident management. |
| **Instrument 1** | A demonstrative applied capstone project is given during the final required course of the certificate. The project consists of the collection of real-time intelligence of potential hazards and applying that intelligence to a simulated event. Students must demonstrate an understanding of incident management as they produce a tangible, comprehensive emergency action plan with simulated response efforts as part of a real-time experiment that unfolds across the final week.  |
| **Instrument 2** | An alternative applied capstone course with a traditional assessement that ties together key elements from previously required courses toward a comprehensive understanding of how to plan, mitigate, and expect post-disaster fallout of various environmental emergencies. In addition to final grades, a separate final comprehensive assessment is used to determine overall skill in incident management. |
| **Based on your results, check whether the program met the goal Student Learning Outcome 1.** | **[x]  Met** | **[ ]  Not Met** |
| **Student Learning Outcome 2:** Students completing the Emergency Management Disaster Science Certificate will be able to demonstrate an understanding of risk identification. |
| **Instrument 1** | A demonstrative applied capstone project is given during the final required course of the certificate. The project consists of the collection of real-time intelligence of potential hazards and applying that intelligence to a simulated event. Students must demonstrate an understanding of risk identification as they produce a tangible, comprehensive risk-idenfitication measures with simulated response efforts as part of a real-time experiment that unfolds across the final week.  |
| **Instrument 2** | An alternative applied capstone course with a traditional assessement that ties together key elements from previously required courses toward a comprehensive understanding of how to plan, mitigate, and expect post-disaster fallout of various environmental emergencies. In addition to final grades, a separate final comprehensive assessment is used to determine overall skill in risk identification. |
| **Based on your results, check whether the program met the goal Student Learning Outcome 2.** | **[x]  Met** | **[ ]  Not Met** |
| **Student Learning Outcome 3:** Students completing the Emergency Management Disaster Science Certificate will be able to demonstrate an understanding of emergency planning. |
| **Instrument 1** | A demonstrative applied capstone project is given during the final required course of the certificate. The project consists of the collection of real-time intelligence of potential hazards and applying that intelligence to a simulated event. Students must demonstrate an understanding of emergency planning as they produce a tangible, comprehensive mitigation plan with simulated response efforts as part of a real-time experiment that unfolds across the final week.  |
| **Instrument 2** | An alternative applied capstone course with a traditional assessement that ties together key elements from previously required courses toward a comprehensive understanding of how to plan, mitigate, and expect post-disaster fallout of various environmental emergencies. In addition to final grades, a separate final comprehensive assessment is used to determine overall skill in emergency planning. |
| **Based on your results, check whether the program met the goal Student Learning Outcome 3.** | **[x]  Met** | **[ ]  Not Met** |
| **Program Summary (Briefly summarize the action and follow up items from your detailed responses on subsequent pages.)**  |
| The EMDS Program (1748) provides a strong acumen in principles and practices of emergency management and can serve as a valuable co-credential for both traditional students and seasoned professionals in a variety of disciplines. Due to the strong emphasis on science within the coursework, the program was launched within the Ogden College of Science and Engineering. To effectively promote the interdisciplinary elements of the program, it is housed within the Office of the Dean, rather than being assigned to a specific department. |

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| **Student Learning Outcome 1** |
| **Student Learning Outcome**  | Students completing the Emergency Management Disaster Science Certificate will be able to demonstrate an understanding of incident management. |
| **Measurement Instrument 1**  | A demonstrative applied capstone project is given during the final required course of the certificate. The project consists of the collection of real-time intelligence of potential hazards and applying that intelligence to a simulated event. Students must demonstrate leadership and managerial roles as they produce a tangible, comprehensive emergency action plan with simulated response efforts in the form of written and presented portfolios. |
| **Criteria for Student Success** | The capstone is a pass/fail assessment, whereby a pass is considered no less than 80% successful completion of the project. |
| **Program Success Target for this Measurement** | 95% | **Percent of Program Achieving Target** | 100% |
| **Methods**  | Overall score: 97% | N = 1 |
| **Measurement Instrument 2** | An alternative applied capstone course with a traditional assessement that ties together key elements from previously required courses toward a comprehensive understanding of how to plan, mitigate, and expect post-disaster fallout of various environmental emergencies. In addition to final grades, a separate final comprehensive assessment is used to determine overall skill. |
| **Criteria for Student Success** | Criticial assessment is considered when the average score between the overall course grade and , whereby a pass is considered no less than 80% successful completion of the project. |
| **Program Success Target for this Measurement** | 80% | **Percent of Program Achieving Target** | 100% |
| **Methods** | Overall score: 92.5% | N = 20Overall assessment score: 94% | N = 18Average completion score: 90% | N = 18 |
| **Based on your results, highlight whether the program met the goal Student Learning Outcome 1.** | **[x]  Met** | **[ ]  Not Met** |
| **Actions** (Describe the decision-making process and actions for program improvement. The actions should include a timeline.) |
| This was only the second time offering this course. Upon reflection and feedback from student and industry professionals, we plan to augment some of the introductory course content to be less FEMA overspill and more applied and practical. We tested the capstone approach in a pedgagocial study, which was recently accepted for publication in a peer-review journal in the field. This capstone assessment reflects positively the approaches for instruction and resulting deliverables are sufficient for the intended purpose and outcomes of the graduate EMDS certificate program. Measurement Instrument 2 offers a larger enrollment. |
| **Follow-Up** (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.) |
| No follow up is needed at this time. |
| **Next Assessment Cycle Plan** (Please describe your assessment plan timetable for this outcome) |
| We plan to utilize the same assessment at the end of the academic year and/or summer 2023. |

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| **Student Learning Outcome 2** |
| **Student Learning Outcome**  | Students completing the Emergency Management Disaster Science Certificate will be able to demonstrate an understanding of risk identification. |
| **Measurement Instrument 1**  | A demonstrative applied capstone project is given during the final required course of the certificate. The project consists of the collection of real-time intelligence of potential hazards and applying that intelligence to a simulated event. Students must demonstrate leadership and managerial roles as they produce a tangible, comprehensive emergency action plan with simulated response efforts in the form of written and presented portfolios. |
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| **Student Learning Outcome 3** |
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| **Measurement Instrument 1**  | A demonstrative applied capstone project is given during the final required course of the certificate. The project consists of the collection of real-time intelligence of potential hazards and applying that intelligence to a simulated event. Students must demonstrate leadership and managerial roles as they produce a tangible, comprehensive emergency action plan with simulated response efforts in the form of written and presented portfolios. |
| **Criteria for Student Success** | The capstone is a pass/fail assessment, whereby a pass is considered no less than 80% successful completion of the project. |
| **Program Success Target for this Measurement** | 95% | **Percent of Program Achieving Target** | 100% |
| **Methods**  | Overall score: 99% | N = 1 |
| **Measurement Instrument 2** | An alternative applied capstone course with a traditional assessement that ties together key elements from previously required courses toward a comprehensive understanding of how to plan, mitigate, and expect post-disaster fallout of various environmental emergencies. In addition to final grades, a separate final comprehensive assessment is used to determine overall skill. |
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