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# Academic Assessment Plan for Occupational Endorsement Certificate in Safety Specialist

# & Associate of Applied Science &

# Bachelor of Science in

# Occupational Safety and Health

Adoptedby the Occupational Safety and Health faculty March 22, 2016.

Revised April 12, 2021.

Reviewed with curriculum changes by the Academic Assessment Committee: 4/16/21

Reviewed by the Faculty Senate as an information item: 4/30/21

## Mission Statement

The mission of the Occupational Safety and Health (OSH) program of UAA’s Community and Technical College is to educate and prepare safety professionals to improve safety and operational effectiveness in diverse industries in Alaska. The OSH program is committed to excellence in academics and to vocational and life-long learning. The State of Alaska has some of the highest injury and fatality rates in the country; an increase in the number of safety professionals in the state will help reduce these rates.

## Introduction

Alaskan industries (oil and gas, transportation, construction, mining, fisheries, etc.) need OSH graduates that are qualified to develop, manage, and implement safety programs that effectively address the prevailing challenges of the Arctic environment. The BS OSH went through the UAA curriculum approval process in spring 2016.

This document outlines a plan for the assessment of student learning outcomes for the OEC Safety Specialist, AAS OSH and BS OSH programs.  The intention of CTC is to pursue Accreditation Board for Engineering and Technology, Inc. (ABET) accreditation for both the AAS and BS degree programs. To that end, program student learning outcomes for the AAS were modified to align with the BS outcomes prescribed by ABET’s accreditation process. This revision of the department’s assessment plan is scheduled for implementation in Fall 2021.

## Program Student Learning Outcomes

The program student learning outcomes were developed by the American Society of Safety Professionals (ASSP) Educational Standards Committee (SEC) for the Accreditation Board for Engineering and Technology, Inc. (ABET) accreditation process.

Students graduating with an OEC in Safety Specialist will be able to:

1. Identify and apply applicable standards, regulations, and codes.
2. Recognize, evaluate, and recommend control strategies for common hazardous conditions and unsafe work practices.
3. Describe the basic elements of Risk Management, Workers’ Compensation losses and risk assessment.
4. Implement oral, written and non-verbal communication strategies and techniques to effectively communicate with a multicultural workforce.
5. Develop and implement an effective Injury and Illness Prevention Program (IIPP).
6. Describe basic accident/incident investigation procedures and analysis techniques.
7. Describe basic inspection techniques and procedures.

Students graduating with an AAS in OSH will be able to:

1. Recognize, evaluate, and recommend control strategies for common hazardous conditions and unsafe work practices.
2. Describe the fundamental aspects of occupational safety: industrial hygiene, environmental science, fire science, hazardous materials, and ergonomics.
3. Develop safety, health, and environmental programs.
4. Apply adult learning theory to safety training methodologies.
5. Identify and apply applicable standards, regulations, and codes.

Students graduating with a BS in OSH will be able to:

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.

Curriculum Map OEC, AAS & BS OSH

## Measures

The curriculum map for the AAS and BS determines the design of the assessment. The outcomes for the AAS are aligned with the first five outcomes of the BS and are assessed together. In some instances, they share a formative assessment; in others the summative assessment for the AAS outcome is the formative for the BS outcome.

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.

## Process

The assessment will occur in a three-year cycle. This coincides with the 6-year cycle for ABET accreditation. ABET is not very prescriptive in their requirements for continuous program improvements and this process will satisfy their requirements.

Each outcome except for number two will be assessed every three years. Outcome two, which addresses specific content areas in the field (industrial hygiene, environmental science, fire science, hazardous materials, ergonomics and human factors) will be assessed annually; each year different fields will be a part of the assessment.

|  | **Outcome** | **OEC**  **Formative** | **OEC**  **Summative** | **AAS**  **Formative** | **AAS**  **Summative** | **BS**  **Formative** | **BS**  **Summative** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Year 1 | 1 | OSH A101 | OSH A108 | OSH A108 | OSH A201 | OSH A201 | OSH A420 |
|  | 2 | OSH A101 | OSH A211 | OSH A160 | OSH A240 | OSH A160 | OSH A360 |
|  | 3 | OSH A108 | OSH A201 | OSH A211 | OSH A250 | OSH A211 | OSH A450 |
| Year 2 | 2 | OSH A101 | OSH A120 | OSH A101 | OSH A230 | OSH A230 | OSH A310 |
|  | 4 | OSH A101/A108 | OSH A201 | OSH A111 | OSH A211 | OSH A111 | OSH A460 |
|  | 5 | OSH A101 | OSH A201 | OSH A101 | OSH A211 | OSH A101 | OSH A405 |
| Year 3 | 2 | OSH A101 | OSH A120 | OSH A108 | Fire A105 | OSH A108 | OSH A390 |
|  | 6 | OSH A101 | OSH A201 | --- | --- | OSH A201 | OSH A305 |
|  | 7 | OSH A101/A108 | OSH A120 | --- | --- | OSH A108 | OSH A460 |
| Repeat Year 1 |  |  |  |  |  |  |  |

## Continuous Improvement

Each fall, the OSH program faculty will meet to review assessment results. Faculty will discuss and identify recommendations for program changes designed to enhance student performance relative to the program student learning outcomes. A plan for implementing any recommended changes will be discussed with the advisory board.The results of the data collection, an interpretation of the results, and the recommended program changes will be forwarded to the Office of Academic Affairs each year.

The faculty may decide to revise the assessment plan after reviewing the collected data and the collection process. Faculty may change any component of the plan, including assessment measures, timeline for collection, and courses assessed. Modified assessment plans will be forwarded to the dean’s office and the Office of Academic Affairs for required reviews.

## Appendix A List of Occupational Safety and Health Courses

**Course Credits**

OSH A101 Introduction to Occupational Safety and Health 3

Fire A105 Fire Prevention 3

OSH A108 Injury Prevention and Risk Management 3

OSH A111 Training Needs and Methods 3

OSH A120 Safety Program Management and Recordkeeping 3

OSH A160 Introduction to Industrial Hygiene 3

OSH A201 Hazard Identification: Inspections, Audits, and Investigations 3

OSH A211 Safety Management Systems 4

OSH A215 Environmental Issues for Safety & Health Professionals 3

OSH A230 Principles of Ergonomics 3

OSH A240 Workplace Monitoring: Instrumentation and Calibration 3

OSH A250 Hazardous Materials Operations 3

OSH A295 OSH Internship (AAS only) 3

OSH A305 Incident Investigation and Analysis 3

OSH A310 Human Factors 3

OSH A360 Advanced Industrial Hygiene 3

OSH A390 Special Topics (may be taken more than once) 3

OSH A375 Process Safety 3

OSH A405 Construction Safety Management 3

OSH A420 Legal Aspects of Occupational Safety and Health 3

OSH A450 Risk Management for Safety and Health 3

OSH A460 Economic Value of Safety (Capstone) 3

OSH A495 Advanced OSH Internship 3