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| **Assurance of Student Learning**  **2020-2021** | |
| Ogden College of Science & Engineering | School of Engineering and Applied Sciences |
| Architectural Science - 518 | |

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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:** Graduates will possess/ demonstrate the ability to identify, formulate strategies and solve technical problems | | | |
| **Instrument 1** | Analysis of pre-design of capstone project (comprehensive design) | | |
| **Instrument 2** | Analysis of design development and construction documents of capstone project (Senior project) | | |
| **Instrument 3** | Appraisal of Student technical skills by employers during internship. | | |
| **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 possess effective (oral/ written and/or graphic) communication skills. | | | |
| **Instrument 1** | Appraisals from industry professionals of schematic design presentations | | |
| **Instrument 2** | Appraisals from faculty and industry professionals of schematic design presentations | | |
| **Instrument 3** | Appraisal of student communication skills by employers during internship | | |
| **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 manage a project through the different design phases. | | | |
| **Instrument 1** | Analysis of schematic design of capstone project | | |
| **Instrument 2** | Appraisals from industry professionals of capstone projects | | |
| **Instrument 3** | Appraisal of Students project management skills by employers during internship. | | |
| **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.)** | | | |
| Changes have been made to pre-requisite courses in the program to improve the outcomes. Courses which changes have been made are AMS 251, AMS 363, AMS 369 and AMs 469. In addition, curriculum changes are being worked on by faculty on pre-requisites for AMS 363. New software technology is being introduced in the classroom to improve student graphic communication outcomes. A thesis book has been added to the capstone to improve written communication. Faculty in the program are also working on improving the rubric that is being currently utilized for assessments. These changes could not be implemented due to COVID-19 but are currently being worked on and will be implemented in the 2021-2022 and 2022-2023 assessment cycles. | | | |

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| **Student Learning Outcome 1** | | | | | | | |
| **Student Learning Outcome** | **Graduates will possess/ demonstrate the ability to identify, formulate strategies and solve technical problems** | | | | | | |
| **Measurement Instrument 1** | Direct: **Analysis of pre-design of capstone project (comprehensive design)**  Senior AS students work on a year-long capstone (fall and spring semesters). The students were assessed on the first phase of the capstone to evaluate their competency in pre-design tasks in a given design project. | | | | | | |
| **Criteria for Student Success** | students will have a 3.0 satisfaction rating on a 4 point scale | | | | | | |
| **Program Success Target for this Measurement** | | | 75 % of senior students | | **Percent of Program Achieving Target** | 77 % of senior students | |
| **Methods** | Students assessed 13.  Student work on their project proposal, case-study, site analysis, program and code-review were analyzed based on a rubric. The rubric was completed by faculty in the AS program as well as industry professionals. | | | | | | |
| **Measurement Instrument 2** | Direct: **Analysis of design development and construction documents of capstone project (Senior project)**  Senior AS students work on a year-long capstone (fall and spring semesters). The students were assessed on the design development drawings and the set of construction drawings at the end of the spring semester. | | | | | | |
| **Criteria for Student Success** | students will have a 3.0 satisfaction rating on a 4 point scale | | | | | | |
| **Program Success Target for this Measurement** | | 75 % of senior students | | **Percent of Program Achieving Target** | | -- % of senior students | |
| **Methods** | Students assessed 18.  Student work on design development and construction drawings were analyzed based on a rubric. The rubric was completed by faculty in the AS program as well as industry professionals. Due to Covid all assessments were completed via Zoom (online environment) hence it was not possible to evaluate construction documents. This Instrument was not assessed this academic year. | | | | | | |
| **Measurement Instrument 3** | Appraisal of Student technical skills by employers during internship. | | | | | | |
| **Criteria for Student Success** | students will have a 3.0 satisfaction rating on a 4 point scale | | | | | | |
| **Program Success Target for this Measurement** | | 75 % of students | | **Percent of Program Achieving Target** | | 100 % of students | |
| **Methods** | 10 AS students completed 200 hours of internship during the 2020-2021 academic year. The students were reviewed and responses were provided by supervisors. | | | | | | |
| **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 program has begun implementing changes to pre-requisite courses. These changes are moving through the curriculum process currently.  Faculty were aiming to introduce a programming component in design studio – AMS 369 in Spring 2020 But due to Covid-19 this was delayed. This will be implemented in Spring 2021 with the possibility of assessment in 2022-2023 assessment cycle.  Due to changes in course offering modalities in Fall 2020 plans to implement additional technical assignments in upper level courses have been delayed. Additional assignments to cover areas of site analysis and code review will be introduced in two courses AMS 363 and AMS 469 to improve pre-design outcomes in Fall 2022. | | | | | | | |
| **Follow-Up** (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.) | | | | | | | |
| Follow up will occur in the 2022-2023 assessment period due to the difficulty of implementing proposed changes during COVID 19. | | | | | | | |

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| **Student Learning Outcome 2** | | | | | | | |
| **Student Learning Outcome** | **Graduates will demonstrate an ability to possess effective (oral/ written and/or) graphic communication skills.** | | | | | | |
| **Measurement Instrument 1** | Direct: **Appraisals from industry professionals of capstone projects presentations.** | | | | | | |
| **Criteria for Student Success** | Students will score a minimum 3.0 satisfaction on a 4 point scale | | | | | | |
| **Program Success Target for this Measurement** | | | 75% of Students | | **Percent of Program Achieving Target** | 88 % of senior students | |
| **Methods** | Students assessed 18.  At the end of the semester students present their capstone work to industry professionals and faculty. Students are assessed on their graphic and oral skills. The rubric was completed by industry professionals. | | | | | | |
| **Measurement Instrument 2** | Direct: **Appraisals from industry professionals of schematic design presentations.** | | | | | | |
| **Criteria for Student Success** | Students will score a minimum 3.0 satisfaction on a 4 point scale | | | | | | |
| **Program Success Target for this Measurement** | | 75% of Students | | **Percent of Program Achieving Target** | | 76 % of students | |
| **Methods** | Students assessed 13.  Student design work on schematic design were analyzed based on a rubric. At the completion of schematic design students create a power point and/or presentation board highlighting necessary components of the project. Students also give a verbal presentation of their projects. The rubric was completed by faculty in the AS program and industry professionals who attended student presentations. The assessments were completed during the presentation itself. | | | | | | |
| **Measurement Instrument 3** | Appraisal of student communication skills by employers during internship | | | | | | |
| **Criteria for Student Success** | Students will score a minimum 3.0 satisfaction on a 4.0 point scale | | | | | | |
| **Program Success Target for this Measurement** | | **75%** | | **Percent of Program Achieving Target** | | **100%** | |
| **Methods** | Students assessed 10.  Students are assessed by their supervisors upon the completion of their internship requirements for the program. Supervisors fill out a survey. | | | | | | |
| **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.) | | | | | | | |
| Students completed a project summary report (Thesis Book) of their capstone projects but due to Covid there was minimum input from external jury members hence this will need to be reassessed in the 2021-2022 academic year.  Faculty in the As program have extended the assessment to include a written component. It was planned to add a thesis book to the capstone course but due to the current conditions this has been postponed to the 2020-2021 assessment cycle.  Additional presentation opportunities have been created for students in design studios I (AMS 369) & II (AMS 469). Faculty are working to implement these aspects in the 2021-2022 assessment cycle. | | | | | | | |
| **Follow-Up** (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.) | | | | | | | |
| Follow up for communication will happen in the 2022-2023 assessment. | | | | | | | |

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| **Student Learning Outcome 3** | | | | | | | |
| **Student Learning Outcome** | **Graduates will demonstrate the knowledge and capacity to manage a project through the different design phases** | | | | | | |
| **Measurement Instrument 1** | Direct: Analysis of schematic design of capstone project | | | | | | |
| **Criteria for Student Success** | Students will score a minimum 3.0 satisfaction on a 4 point scale | | | | | | |
| **Program Success Target for this Measurement** | | | 75% of Students | | **Percent of Program Achieving Target** | 78 % of senior students | |
| **Methods** | Student work on design development and construction drawings were analyzed based on a rubric. The rubric was completed by faculty in the AS program as well as industry professionals. | | | | | | |
| **Measurement Instrument 2** | Appraisals from industry professionals of capstone projects | | | | | | |
| **Criteria for Student Success** | Students will score a minimum 3.0 satisfaction on a 4 point scale | | | | | | |
| **Program Success Target for this Measurement** | | 75% of Students | | **Percent of Program Achieving Target** | | 78 % of senior students | |
| **Methods** |  | | | | | | |
| **Measurement Instrument 3** | Appraisal of Students project management skills by employers during internship. | | | | | | |
| **Criteria for Student Success** | Students will score a minimum 3.0 satisfaction on a 4 point scale | | | | | | |
| **Program Success Target for this Measurement** | | 75% of Students | | **Percent of Program Achieving Target** | | 90% of students | |
| **Methods** | Students assessed 10.  Students are assessed by their supervisors upon the completion of their internship requirements for the program. Supervisors fill out a survey. | | | | | | |
| **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.) | | | | | | | |
| AMS 351 will be taught to the students in the spring semester of the sophomore year. It will be a pre-requisite for AMS 363 which will help students create an enhanced set of construction documents and improve their project management skills. | | | | | | | |
| **Follow-Up** (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.) | | | | | | | |
| This will be assessed in the 2022-2023 academic year. | | | | | | | |