

Submission date: February 10, 2020

Program/s in this review: AAS Fire and Emergency Services

Specialized accrediting agency (if applicable): Fire and Emergency Services Higher Education (FESHE)

Campuses where the program is delivered: Anchorage (UAA)

Members of the program review committee:

- Conor Kantrowitz, Interim Fire and Emergency Services Program Director (chair), UAA
- LeeAnne Carrothers, Director of Allied Health, UAA

1. Centrality of Program Mission and Supporting Role (700 words or less)

Program Relevancy

The mission of the University of Alaska Anchorage (UAA) is to discover and disseminate knowledge through teaching, research, engagement and creative expression. UAA is committed to serving the higher education needs of the state, its communities and its diverse peoples.

UAA's School of Allied Health's mission is "to educate and develop allied health professionals to serve all Alaskans," while the College of Health's mission is "Advancing the health and well-being of people and communities."

The mission of the Fire and Emergency Services (FES) Technology program at UAA is "... to graduate competent and ethical professionals. By working to meet the needs of both entry-level students and students already in the workforce, the program will remove barriers to student success. We recognize the value of work experience already gained, offer excellent and relevant education, and provide courses that are easy to access for both traditional and non-traditional students. Our goal is to meet the growing need for well-educated and skilled Fire and Emergency Services professionals."

The program's mission directly aligns with those of the School and Institution with its goal to meet the growing need for well-educated and skilled FES professionals in all areas of the state through its distance education format (disseminate knowledge through teaching; educate and develop allied health professionals to serve all Alaskans). The program also contributes to the strategic priority of "forging strong relationships, partnerships and ties with our communities, businesses, schools and people" with its solid connection to industry partners.

Support of Other Academic Programs

Approximately ten percent of Student Credit Hour (SCH) production for Emergency Medical Technician courses (EMT A110, EMT A130, EMT A230 and EMT A231) is from students in the major while the other 90 percent is from students in other programs or non-degree seeking students. These courses could be electives to support other majors or may be occupational requirements for a second career option.

Similarly, out of major SCH production for classes in the Fire Sciences exceeds that of in major (53% vs. 47%), though clearly the proportion is different. The reason for the difference is unclear, though a reasonable explanation would be that students taking Fire Sciences classes are completing them as professional development or career-exploration activities, though they are not degree-seeking.

Partnerships

All three EMT classes (EMT A130 EMT I, EMT A230 EMT II and EMT A231 EMT III) and the FIRE A295 FES Practicum require the student to work in hospitals or with emergency response agencies. Since the emergency response community in Alaska is very small, this helps students build a positive reputation with hiring companies in Alaska. The UAA FES program is partnered, through MOA/MOU, with the following agencies:

- Anchorage Fire Department (AFD)
- Providence Alaska Medical Center (Emergency Department)
- Alaska Regional Hospital (Emergency Department)
- Chugiak Volunteer Fire and Rescue
- Alaska Heart and Vascular Institute
- Mat-Su Borough Fire Department

Workforce Development/Employment Opportunities

While the Alaska employment growth outlook is low for firefighters (1.5% change by 2026), the Alaska Department of Labor and Workforce Development predicts 13% growth in job openings by 2026 for Emergency Medical Technicians (EMTs) and Paramedics by 2026. Given that EMT courses are required for the FES degree and as prerequisite courses for the AAS in Paramedical Technology, workforce growth will help to ensure continued demand for those courses.

The FES Technology program has two major opportunities for workforce development. The first such opportunity is to partner with AFD in the development of a bachelor's degree program. There is no bachelor's degree program offered in Alaska specific to FES Technology. A partnership with AFD would be mutually beneficial. AFD would provide curriculum development assistance, an adjunct faculty pool, subject matter expertise and a potential student pool. UAA would provide a regionally accredited, Fire and Emergency Services Higher Education (FESHE) recognized, bachelor's degree program.

The second opportunity is a partnership between Mat-Su College (MSC), AFD and UAA to deliver high quality paramedic education. The MSC is working to meet AFD's need for paramedic-trained EMS professionals, but currently requires that students attend laboratory classes on the MSC campus. By UAA providing laboratory classes in Anchorage there would be an increased accessibility to paramedic education to AFD and other students.

2. Program Demand (including service to other programs), Efficiency, and Productivity (7 year trend; 1400 words or less)

Entry-level firefighting classes are typically vocational classes taught within various fire departments. The University of Alaska Fairbanks (UAF) has an on-campus firehouse, but UAA does not. The UAA FES Technology program was created as a pathway for degree acquisition or completion for individuals in the FES workforce. The AAS in FES Technology allowed those persons in the workforce to leverage their work experience and acquire the associate degree required for professional development, promotion and increased pay. UAA specifically partnered with the Anchorage Fire Department (AFD) during the creation of the FES program.

In more recent years, with the development of online colleges and degree programs, specifically Columbia Southern University in Alabama, there has been a decrease in the number of degrees awarded, with a concomitant shift in the type of students attending UAA for a FES degree. While there are still some local students attending from the current workforce, the majority of students are new to the field and seek a path to employment. The UAA FES degree helps these students in two ways. First, the program provides foundational education and training that is desirable in the workplace. Second, the program, through certain classes, allows the student to explore the FES career prior to actually seeking a healthcare career.

Students who previously might complete their degree at UAA are now going to other universities instead, representing lost opportunities for UAA. This has occurred in part due to the fact that AFD tuition reimbursement policies currently allow students to attend any accredited university and be eligible for reimbursement. AFD is presently working on a change to their policy that would require students to attend regionally accredited programs; this change would likely result in a significant return of AFD students wishing to complete their degree at UAA.

Given the mission of the program, the average number of years to complete a degree (4.5 years) is not surprising. The goal of this program is to enable non-traditional students, who are currently full-time employees, to complete a degree. That said, the average credits per degree (67) is relatively close to the number of credits (60) required for the degree. This likely demonstrates that individuals enrolled in the program are committed to a specific career path and take program-specific courses.

SCH production has been relatively level for the past three years, with higher production seen in 2016-2017. Current levels still provide sufficient revenue to meet and exceed costs. The program has room to grow and increase, particularly if AFD changes their tuition reimbursement policy, and mandates that employees take classes from regionally accredited universities to receive reimbursement.

Because the majority of FES courses are taught by adjuncts, the 80% tuition revenue/ instruction cost ratio ranges from 0.94 to 1.61 (self-calculated), with a 5-year average of 1.24. This means the FES technology program brings in more revenue than is expended in instructional costs. This program stands out in the School of Allied Health because it generates significantly more revenue than expense, thus helping support other programs.

The creation and implementation of a bachelor's degree, with an emphasis on fire leadership, within the FES program would only enhance the tuition revenue/instruction cost ratio. The bachelor's degree faculty would remain largely adjunct in nature and, since courses would now be upper division, greater revenue would be generated.

A FES program with an AAS and BS would allow entry-level students seeking to hire on with a municipal fire department, and also experienced personnel already in the workforce, to gain a formal education. This education will make the entry-level students more marketable for available jobs while the in-situ workers will be more competitive for promotion. There is a nationwide trend to use academic education as one of the four pillars of professional development within the Fire and Emergency Services field.

As it stands now, there are only six online, FESHE-recognized, Bachelor of Science degrees relating to the fire service nationwide. None of these focus on fire leadership.

The creation of a bachelor's degree focused on fire leadership, with a strong online component, could increase enrollment in FES program classes by a significant amount and strongly align with the UA Board of Regents directive to double the number of healthcare graduates by 2025.

3. Program Quality, Improvement and Student Success (1500 words or less)

Specialized Accreditation

While not externally accredited, the entire program is recognized by Fire and Emergency Services Higher Education (FESHE), a branch of the US Fire Administration through Federal Emergency Management Agency (FEMA). UAA's program is the only FESHE-recognized program in Alaska.

Currency of the Curriculum

All FIRE classes are being taught with up-to-date textbooks, learning materials and practices. Because of UAA's regional accreditation and the FESHE recognition, the program is required to remain up to date. FESHE recognition is not required but was proactively sought out for the students attending UAA FEST program classes. FESHE recognition facilitates the use of Non-Traditional Credits for coursework obtained outside of UAA. Some courses that meet National Fire Protection Administration (NFPA) standards and are accredited through the International Fire Service Accreditation Congress (IFSAC) or ProBoard, can be directly applied to UAA curriculum.

The EMS classes, however, are not as current, as the State of Alaska standards for EMS courses (which dictate course requirements) were last changed in 2002. Since then, not only have the national standards changed, the

practice of medicine has changed dramatically. There are four (4) EMS classes taught at UAA. EMT A110 Emergency Trauma Technician (ETT) is a State of Alaska-only class for first responders and does not lead to State of Alaska certification. The other three classes (EMT A130 Emergency Medical Technician I, EMT A230 Emergency Medical Technician II and EMT A231 Emergency Medical Technician III) all lead to State of Alaska certifications. Furthermore, the EMT I class can lead to national "certification." Currently, the EMT I class is compliant with both State of Alaska and National EMS education standards. Students who successfully complete the EMT I course can take the national EMS exam and become nationally registered as well as State-certified. The EMT II and EMT III classes are Alaska-only certifications and are taught within the State of Alaska framework and there is no national certification for these courses.

The hope in the coming years is that UAA will offer the National Registry Advanced-EMT (AEMT) course. This course, currently being used by the majority of the US, has not yet been incorporated into the State of Alaska EMS system; the program expects this integration to move forward in the next 12-18 months. By offering the AEMT course, and also developing, with the help of the AFD, EMT I and EMT III courses that will bridge into AEMT, the program will be one of the first in the state to meet these acute, growing needs for Nationally Registered EMTs.

Another effort that will contribute to currency of the curriculum is the development of the Bachelor of Science in Fire and Emergency Services degree. In the process of creating this degree, all FES courses have been evaluated and updated as needed. As stated above, this program is currently in development, but has not yet been submitted for formal curriculum review and approval.

Student Success

As students progress through the FES degree program, there are many opportunities for high-impact learning. The FES program's high-impact learning strategies focus is on three elements:

- Service/Community Based learning
- Internship/Field Placement
- Capstone project

All three EMT courses (EMT I, II and III) require some form of Service or Community Based learning.

EMT I: Students are required to complete an eight (8) hour shift in a local emergency department (ED). This experience comes with the requirement to write a 500 – 1000 word essay about what they observed in the ED and how it relates to what was learned in class. Both the ED observation and essay are required for a student to be eligible to sit for certification testing.

EMT II: Students are required to complete a clinical notebook which requires students to do ED observations and perform a variety of tasks. The clinical notebook requires 10 patient assessments, 5 lung assessments, 10 live intravenous cannulations (performed in class under instructor supervision) and 5 medication administrations. Completion of the clinical notebook constitutes a substantial portion of the student's grade and is required for a student to be eligible for certification testing.

EMT III: Students also complete a clinical notebook, but, in addition to in-class learning and practice, also have the opportunity to ride with AFD or complete rotations at the Alaska Heart Institute. These field placements provide excellent learning opportunities for the UAA EMT students. Because the program already has an MOU with AFD and have sent through competent students, the program would expect this ever-growing relationship to flourish.

Select fire classes, e.g., FIRE A117 Rescue Practices, also provide opportunities for hands-on, service learning. Students in this course work with members of the Girdwood Fire Department to develop high angle rescue techniques that require rescuers to be fully dependent upon ropes to support their weight. Additionally, the one-day Vehicle Extrication course partners with Chugiak Volunteer Fire and Rescue for live extrication

evolutions under the supervision of officers within that department. Students from the EMT I class join the FIRE students for an opportunity to learn and practice side-by-side in interdisciplinary rescue evolutions. Lastly, the FES Practicum course serves as a capstone of sorts and places the FES student in a position to practice the skills learned in class. Students are placed at various fire departments and EMS services for real-life learning opportunities. The students then create an e-portfolio on eWolf relating their practical experiences to their in-class learning. This includes creation of a resume, thus making a complete portfolio that can be carried forward by the student into the job-seeking world. All academic advising is handled by the program director who is term faculty and the only full-time faculty member.

Student Accomplishments

The UAA FEST program enjoys a ~91% first-time pass rate on the National Registry of EMTs Emergency Medical Technician cognitive exam. This is well above the 71% first-time pass rate national average. EMT II and EMT III have a 95% first time pass rate on the State of Alaska cognitive exams. Many FES Technology graduates go on to other fields in medicine at UA institutions including Paramedical Technology, Nursing, Physician Assistant, Diagnostic Medical Sonography and even the MEDEX and WWAMI programs. Many students graduate with university honors.

4. Program Duplication / Distinctiveness (300 words or less)

Outside of the University of Alaska system, opportunities exist for education in Fire and Emergency Services education in Alaska, including private EMT I courses, EMT I courses offered by fire departments, and online Fire Science degrees. Within the University of Alaska system, students can complete associate degree programs in Paramedicine (at KPC, MSC and UAF), or a bachelor's degree in Homeland Security Emergency Management. That said, UAA's AAS in Fire and Emergency Services serves a unique need (degree completion for existing fire professionals) not offered elsewhere on the state. The coursework of the UAA and UAF programs at the associate level is similar, however, the target audiences are vastly different. Furthermore, creation of a bachelor's degree with an emphasis on fire leadership would allow students from UAF's program a second bachelor's degree option beyond the BS offered at UAF.

5. Summary Analysis (500 words or less)

Overall, the greatest strength of this program is the capacity for growth. Current MOAs/MOUs with different facilities and clinical settings provide ample opportunities for high-impact student learning, as evidenced by performance on the National Registry and Certification exams. The in-development BS in Fire and Emergency Services will provide additional opportunities for degree completion and will further strengthen the program's relationship with AFD. As that program develops, the process will facilitate detailed curriculum review (and revision as necessary), updated assessment plans and excellent opportunities to meet Alaskan workforce needs within the profession. It will recognize the value of work experience already gained, offer excellent and relevant education, and provide courses that are easy to access for both traditional and non-traditional students.

The FES program currently provides excellent return on investment, both tangible and intangible. An excellent tuition revenue/instruction cost ratio is a strong foundation for growth, while many students use EMT classes as starting points for their Health and Allied Health degrees and careers. The FES program is fertile ground, ready for expansion and development. This aligns with the UA Board of Regents directive to double the number of healthcare graduates by 2025.

The review committee finds the Fire and Emergency Services program successfully serves its students and meets its mission and goals, and addresses a unique educational need in Alaska. The addition of the bachelor's degree will provide opportunities for growth, increased SCH hour production, and opportunities to further strengthen the program's relationship with AFD. The committee recommends the Fire and Emergency Services AAS be ***continued and enhanced***.