




Date: May 26, 2016
To: Statewide Academic Council
From: Samuel Gingerich, Provost and Executive Vice Chancellor for Academic Affairs
Through: Thomas Case, Chancellor 
Subject: Proposed BS Occupational Safety and Health

In response to state needs and industry demand, the Community and Technical College is proposing an Occupational Safety and Health Bachelor of Science (BS OSH) program. Following an industry discussion with the President of the University of Alaska, this proposal has been three years in the making and has been guided by the Occupational Safety and Health (OSH) Advisory Board. The Board has been led and co-facilitated by Alaska Workforce Investment Board (AWIB) member Florian Borowski and Ann Lindsey, senior health and safety consultant and active member of the Alaska Safety Association, and includes prominent safety and HR professionals from Alaska's oil and gas, construction, mining, fisheries, and transportation industries. Examples of organizations represented on this Board include BP, the Alaska Railroad, ConocoPhillips, CH2M Hill, Davis Construction, and Schlumberger. The BS OSH will be the sole baccalaureate program of its kind in the state of Alaska, and it will build on the current AAS OSH, also solely offered at UAA.

Graduates of the program will be prepared to address the unique occupational health and safety challenges faced in the Arctic/polar region environment, and will reach across the State through distance delivery.

Alaska Technical Vocational Education Program (TVEP) funds have supported development of this program, with a portion of these funds dedicated to curriculum development, hiring the program faculty, and purchasing necessary laboratory equipment. TVEP funds will be used for the initial start-up years, as well as the continued development of the university-industry partnership. In the event that TVEP funds are not available, the program's expenses will be met through reallocation of the available college funds.

The program proposal has been approved by the faculty, dean, and appropriate UAA curriculum committees and the Faculty Senate. The program faculty have also coordinated with colleagues throughout the University of Alaska System in order to identify and support other programs that require safety content.

Throughout development, the OSH Advisory Board established a goal for this program to meet rigor associated with the highest recognized standards in the field. As a result, upon graduating our first BS-OSH students, UAA will be eligible to seek ABET program accreditation for this program.

Attachments: BOR Program Action Request Form, Program Prospectus



Board of Regents Program Action Request
University of Alaska
 Proposal to Add, Change, or Delete a Program of Study

1a. UA University (choose one) UAA	1b. School or College Community & Technical College	1c. Department or Program Construction, Design and Safety																																								
2. Complete Program Title Bachelor Science in Occupational Safety and Health																																										
3. Type of Program <input type="checkbox"/> Undergraduate Certificate <input type="checkbox"/> Associate <input checked="" type="checkbox"/> Baccalaureate <input type="checkbox"/> Post-Baccalaureate Certificate <input type="checkbox"/> Master's <input type="checkbox"/> Graduate Certificate <input type="checkbox"/> Doctorate																																										
4. Type of Action <input checked="" type="checkbox"/> Add <input type="checkbox"/> Change <input type="checkbox"/> Delete	5. Implementation date (semester, year) <input type="checkbox"/> Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Summer Year 2017																																									
6. Projected Revenue and Expenditure Summary. Not Required if the requested action is deletion. (Provide information for the 5 th year after program or program change approval if a baccalaureate or doctoral degree program; for the 3 rd year after program approval if a master's or associate degree program; and for the 2 nd year after program approval if a graduate or undergraduate certificate. If information is provided for another year, specify (1st) and explain in the program summary attached). Note that Revenues and Expenditures are not always entirely new; some may be current (see 7d.)																																										
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Page # of attached summary where the budget is discussed, including initial phase-in: 4-5																																										
7. Budget Status. Items a., b., and c. indicate the source(s) of the General Fund revenue specified in item 6. If any grants or contracts will supply revenue needed by the program, indicate amount anticipated and expiration date, if applicable.																																										
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8. Facilities: New or substantially (>\$25,000 cost) renovated facilities will be required. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, discuss the extent, probable cost, and anticipated funding source(s), in addition to those listed in sections 6 and 7 above.																																										

¹Sometimes the courses required by a new degree or certificate program are already being taught by a UA university, e.g., as a minor requirement. Similarly, other program needs like equipment may already be owned. 100% of the value is indicated even though the course or other resource may be shared.

9. Projected enrollments (headcount of majors). If this is a program deletion request, project the teach out enrollments.

Year 1: 60	Year 2: 70	Year 3: 75	Year 4: 80
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Page number of attached summary where demand for this program is discussed: 3

10. Number* of new TA or faculty hires anticipated (or number of positions eliminated if a program deletion):

Graduate TA	
Adjunct	4
Term	1
Tenure track	

11. Number* of TAs or faculty to be reassigned:

Graduate TA	
Adjunct	
Term	
Tenure track	

Former assignment of any reassigned faculty:
For more information see page 4 of the attached summary.

12. Other programs affected by the proposed action, including those at other MAUs (please list):

Program Affected	Anticipated Effect
AAS Occupational Health and Safety	Anticipated Growth in this program as the Bachelor Degree builds on the AAS
Any program in UA that offers an OSH course	As the only provider of BS level course work and a BS OSH courses in other programs would need updating to align with curriculum changes in the AAS and additional courses in the BS so students would not have to retake courses if they chose to continue on from the certification or UG program in which they participated in an outdated OSH course.

Page number of attached summary where effects on other programs are discussed: 4-5

13. Specialized accreditation or other external program certification needed or anticipated. List all that apply or 'none': Anticipated to seek specialized accreditation upon graduation of first BS OSH student through the Accreditation Board for Engineering and Technology (ABET).

14. Aligns with University or campus mission, goals, core themes, and objectives (list): This program aligns the University of Alaska Anchorage (UAA) strategic priorities of engaging in collaborative partnerships for workforce development and high demand careers; and the Community & Technical College mission to "Build Alaska's Workforce" and core themes 1) Teaching & Learning through Programs of Distinction, 2) Student Success through Workforce Preparation and 3) Public Square expanded through Community and Industry Partnerships.

Page in attached summary where alignment is discussed: 2

15. Aligns with Shaping Alaska's Future themes:

Page in attached summary where alignment is discussed: This program aligns with the UA Strategic Pathways framework by engaging in collaborative partnerships with public and private partners for workforce development and high demand careers, and providing access statewide through distance delivery (p. 2).

16. Aligns with Academic Master Plan goals:

Page in attached summary where alignment is discussed: This program aligns with the Academic Master Plan goals by meeting the state's technical and workforce training needs and providing access through distance education (p. 2).

17. State needs met by this program (list): The workforce is aging out; Occupational Safety and Health is a growing career field in Alaska; Alaskan Industries indicate a need for bachelor prepared OSH professionals; Alaska has an incidence rate for non fatal occupational injuries that is higher than the national average; for every \$1 invested in safety \$2 is returned.

Page in the attached summary where the state needs to be met are discussed: 1-4

18. Program is initially planned to be: (check all that apply)

- Available to students attending classes at campus(es).
- Available to students via e-learning.
- Partially available students via e-learning.

Page # in attached summary where e-learning is discussed: 2, 3, 5

Submitted by the University of Alaska Anchorage.
(choose one above)


Provost

5/27/2016
Date

T Case
Chancellor

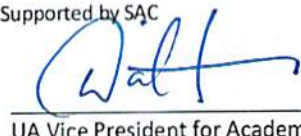
5/31/2016
Date

Consensus Support of SAC

Not Supported by SAC

Recommend Approval by VPAAR

Recommend Disapproval by VPAAR



UA Vice President for Academic Affairs

7/15/16
Date

*Net FTE (full-time equivalents). For example, if a faculty member will be reassigned from another program, but his/her original program will hire a replacement, there is one net new faculty member. Use fractions if appropriate. Graduate TAs are normally 0.5 FTE. The numbers should be consistent with the revenue/expenditure information provided.

Attachments: Summary of Degree or Certificate Program Proposal

Other (optional)

Revised: 04/20/2015

Bachelor of Science in Occupational Safety and Health Prospectus

Program Overview

To address state and employer needs, UAA proposes a Bachelor of Science in Occupational Safety and Health (BS OSH). The BS OSH degree will prepare students for well-paying Alaskan jobs as safety professionals with the educational level required by employers to fill workforce needs.

The BS OSH prepares graduates to recognize, evaluate, and control workplace hazards that may cause injury, illness, or disease. The general education and core occupational safety and health courses will provide students with the academic foundations needed to successfully pursue a career in safety, obtain professional certifications, and pursue advanced studies. Graduates will be resources for private and public industries and communities to reduce potential safety, security, and health losses.

The core curriculum was developed to provide the technical and professional knowledge needed to pursue careers in occupational safety and health, meet industry requests, and achieve Accreditation Board for Engineering and Technology (ABET) accreditation. Focus areas for the degree include construction safety management, process safety, incident investigation and analysis, legal aspects of occupational safety and health, and the economic value of safety.

The AAS OSH has been revised to provide the basic foundation needed in the discipline and to add general education courses requested by industry. It will “stack” into the BS OSH using a 2 + 2 model creating a seamless pathway and smooth transition for students. Safety professionals at BS level are in demand, and the BS Occupational Safety and Health program will prepare students for a rewarding career in the field.

The planning for this degree began when a group of prominent and influential safety and HR professionals representing Alaska’s oil and gas, construction, mining, fisheries, and transportation industries approached the university about their need for an educated safety professional workforce. The industry group had identified common challenges in trying to fill professional level safety positions with qualified local candidates. They noted that their safety workforce was aging and very few candidates in the Alaskan labor pool possessed the minimum education and experience to replace the retirees to assure continued safe and effective operations in the unique and challenging Arctic environments of Alaska.

These professionals agreed that a strategy for addressing the shortage was warranted and formed the Occupational Safety and Health (OSH) Advisory Board to work with the university in developing the needed curriculum. The board took an unprecedented approach in supporting the development of the BS OSH by leading the advocacy efforts with the university president, assessing and researching the needs and actively engaging in curriculum development.

At the behest of the OSH Advisory Board, UAA began groundwork to create the BS OSH in 2013. The goal is a globally recognized, ABET-accredited academic program that prepares students for successful careers as safety professionals. Graduates will have the knowledge, understanding and experience across the complete process life cycle and be prepared to address the unique challenges faced in the Arctic/polar region environment.

Alaskan industries find it difficult to find sufficient qualified safety graduates and professionals in Alaska, and often recruit them from schools and industries in the Lower 48. This program will fill an unmet workforce training need, as it will be the first such program at this level in Alaska. The existing AAS in OSH degree is the foundation upon which this degree is built.

More and more contracts require safety professionals to have nationally recognized professional certifications; leadership, collaboration, teamwork and change management skills; and computer skills and knowledge. This program will have a strong emphasis on engineering, communication and analytical skills; appeal to a diverse set of students including full-time or part-time students who are recent high school graduates or experienced working professionals; meet industry demands to educate and prepare safety professionals to improve safety and operational effectiveness in diverse industrial process environments; and actively engage industry partners to provide on-going support for the program through an advisory council, advocacy, financial investments, internships, hands-on intensives, equipment, and teaching opportunities.

Mission and Strategic Alignment

The BS OSH program at UAA aligns with the UA Strategic Pathways initiative; the UAA Strategic Plan 2017; and the Community and Technical College's (CTC) mission and core themes:

- *UA Strategic Pathways framework core principles of FOCUS and ACCESS.* This degree builds on the current AAS OSH which is delivered collaboratively across the state, is designed to meet the state's higher education needs per the OSH Advisory Board and Department of Labor and Workforce Development (DOLWD) research, is the only one of its kind in the system, and will be delivered entirely online to provide access to students statewide.
- *University of Alaska Anchorage (UAA) strategic priorities* of engaging in collaborative partnerships for workforce development and high demand careers, of building programs of distinction, and providing access through distance education and collaborative programming.
- *Community & Technical College mission* to "Build Alaska's Workforce" and core themes of 1) Teaching & Learning through Programs of Distinction, 2) Student Success through Workforce Preparation and 3) Public Square expanded through Community and Industry Partnerships will be fulfilled through the development of this program.

The BS OSH program will fulfill these missions and strategies by building a safety professional workforce of prepared graduates who will improve safety and operational effectiveness in diverse industrial process environments.

Student Demand and State Needs

According to UAA Institutional Research, the enrollments in the AAS OSH are increasing each year, with 122 admitted students actively enrolled in the AAS OSH core courses. Additionally, the number of AAS graduates going on to a BS degree program is increasing. Currently the option for students to earn a BS is through the baccalaureate completion program (Bachelor of Applied Science Leadership Technology) at CTC or at an out of state college or university. Neither of these is an optimal solution for the students' educational needs and industry demands. This program is aimed to provide students with access to a BS OSH in Alaska, and through distance delivery the students will have access to this educational opportunity, regardless of their location.

Data gathered from diverse sources indicate the need for this degree:

- *The workforce is aging out.* 2010 State of Alaska (SOA) Department of Labor and Workforce Development (DOLWD) data showed 1,947 OSH-related employees in Alaska, with 38% over the age of 50.
- *Occupational Safety and Health is a growing career field in Alaska.* The 2011 employment outlook from the State of Alaska DOLWD predicts the rate of growth between 2012 and 2022 in

Occupational Health and Safety Specialists, Occupational Health and Safety Technicians, Health and Safety Engineers, and Mining Safety Engineers to be between 11% and 21%.

- *Alaskan industries indicate a need for bachelor prepared OSH professionals.* The OSH Advisory Board conducted an employer survey in November 2013 to determine the need for trained OSH professionals. Of the 84 Alaskan employers who completed the survey:
 - Over half were in a position to recruit and fill OSH positions in their company;
 - The majority of the respondents indicated that a bachelor degree was at a minimum either required or preferred for OSH Specialists positions;
 - Respondents indicated an expanding demand over the upcoming five years for OSH Specialists;
 - Over 80% of respondents indicated that it would be important or very important for their organization to have access to Alaskans to fill those positions.
- *Safety is a good investment.* A survey conducted by Liberty Mutual Insurance with Chief Financial Operations leaders nationwide found that for every \$1 invested in preventing incidents and managing employers' liability, the return on that investment is \$2 - or twice the investment. Occupational Safety and Health professionals reduce the costs associated with injuries and accidents for employers.
- *Alaska needs to be a safe place to work.* According to the DOLWD, incidence rates for nonfatal occupational injuries is higher than the national average with private industry work-related fatalities in Alaska for the four years between 2010 and 2014 was over 35 per year.

Enrollment Projections

These projections are based on historical data from the Associated of Applied Science in OSH (AAS OSH) degree that CTC currently delivers. Using the new student admits, current FTE enrollment, headcount and graduate data from the AAS OSH as baseline, the projections for the BS OSH were calculated. CTC will target recruitment efforts, inform prospective students about workforce demand, and support students through their transition into the program. Additionally, AAS students will be supported in the transition to the BS.

	2017	2018	2019	2020	2021
FTE Enrollment BS	45	50	55	60	66
Enrollment Headcount	60	70	75	80	90
Graduates	0	5	10	15	15

Student Opportunities and Student Success

With the growing industry in Alaska and the Lower 48 there is an increased need for OSH professionals in the state. Employers in Alaska are struggling to fill positions with qualified OSH professionals from Alaska. More and more contracts require degreed safety professionals who have nationally recognized certifications from the Board of Certified Safety Professionals (BCSP).The BS OSH program will award degrees and prepare safety professionals for the certification examinations.

Students currently enrolled in the AAS full-time or part-time, those who are recent high school graduates and experienced, working professionals will have the opportunity to enroll in the BS OSH. Distance learning capabilities will be available and will expand access to the program for remote and rural students across Alaska.

Outreach to high schools across the state will provide opportunity for students to explore careers in the health and safety profession. Intrusive advising strategies by faculty and other advisers will be employed and students will be encouraged to transition from the AAS to the BS, as appropriate, to meet the industry needs. Through targeted recruitment and retention efforts aimed at the incumbent workforce, students will be enrolled and supported through their transition into the program for job enrichment.

The OSH Advisory Board will continue to support the program and students by connecting with students through presentations to the classes and supplying resources for students and ongoing quality programming. Many employers offer internship opportunities to OSH students on a regular basis, and have hired a number of students full-time upon internship completion and graduation.

Current Capacity and Quality

CTC delivers the AAS in OSH and collaborates across the system to provide access for students to this degree program. Registration data indicates that the AAS OSH core courses offered over the past three years are running at approximately 70% enrolled capacity, leaving plenty of room for growth in enrollments and not stressing the current teaching workload capacity of the 1.0 FTE faculty and adjuncts who teach in the program. The BS OSH will increase the need for additional faculty workload capacity by 1.0 FTE and four adjunct faculty. These include new adjuncts and increased assignments for current adjunct faculty who are qualified to teach throughout the program.

The BS OSH was developed in close collaboration with industry partners on the OSH Advisory Board and with the support of an Instructional Designer skilled in the Quality Matters model for eLearning course development. The program will continue to use classroom, lab, and faculty office space in UAA's University Center (UC). Students will have access to existing library, distance education, and student support resources.

Resource Implications

The Community & Technical College currently delivers the AAS OSH with resources in place from general funds, tuition and fees to support 1.0 FTE program plus adjunct faculty.

Building on these existing resources and allocation of funds from the Technical Vocational Education Program (TVEP) in fall 2015, an additional 1.0 FTE faculty was hired to write the curriculum and shepherd the program through the university approval processes.

Moving forward the projected budget for the delivery of both the AAS and BS OSH will include 2.0 FTE faculty and up to eight adjunct faculty per academic year.

Sustainability of this program after TVEP funds are expended is a priority for the college and as such budget will be allocated to support this faculty position. In addition, the OSH Advisory Committee is engaged and will be approached for contributions and opportunities to solicit contributions from the industry for equipment and other one-time programmatic needs.

Programmatic and fiscal staff support has been assumed by the Construction, Design, and Safety Division; advising and student support will be provided in collaboration with the CTC General Advising staff and by program faculty.

Affected Programs

This will be the first BS OSH degree in Alaska and will be led from the University of Alaska Anchorage Community & Technical College. The core courses will be developed and delivered at the CTC and will

take advantage of available distance delivery capabilities to provide access across the state; the plan of study for the degree can also leverage existing classes offered across the UA system.

As a new program, the effects on other programs are minimal and the OSH faculty reached out to provide notice to the other UAA campuses who offer OSH courses, degrees and certificates to inform them of the curriculum and program changes. Conversations are ongoing on how the AAS/ BS OSH degree can be offered across the UAA campuses collaboratively with the community campuses and through eLearning. The impact on general education should be minimal as well, as the new courses are major-specific and AAS OSH students are already taking the general education courses.

Additional library resources will be identified with program course development.

Program Accreditation and Special Certifications

The program was designed and aligned with Accreditation Board for Engineering and Technology (ABET) specialized accreditation standards. The ABET accreditation process will be initiated upon graduation of the program's first student. The OSH Advisory Group recommended that the program seek ABET accreditation.

Program Student Learning Outcomes and Plan for Assessment

Student learning outcomes are directly aligned with the Accreditation Board for Engineering and Technology (ABET) accreditation requirements for applied science programs, and with the American Society of Safety Engineers (ASSE) safety curriculum guidelines, in order to facilitate program accreditation when the first students graduate with the BS degree.

Student Learning Outcome

Plan for Assessment

1. Anticipate, recognize, evaluate, and develop control strategies for hazardous conditions and unsafe work practices.

The OSH faculty will agree on a master assignment, activity, or quiz for each outcome to be assessed. The master assignment will typically be a research paper, presentation, or project. Common rubrics for the papers, presentations, or projects will be shared among the faculty.

2. Apply the fundamental aspects of occupational safety: industrial hygiene, environmental science, fire science, hazardous materials, ergonomics, and human factors.

The OSH faculty will agree on a master assignment, activity, or quiz for each outcome to be assessed. The master assignment will typically be a research paper, presentation, or project. Common rubrics for the papers, presentations, or projects will be shared among the faculty.

3. Design, implement, and evaluate safety, health, and environmental programs.

The OSH faculty will agree on a master assignment, activity, or quiz for each outcome to be assessed. The master assignment will typically be a research paper, presentation, or project. Common rubrics for the papers, presentations, or projects will be shared among the faculty.

Student Learning Outcome**Plan for Assessment**

4. Apply adult learning theory to the design and delivery of safety training programs.

The OSH faculty will agree on a master assignment, activity, or quiz for each outcome to be assessed. The master assignment will typically be a research paper, presentation, or project. Common rubrics for the papers, presentations, or projects will be shared among the faculty.

5. Interpret and apply applicable standards, regulations, and codes.

The OSH faculty will agree on a master assignment, activity, or quiz for each outcome to be assessed. The master assignment will typically be a research paper, presentation, or project. Common rubrics for the papers, presentations, or projects will be shared among the faculty.

6. Conduct incident/accident investigations and analyses.

The OSH faculty will agree on a master assignment, activity, or quiz for each outcome to be assessed. The master assignment will typically be a research paper, presentation, or project. Common rubrics for the papers, presentations, or projects will be shared among the faculty.

7. Evaluate and apply business and risk management concepts.

The OSH faculty will agree on a master assignment, activity, or quiz for each outcome to be assessed. The master assignment will typically be a research paper, presentation, or project. Common rubrics for the papers, presentations, or projects will be shared among the faculty.

Schedule for Implementation of the Program**Critical Milestone****Date**

Admission to program opens (subject to approvals)

Spring 2017

Instruction commences

August 2017

First graduates

May 2019

E-learning Options

All Occupational Safety and Health (OSH) core courses are offered via e-Learning; most degree support courses are available via eLearning making the entire degree accessible and available to students across the state.

Faculty and Staff***Lead faculty BS OSH:***

Assistant Professor Phillip Galloway holds a Master of Science in Business Organizational Management and the safety-focused industry certification from the Board of Certified Safety Professionals, in addition to over thirty years' experience as a safety professional.

Lead faculty AAS OSH:

Assistant Professor Albert R. Grant holds an MAS, Safety Systems & Management, Embry-Riddle and is a Certified Safety Professional (CSP) with thirty-two years' experience as a safety professional.

***Adjunct faculty* are recruited from the industry and possess advanced degrees, industry certifications and many years of service in the occupational safety and health profession.**

Bachelor of Science in Occupational Safety and Health Catalog Copy

Admission Requirements

Satisfy the [Application and Admission Requirements for Baccalaureate Programs](#).

Advising

Meet with an advisor to complete the advising interview checklist. Students must contact the OSH department at (907) 786-6423 prior to registering for OSH courses.

Graduation Requirements

- Satisfy the [General University Requirements for Baccalaureate Degrees](#).
- Complete the [General Education Requirements for Baccalaureate Degrees](#).
- In order to receive the Bachelor of Science in Occupational Safety and Health, students must achieve a grade of C or better in all courses required for the degree.
- Complete the major requirements below.

Major Requirements

Code	Title	Credits
Foundational Courses		
AKNS A201	Alaska Native Perspectives *	3
Complete one of the following:		3-4
BIOL A100	Human Biology	
BIOL A102	Introductory Biology *	
BIOL A111	Human Anatomy and Physiology I *	
CHEM A103	Survey of Chemistry *	3
CHEM A103L	Survey of Chemistry Laboratory *	1
ENGL A212	Technical Writing *	3
JPC A204	Media Literacy *	3
JPC A362	Principles of Strategic Communications	3
MATH A151	College Algebra for Calculus *	4
Complete one of the following:		3
ENVI/PHIL A303	Environmental Ethics	
PHIL A304	Business Ethics	
PHIL A305	Professional Ethics *	
PHYS A123	Basic Physics I *	3
Complete one of the following		3
PSY A111	General Psychology *	
PSY A200	Introduction to Behavior Analysis *	
STAT A252	Elementary Statistics *	3
TECH A305	Applied Leadership for Technicians	3

Code	Title	Credits
Core Courses		
FIRE A105	Fire Prevention	3
OSH A101	Introduction to Occupational Safety and Health	3
OSH A108	Injury Prevention and Risk Management	4
OSH A111	Occupational Safety Training Needs and Methods	3
OSH A120	Safety Program Management and Recordkeeping	3
OSH A160	Fundamentals of Industrial Hygiene	3
OSH A201	Hazard Control: Inspections, Audits and Investigations	4
OSH A211	Safety Management Systems	4
OSH A215	Environmental Issues for Safety and Health Professionals	3
OSH A230	Principles of Ergonomics	3
OSH A240	Workplace Monitoring: Instrumentation and Calibration	3
OSH A250	Hazardous Materials Operations	3
OSH A305	Incident Investigation and Analysis	3
OSH A310	Human Factors	3
OSH A360	Advanced Industrial Hygiene	3
OSH A375	Process Safety Management	3
OSH A405	Construction Industry Safety Management	3
OSH A420	Legal Aspects of Safety	3
OSH A450	Risk Management for Safety and Health	3
Complete 9 credits of electives		9
OSH A390	Selected Topics in Occupational Safety and Health	
OSH A495	Advanced Occupational Safety and Health Internship	
Capstone		
OSH A460	Economic Value of Safety	3
Total Credits		110-111

* May satisfy General Education Requirements (GERs).

A total of 120 credits is required for the degree.

E-Learning:

50-99% available via e-learning

All Occupational Safety and Health (OSH) courses are offered via e-learning. Support courses may be offered via e-learning or face-to-face.

Please read this [statement](#) regarding out-of-state student enrollment if you are not a resident of Alaska.

Student Learning Outcomes:

1. Anticipate, recognize, evaluate, and develop control strategies for hazardous conditions and unsafe work practices.
2. Apply the fundamental aspects of occupational safety: industrial hygiene, environmental science, fire science, hazardous materials, ergonomics and human factors.
3. Design, implement, and evaluate safety, health, and environmental programs.
4. Apply adult learning theory to the design and delivery of safety training programs.
5. Interpret and apply applicable standards, regulations, and codes.
6. Conduct incident/accident investigations and analyses.
7. Evaluate and apply business and risk management concepts.