



**Mitchell CC: Student Learning Outcomes Assessment Report
Academic Year Report: 2021-22**

Student Achievement

Comprehensive Standard 8.2a

The institution identifies expected outcomes, assesses the extent to which it achieves these outcomes, and provides evidence of seeking improvement based on analysis of the results in the areas below:

- a. Student learning outcomes for each of its educational programs. (Student outcomes: educational programs)*

Program: A55240, C55240, C55240FS, C55240AH

Chair: Joshua Smith

This program is part of: Fire Protection Technology [Division of Public Safety]

Date Submitted: 6/30/22

Overview A55240: Fire Protection Technology

AAS- Associate in Applied Science

CIP 43.0201

Through a collaborative process including faculty and the program's advisory committee, we identified common critical components (CCCs) of knowledge, skills and abilities (KSAs) that students would need to be successful in the workforce. The KSA's became the foundation for the establishment of our student learning outcomes (SLOs). Once the SLOs were established we mapped the objectives to our program curricula. The objectives were identified in three stages: (1) introduced; (2) reinforced; and (3) competency attained. The last stage is the focus of the program assessment. To effectively assess competency, certain assessment tools were identified. These assessment tools have been mapped to each fire protection course in the program. The next step is to integrate the assessment tools in the protection courses syllabi as appropriate. Both SLO's and the course curricula will continue to be reviewed in an effort to provide accounting graduates with relevant and current KSA's.

PART I

(Associate Degree; AAS)

SLO1 Students will demonstrate proficiency (80%) in the area of personnel and resource management

SLO2 Students will demonstrate proficiency (80%) in emergency scene management

SLO3 Students will demonstrate proficiency (80%) in fire detection and suppression systems

SLO4 Students will demonstrate proficiency (80%) in fire cause determination

SLO5 Students will demonstrate proficiency (80%) in fire prevention and code enforcement

C55240

SLO1 Students will demonstrate proficiency (80%) in the area of personnel and resource management

SLO5 Students will demonstrate proficiency (80%) in the area of fire prevention and code enforcement

C55240FS

SLO1 Students will demonstrate proficiency (80%) in the area of personnel and resource management

SLO2 Students will demonstrate proficiency (80%) in emergency scene management

C55240AH

SLO1 Students will demonstrate proficiency (80%) in the area of personnel and resource management

SLO4 Students will demonstrate proficiency (80%) in fire cause determination

SLO5 Students will demonstrate proficiency (80%) in fire prevention and code enforcement

Goal/Outcome	Course and Assessment Activity	Performance Target	Assessment Results	Comparison with Prior Academic Year's Results	Actions to be Taken based on Results of Assessment
<p>SLO1 - Students will demonstrate proficiency (80%) in the area of personnel and resource management</p>	<p>FIP120; multiple written assignments on fire department resources; Final Exam (Written)</p> <p>FIP276; multiple written assignments and quizzes on fire department services and resources; Final Project via National Fire Academy (Written)</p>	<p>80%</p> <p>80%</p>	<p>This is an entry-level course that has proven to be successful in introducing the fire service to students new to the program. Assignment results showed the all of students met the goal of 80% personnel and resource management. Students that were not successful typically did not complete the assignments. Program outcome data indicate the majority of students are successful in meeting established goals. Qualitative data also support the positive outcomes in relation to the Fire Protection Program.</p> <p>Specific Assignment grading linked to program outcomes: Specific Assignment grading linked to program outcomes: Chapter 7/8/9 Quiz: 92.5; Final Exam: 85.56</p>	<p>Target: These courses introduce the components of the fire service. The second-year course reinforces the operations of a fire department. Courses provide consistent results in identifying learning. Targeted assignments are also assuring courses meet fire service needs.</p>	<p>Action Plan: FEMA continues to update its online course library and we will continue to maintain current course content. This course meets National Fire Academy Course requirements (Principles of Emergency Services) set by FEMA. Additional assignments were implemented to provide additional opportunities to meet stated goals.</p>

<p>SLO2 - Students will demonstrate proficiency (80%) in emergency scene management</p>	<p>EPT140; multiple written assignments and discussion forums revolving around emergency scene management; also, FEMA project on operations</p>	<p>80%</p>	<p>This is an entry-level course that has proven to be successful in introducing, reinforcing, and showing competence in the area of scene management. Assignment results showed that all of the students met the goal of 80% emergency management. Students that were not successful typically did not complete the assignments. Program outcome data indicate the majority of students are successful in meeting established goals. Qualitative data also support the positive outcomes in relation to the Fire Protection Program.</p> <p>Specific Assignment grading linked to program outcomes: Principles of EM: 100; Mid-Term: 99.43; Chapter 6: 90.712; Final Project/FEMA: 85.71</p>	<p>Target: This course is an overview of all of the phases of emergency management and concludes with a final project allowing the student to master the topic Updated FEMA assignments are assuring learning is meeting emergency services needs.</p>	<p>Action Plan: FEMA continues to update its online course library and we will continue to maintain current course content. The college will continue to use the current information from the National Emergency Management Institute. Additional assignments were implemented to provide additional opportunities to meet stated goals.</p>
<p>SLO3 - Students will demonstrate proficiency (80%) in fire detection and suppression systems</p>	<p>FIP128; multiple written assignments, quizzes, and discussion forums revolving around fire detection and fire cause determination</p>	<p>80%</p>	<p>This is an entry-level course that has proven to be successful in introducing and reinforcing the concepts of fire suppression systems. Assignment results showed the majority of students met the goal of 80% suppression system operations. Students that were not successful typically did not complete the assignments. Program outcome data indicate the majority of students are successful in meeting established goals. Qualitative data also support the positive outcomes in relation to the Fire Protection Program.</p> <p>Specific Assignment grading linked to program outcomes: Week 4 Discussion: 100; Week 5 Written: 91.67; Final Exam: 91.27</p>	<p>This course overviews several fire investigation topics. Students are introduced to detection and suppression systems and reinforced later in the course in the areas of fire cause determination. NC Fire Investigations course criteria assure standards are being met annually.</p>	<p>Determining fire causes uses the proven scientific method. Faculty maintain currency with investigations. Faculty are actively service local fire officers and are required to maintain a current NC Fire Service Instructor II qualification.</p>

<p>SLO4 - Students will demonstrate proficiency (80%) in fire cause determination</p>	<p>FIP128; multiple written assignments, quizzes, and discussion forums revolving around fire detection and fire cause determination</p>	<p>80%</p>	<p>This is an entry-level course that has proven to be successful in introducing and reinforcing the concepts of fire cause. Assignment results showed the majority of students met the goal of 80% detection of fires. Students that were not successful typically did not complete the assignments. Program outcome data indicate the majority of students are successful in meeting established goals. Qualitative data also support the positive outcomes in relation to the Fire Protection Program.</p> <p>Specific Assignment grading linked to program outcomes: Week 1 Written: 100; Week 2 Written: 100; Mid-Term: 93.09</p>	<p>This course overviews several fire investigation topics. Students are introduced to detection and suppression systems and reinforced later in the course in the areas of fire cause determination. NC Fire Investigations course criteria assure standards are being met annually.</p>	<p>Determining fire causes uses the proven scientific method. Faculty maintain currency with investigations. Faculty are actively service local fire officers and are required to maintain a current NC Fire Service Instructor II qualification.</p>
<p>SLO5 - Students will demonstrate proficiency (80%) in fire prevention and code enforcement</p>	<p>FIP124; multiple written assignments, quizzes, and discussion forums revolving around fire prevention and fire education</p>	<p>80%</p>	<p>This is an entry-level course that has proven to be successful in introducing and reinforcing the concepts of fire prevention and code enforcement. Assignment results showed that all of the students met the goal of 80% detection of fires and suppression system operations. Students that were not successful typically did not complete the assignments. This course was not offered this year</p>	<p>This course overviews several fire prevention and public fire education topics. Students are introduced and reinforced to methods of prevention and how to deliver content to the public. NC Fire Prevention Educator assures adequate standards are being met each year.</p>	<p>Local fire officers deliver the content and stay current on prevention methods and education by operating in their position. Faculty are required to maintain a current NC Fire Service Instructor II qualification.</p>

PART IV

Analysis of Results and Plans for Improvement for Next Year

Describe or expand upon the assessment results and how best to make improvements based upon the current year's results. Improvements could include modifications in the assessment processes or curriculum, examining curriculum content in support of skill development, changes in pedagogical practices, re-examining the SLOs, or identifying ways student support services (tutoring, advising, the library) might contribute to increased student success. The narrative should address some probable conclusions based on the results provided in the assessment report.

The FIP program was revised in 2017 to reduce the hours for completion and provide methods to crosswalk certifications toward the degree. The program has graduated 5 during this catalog year. The program is being phased into eight-week sessions to allow students the opportunity to focus on fewer classes at a time. Completely online course delivery works well for active firefighters. The need for a full-time fire coordinator has been requested to assist with program management. This will allow for some entry-level courses to be delivered in a hybrid or traditional format.

PART V

Closing the Loop and Impact of Prior Improvements

Provide an effective summary that closes the assessment loop by analyzing the impact of the improvements which were implemented based on previous years' results. Include faculty discussions of the intended and actual results of the improvements and what are next steps.

Faculty advising continued to improve student success. Each student is contacted at a minimum of twice each semester. The FIP advisory committee includes faculty, staff, and members of the local fire service community. This committee recommended a certification to be used for promotion within the municipal fire services in Iredell County. Two local fire departments now use the certification program for their promotional processes. The program has grown slightly over the past few years. The local fire services leaders are enrolled in the program which is bringing additional students into the program. The requested full-time fire coordinator will continue to improve efficiency and consistency in the program. Additionally, MCC will move to program and course evaluation using the LMS next year. This will permit all assignments to be linked to an evaluation.