

CNM ANNUAL STUDENT LEARNING ASSESSMENT REPORT

Due to the Student Academic Assessment Committee by October 15



PART 1: REPORT INFORMATION

| Report Year and Contact Information | | | |
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| <u>2017-2018</u> Academic Year | <u>Charles Molinari</u> Contact Person | <u>cmolinari@cnm.edu</u> CNM Email | <u>50743</u> CNM Office Extension |
| Subject of this Report | | | |
| HWPS--FS_AAS--Fire Science Degree | | | |

PART 2: CONTEXT IN WHICH THE ASSESSMENT TOOK PLACE

| Program/Area Highlights and Successes (Wherever applicable, include course completion rates, job placement outcomes, and licensing examination pass rates. See the program information dashboard at https://livecnm.sharepoint.com/sites/Dashboards/SitePages/Program%20Information%20Dashboard.aspx (access restricted to CNM employees) and other reports at https://www.cnm.edu/depts/opie .) |
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| <p>The Fire Science Program over the year 17-18 had an overall completer success rate of 87.1% with a C-pass rate of 75.4%. This is a slight increase over the 16-17 reporting year in which the completer success rate was 84.4%, and the C-pass rate was 75.1%.</p> <p>During the 17-18 year the Fire Science Program has also implemented a new credit for prior learning form allowing industry standard certificates to be applied to the student's degree plan. In addition, articulation agreements have been reestablished with 5 local fire departments allowing students who are currently employed with these departments to receive credit based on their certifications to received credit for prior learning.</p> <p>The Fire Science Program was also redesigned during the 17-18 year to meet the outcomes of the DACUM study that was conducted during Summer of 2016.</p> <p>The Fire Science Program received a Certificate of National Recognition as an official Fire and Emergency Services Higher Education institution from the National Fire Academy. This recognition allows CNM Fire Science students to receive National Fire Academy Certificates for FESHE courses completed at CNM.</p> |

Changes Implemented During the Past Year in Support of Student Learning

During the past year the fire science program has continued to transition courses from the face to face only format to the online format.

The Fire Science Program has also been redesigned for the transition to the 2018-2020 catalog which aligns with the DACUM that was conducted in 2016. This transition ensures that CNM graduates are meeting the needs of our industry partners upon graduation. Through this transition the previous concentration model in which there was EMS, Structural, and Wildland has been condensed to one concentration with three certificates of completion embedded.

PART 3: REPORT ON ASSESSMENT OF STUDENT LEARNING

| Assessment Method | Type of Assessment Tool | Population or Course(s) Assessed | Graduate Learning Outcome(s) Assessed | Mastery Level (E.g., "Minimum score of 3 on a rubric scaled 0-4" or "Minimum score of 75%") | Targeted % Achieving Mastery | Outcome |
|--|--------------------------------|---|--|---|-------------------------------------|----------------|
| In class and certification exams (embedded questions), Field Day (skills practice, practical scenarios), NWCG examinations (embedded questions). | Direct & Internal | FS 1504 Wildland Firefighting | <ol style="list-style-type: none"> 1. Explain and promote fire protection and prevention within the community. 2. Explain the causes of structural, wildland, vehicle, and hazardous materials fires and understand the effects of fires in these settings so they may predict fire behavior while fighting fires. | At least 70% of the students passed with a C or better. | 86% | Target met |
| In class exams (embedded questions), unit assignments (embedded questions), case studies/discussions (rubrics), class project (rubric). | Direct & Internal | FS 1512 Building Construction | <ol style="list-style-type: none"> 1. Explain and promote fire protection and prevention within the community. 2. Explain the causes of structural, wildland, vehicle, and hazardous materials fires and understand the effects of fires in these settings so they may predict fire behavior while fighting fires. | At least 70% of the students passed with a C or better. | 65% | Target not met |

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| In class exams (embedded questions), Practical exercises (skill sheets), NMFTA IFSAC Examination (embedded questions and skill sheets). | Direct & Internal | FS 1820 Hazardous Materials Awareness and Operations | 1. Explain and promote fire protection and prevention within the community. 2. Explain the causes of structural, wildland, vehicle, and hazardous materials fires and understand the effects of fires in these settings so they may predict fire behavior while fighting fires. | At least 70% of the students passed with a C or better. | 93% | Target met |
| In class exams (embedded questions), discussion questions (rubrics), unit assignments (rubrics). | Direct & Internal | FS 2402 Managing Community Fire Protection | 1. Explain and promote fire protection and prevention within the community. | At least 70% of the students passed with a C or better. | 67% | Target not met |
| In class exams (embedded questions), unit assignments (rubrics), case studies (checklists). | Direct & Internal | FS 2001 Fire Protection Systems | 1. Explain and promote fire protection and prevention within the community. | At least 70% of the students passed with a C or better. | 85% | Target met |
| In class exams (embedded questions), discussion questions (rubrics), case studies (checklists). | Direct & Internal | FS 2814 Facilities Inspections | 1. Explain and promote fire protection and prevention within the community. | At least 70% of the students passed with a C or better. | 78% | Target met |
| In class exams (embedded questions), unit assignments (rubrics), discussions (rubrics). | Direct & Internal | FS 2422 Fire Behavior and Combustion | 2. Explain the causes of structural, wildland, vehicle, and hazardous materials fires and understand the effects of fires in these settings so they may predict fire behavior while fighting fires. | At least 70% of the students passed with a C or better. | 85% | Target met |

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| In class exams (embedded questions), unit assignments (rubrics), practical demonstrations (rubrics). | Direct & Internal | FS 2815 Wildland Fire Patterns and Prevention | 2. Explain the causes of structural, wildland, vehicle, and hazardous materials fires and understand the effects of fires in these settings so they may predict fire behavior while fighting fires. | At least 70% of the students passed with a C or better. | N/A | N/A |
| Unit exams (embedded questions), unit assignments (rubrics), practical exercises (checklists). | Direct & Internal | FS 2830 Wildland Urban Interface Operations | 2. Explain the causes of structural, wildland, vehicle, and hazardous materials fires and understand the effects of fires in these settings so they may predict fire behavior while fighting fires. | At least 70% of the students passed with a C or better. | 83% | Target met |

Summary of Assessment Findings

During the 2017-2018 reporting period Global Learning Outcomes 1 and 2 were measured. Data reported on the Enrollment and Course Success Metrics shows that the Fire Science program has a 75.4% C-pass rate, and an 87.1% completer success rate. This information shows a slight increase from last year's numbers. Of the courses evaluated all but two met the C-pass rate set at 70%. The C-pass rate of FS 1512, and FS 2402 were 65% and 67% respectively.

Interpretation of Assessment Findings

In review of the assessment findings the majority of the courses have C-pass success rates well over the 70% mark. In evaluation of the FS 1512 and FS 2402 the curriculum and past student performance has been evaluated to determine the cause for the lower pass rates.

Action Plan in Support of Student Learning (Describe changes to be made that are based at least in part on the assessment interpretation. If the assessment did not yield useful information, describe changes to be made in the assessment methodology and/or criteria.)

During the evaluation of FS 1512 it was identified course project has attributed to the lower C-pass rate. The project has been evaluated and it has been determined by the instructional staff that the project can be divided into manageable smaller projects that meet the objectives so that such a large portion of the course grade does not hinge on one assignment. The FS 2402 curriculum has been evaluated as well, and rubrics have been added to assignments to assist in student success. In addition, the FS 2402 course is becoming an elective in the FS 2018-2020 catalog as opposed to being a degree requirement.

Please select all of the following that characterize the types of changes described in the above action plan:

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| <input checked="" type="checkbox"/> Assessment criteria revision | <input type="checkbox"/> Assessment methodology revision | <input checked="" type="checkbox"/> Assignment revision |
| <input type="checkbox"/> Budgetary reallocation | <input type="checkbox"/> Change in teaching approach | <input type="checkbox"/> Course content revision |
| <input checked="" type="checkbox"/> Curricular Revision | <input type="checkbox"/> Faculty training/development | <input type="checkbox"/> Process revision |

| Recommendations, Proposals, and/or Funding Requests | Budget Needed |
|--|---------------------|
| <p>The redesign of the fire science program has been implemented to meet the needs of our industry partners. Currently, the fire science program is working towards the implementation of a Fire Academy Cadet program. The program is currently working with industry partners on the development of the fire academy which is currently expected to be a 10 week Monday-Friday program which will require additional space, a training facility, and equipment. The budget needed will assist in the purchase of a training tower, and a used fire truck if one cannot be obtained through a donation.</p> | <p>\$200,000.00</p> |

PART 4: REMAINING YEARS IN CURRENT ASSESSMENT CYCLE PLAN (including any revisions) – **OR -- UPCOMING ASSESSMENT CYCLE PLAN** (if this was the final year)

| Years of Full Cycle | Next Year's Assessment Focus (Describe how the next planned assessment is expected to provide information that can be used toward improving student learning.) |
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| 2019-2024 | <p>The current 2018-2019 year will be evaluated as a baseline for future assessment as the FS program was redesigned to include industry standard certification courses. New learning outcomes are being developed and reviewed for the 2019-2024 Cycle Plan.</p> |