

Student Learning Outcomes Assessment Summary

Fire Science, Associates of Applied Science

UAF Community and Technical College: Fire Science

2015-2016

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Date: May 13, 2016

1. Assessment information collected

- a. Graduates will secure employment in emergency services or a closely related field or go on for additional education, training, or experience within one year.
- b. Eighty percent of students who take the State of Alaska/International Fire Service Accreditation Congress certification in one or more of the following will pass the examination in:
Firefighter I
Firefighter II
Rapid Intervention Technician
Or
National Wildfire Coordination Group
- c. Students will demonstrate knowledge the Incident Command System (ICS) through standardized testing in relevant courses.

2. Conclusions drawn from the information summarized above

- a. Graduate survey results for 2016 and 2015.

2016 Graduate Survey Results:

9 UAF Homeland Security Emergency Management BEM
1 Employed and Homeland Security Emergency Management BEM
1 BA outside UA
1 UA Nursing
1 UAF Psychology
1 UAF Biological Science
3 UAF CTC Paramedic
1 UAF CTC Emergency Services: Public Safety
2 Employed in the fire service in Alaska
2 Employed outside of emergency services

AAS Fire Science and Emergency Services: Fire Science had 22 graduates for the outcome assessment period of 2016. Of our 22 graduates, we were able to track all 22.

Of our 2016 graduates, **95%** were successful in obtaining employment or continuing their education.

2015 Graduate Survey Results:

11 UAF Homeland Security and Emergency Management BEM
4 Employed and Homeland Security Emergency Management BEM
1 UAF Biology Sciences
4 UAF CTC Paramedic
1 Paramedic outside UA
1 UAF General Studies
1 Higher Education outside UAF
3 Employed outside of emergency services
2 Unknown/Not able to contact

AAS Fire Science and Emergency Services: Fire Science had 28 graduates for the outcome assessment period of 2015. Of our 28 graduates, we were able to track 26. Data reflects the 26 graduates that responded to our survey.

Of our 2015 graduates, **88%** were successful in obtaining employment or continuing their education.

b. State and National certification test results.

State of Alaska/IFSAAC Firefighter I

2016	24 out of 27 passed	88%
2015	45 out of 45 passed	100%
2014	36 out of 37 passed	97%
2013	40 out of 43 passed	93%
2012	41 out of 43 passed	95%
2011	39 out of 39 passed	100%
2010	21 out of 21 passed	100%
2009	18 out of 18 passed	100%
2008	28 out of 28 passed	100%

State of Alaska/IFSAC Firefighter II

2016	Course in progress	
2015	23 out of 23 passed	100%
2014	23 out of 23 passed	100%
2013	15 out of 15 passed	100%
2012	12 out of 12 passed	100%
2011	12 out of 12 passed	100%
2010	22 out of 22 passed	100%
2009	14 out of 14 passed	100%
2008	22 out of 23 passed	95%

State of Alaska Rapid Intervention Technician

2016	Course not offered	
2015	5 out of 5 passed	100%
2014	7 out of 8 passed	87%
2013	9 out of 11 passed	81%
2012	6 out of 7 passed	85%
2011	9 out of 9 passed	100%
2010	10 out of 10 passed	100%
2009	9 out of 9 passed	100%
2008	10 out of 10 passed	100%

National Wildfire Coordination Group

2016	110 out of 112 passed	98%
2015	73 out of 74 passed	98%

- c. Test questions in the midterm and/or final were created to test retention of student knowledge of the Incident Command System (ICS) in FIRE F101Principals of Emergency Services and FIRE F220 Firefighter Safety, Health and Survival. Results of test questions demonstrated a greater degree of knowledge retention from the 2010 period where 70% of students failed an ICS follow up examination. The majority of students passed ICS questions in both classes.
- d. Our department was unable to track student outcomes listed in Section 3 of our assessment for UAF General Education Requirements.

Curricular changes resulting from conclusions drawn above

- a. The majority of program graduates were successful in obtaining employment or furthering their education pathways. Our department goal is that 80% of graduates are successful in obtaining employment in emergency service or continuing onto higher education programs. For the period of 2015-2016 our students met our department goal.
- b. Our students continue to surpass our department goal of 80% passing certification testing. In the spring of 2015 we changed the curriculum company we used for Firefighter I and Firefighter II, as the nation curriculum standards were updated. We noted an approximate 10% drop in passing scores for Firefighter I in 2016 from past outcome reporting periods. A comprehensive review of subject area examination results did not reveal consistency in low score question topic areas between Summer 2015 and Spring 2016 FFI examinations. We plan to continue to monitor future examinations to attempt to determine if we have a curriculum issue or if patterns appear in examination results.
- c. Overall, we saw an improvement in retention of Incident Command System Knowledge from 2010 results. In reviewing data for this report, we realized that tracking of questions and a consistency in the type of ICS examination questions could be improved upon. Our plan is to update our examinations for the next review.
- d. Direction was given that our department was required to track UAF general education requirement outcomes for students in our program in Communication, Computation, and Human Relations. Our first attempt was to track students through general education departments. We were not able to do so. We did find that general education requirements, as they pertain to fire science, can be monitored through student work and presentations. We plan to update our Student Learning Outcomes to reflect that FIRE F101 Principals of Emergency Services and FIRE F220 Firefighter Safety, Health and Survival will review writing samples and

require oral presentations. FIRE F202 Fire Protection and Hydraulics will review Math skills related to emergency services. As an example, one student in FIRE F101 and one student in FIRE F220 were referred to the writing center for further help with their writing skills.

3. Identify the faculty members involved in reaching the conclusions drawn above and agreeing upon the curricular changes resulting

John George, Associate Professor/Program Head

Tylan Martin, Assistant Professor

Loren C. Rotroff, Adjunct Professor