UNIVERSITY OF ALASKA SOUTHEAST KETCHIKAN

Marine Transportation

Annual Assessment Report

Academic Year

2023 – 2024

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University of Alaska Southeast (UAS) Marine Transportation annual assessment report of program learning outcomes for fall 2023 and spring 2024.

Program Overview:

The UAS Marine Transportation Program offers a two-year Associate of Applied Science in Marine Transportation degree. The Marine Transportation Associate Degree provides a strong foundation to a variety of maritime careers. Successful completion of the USCG approved courses included in the program eliminate the need for testing with the US Coast Guard. Graduates who meet sea time, physical agility and other US Coast Guard reequipments will be qualified for certification or licensing in the degree emphasis chosen.

The Marine Transportation Associates Degree benefits students who may end up working on vessels or in the maritime industry. The courses provide a well-rounded knowledge of vessel operations on small passenger vessels, charter fishing vessels, towing vessels, or small research vessels. Students are able to choose between two emphases, **Deck and Engine Room**.

Graduates with a Deck Emphasis, who have met sea service requirements, are qualified to serve as officers on vessels of not more than 200 Gross Registered Tons upon Near Coastal, or Inland Waters.

"**Deck Emphasis:** Students will be prepared for employment in many sectors of the maritime industry including but not limited to; tourism, workboats, RO-RO ferries and off shore shipping vessels. Students who meet sea time and academic requirements will receive United States Coast Guard (USCG) and Standards of Certification and Watch Keeping (STCW) credentials. Graduates of the program who have completed appropriate sea time and course work will be qualified to serve as officers on vessels of not more than 200 Gross Registered Tons upon Near Coastal, or Inland Waters. The goal of the Marine Transportation Program is to provide graduates with the credentials and general education required to excel in Alaskan waters and beyond" (University of Alaska Southeast Academic Catalog 2023-2024).

Graduates with an Engine Room Emphasis have the training and credentials to work in the engine department or in shore side maritime trades. In addition, graduates will have met the academic and practical examination requirements for certification as a Qualified Member of the Engine Department (QMED) with an Oiler endorsement.

"**Engine Room Emphasis:** Engine Room Emphasis coursework provides the training and credentials necessary to begin a career in the engine room side of the Marine Transportation Program industry. Successful graduates will have met the academic and practical examination requirement for certification as a Qualified Member of the Engine Department (QMED) with an Oiler endorsement. The Engine Room Emphasis incorporates a four-month (120-day) internship at sea. The internship with the 60 days of sea time granted for successful completion of the UAS/Oiler program provides the sea-time necessary for the USCG endorsement" (University of Alaska Southeast Academic Catalog 2023-2024).

The UAS Marine Transportation Program also offers two Occupational Endorsements (OE): Marine Transportation and Maritime & Multi-skilled Worker. These occupational endorsements provide students industry specific knowledge in a comparably short amount of time (under 30 credit hours). The Marine Transportation O.E. focuses on providing training for mariners to advance in a wide variety of positions and vessels in the maritime industry. The courses and instructors are US Coast Guard approved for testing in class.

The Maritime and Multi-skilled Worker (M&MSW) O.E. provides training in basic maritime and industrial skills. This particular endorsement emphasizes the student's preparation as an entry- level worker. The M&MSW Program supports a United States Coast Guard approved QMED (Qualified Member of Engine Department) Oiler class. Successful completion of the Program, along with accruing necessary sea service, permits the issuance of a USCG QMED Oiler credential without any further testing.

Program Learning Outcomes (PLOs)

The PLOs, degree reequipment and emphasis areas are as follows:

- Demonstrate effective listening, verbal, and written communication skills that prevents misunderstandings, reduces risks, and ensures proper coordination among crew members.
- Demonstrate critical thinking and problem solving appropriate for students in the maritime transportation industry, in order to enhances operational performance by ensuring quick resolution of problems and minimizing risks.
- Demonstrate a high degree of proficiency in basic seamanship techniques.
- Demonstrate a mastery of shipboard safety, risk assessment and emergency response procedures.
- Demonstrate basic maintenance and troubleshooting of shipboard systems and engineering processes, through specialized curriculum and hands on training.
- Demonstrate a sound knowledge of safe navigation practices.
- Demonstrate use of appropriate reference materials regarding Merchant Mariner Credentials, licensing, and education in their chosen maritime sector.
- Demonstrate how to operate safely while participating in program activities and utilizing program equipment.

By demonstrating these PLOs, maritime workers can contribute to a safer and more efficient workplace, ensuring that operations run smoothly and within legal, operational, and safety guidelines. The combination of hands-on skills, theoretical knowledge, and communication ensures that maritime professionals are well-prepared to tackle challenges in this dynamic industry.

How Data Is Collected Concerning Program Learning Outcomes

Success is measured in the number of students served (Source: Banner); the number of US Coast Guard certificates/licenses awarded (Source: Internal Database) and the number of students who graduate (Source: Banner)

The Marine Transportation Associate Degree program is made up of a number of USCG-approved courses. The USCG provides a framework concerning practical competencies and academic testing in reference to the successful completion of licenses and endorsements. Those tasks, commonly referred

to as “check offs” or practicums in the maritime industry, are the basis for our individual course Student Learning Outcomes. The program’s overall Student Learning Outcomes are extrapolated from those requirements. As students complete individual USCG-approved classes, they are issued a course completion certificate required to apply for USCG Merchant Mariner Credentials. The marine transportation department keeps records of these certificates, allowing us to track an individual student’s progress. Many of our students are successfully employed in the maritime industry as a direct result of the course work, they have completed.

Data Collected on Program Learning Outcomes during Academic Year 2024

The faculty will handle ongoing administrative tasks such as reporting program numbers, curriculum requirements, regulation changes, management of an advisory board, marketing, and program reviews. The lead faculty will meet with the other Maritime and Welding faculty and Campus Director to review the Annual Assessment Report for concurrence.

The Marine Transportation department asks students to complete course evaluations at the end of every class. The faculty routinely review these course evaluations in an effort to better understand our strengths and weaknesses. The course evaluations are the primary source of information concerning the educational needs of students and industry.

Strengths:

- UAS Ketchikan is member of the Alaska Maritime Education Consortium (AMEC) and has been designated as a Center of Excellence for Domestic Maritime Workforce Training and Education from the U.S. Department of Transportation’s Maritime Administration (MARAD).
- UAS Ketchikan Marine Transportation Associates Degree program is unique within UA system and across the state of Alaska.
- The Marine Transportation Associate Degree program offers both an engineering and a deck emphasis.
- There is a clear path to transfer Merchant Mariner, Military, and industry specific credentials into equivalent UAS course credits.
- We serve the industry specific training needs of individual companies and organizations, like Alaska Marine Highway, Vigor, NOAA and USCG.
- Provide training to individuals who may not require a degree, but need specific endorsements, licenses, or simulator training to maintain or further their maritime career.
- Provide hands-on training across all courses contained within the degree program. Student’s course evaluations routinely site this as the most useful portion of a class.
- Faculty and staff represent diverse sectors of the maritime industry.
- We have developed curriculum for an Able Seafarer course which is presently being delivered online.
- UAS Ketchikan houses high quality diesel, welding and simulator laboratories.
- UAS Ketchikan houses a Wartsila DNV-GL Class A Full Mission Bridge simulator. This facility is the only Class A Wartsila facility in the state, and one of only two simulation facilities in Alaska. This has attracted maritime professionals from as far away as the Gulf of Mexico, and San Francisco. This facility serves the needs of our students as well as The Southeast Alaska Sea

Pilots Association, USCG and NOAA.

- UAS Ketchikan has built Partnerships with communities, industries and state agencies across Alaska to develop the Maritime Workforce. Our partners included cities, high schools, industry associations and others, like Alaska Marine Highway, Vigor, Inter Island Ferry and Department of Transportation and Labor.

Weaknesses:

- Maritime instruction requires USCG compliance, is equipment intensive and class size is limited. Our full-time staff and faculty complement are small. We are heavily reliant on external funding to meet the demand for additional educational capacity and adjunct faculty.
- Our QMED MMSW course relies on the Alaska Marine Highway to accept interns to complete sea service in the engine room.
- Some of our courses rely on equipment that is aging and costly to repair. For example, survival & firefighting equipment for shore and sea based evolutions; degrading life boats and fast rescue boats.
- Limited pre/post-classes communication with students. Students don't complete the program exiting/graduation process. Many potential students are working mariners, or after taking a few courses become working mariners. This means that they are often aboard ship for periods of time ranging from a few weeks to a few months, without a way to complete course work, or even easily communicate.
- We do not have a system in place to track our students after they leave the program.
- With such a small faculty we are not able to develop new course offerings in house, or rapidly adapt to a changing educational environment.
- Budget constraints have severely impacted our ability to market, promote and otherwise expand awareness of our maritime training course offerings.
- Students must travel to Ketchikan for many of our classes. Travel can be cost prohibitive.
- The USCG has greatly increased their oversite and scrutiny of USCG approved curriculum. The USCG National Maritime Center (NMC)is also severely understaffed. These two factors have resulted in significant delays to receiving reapproval for much of our curriculum, with the first evaluation of curriculum by the NMC taking anywhere from 9 to 12 months. It is unrealistic to think that faculty can teach courses and work with the USCG NMC to audit, maintain, and develop curriculum.
- USCG oversite of all Maritime Training Programs nationwide has increased, resulting in additional audits and inspections. Audits also require faculty and staff resources for preparation, routinely pulling these personnel away from their regular work duties.
- Staff support and funding is critical to assist with course approvals, audits, record compliance, online curriculum development and equipment maintenance.
- Our program continues to see high turnover in both faculty and staff positions. Many other local employers are able to poach our team members. Our pay scale for staff and faculty is not competitive. We are relying on the additional educational benefits of working at a university to attract talent but this also severely limits applicants. Once the employee completes a degree or program they leave to seek a more stable income.

Data Evaluation of Program Learning Outcomes from the Previous Academic Year:

For of 2023-2024 the UAS:

- Three (3) students graduated with a Maritime Transportation, AAS degree program.
- Five (5) students earned the Marine Transportation, OE.
- Eleven (11) students earned the Maritime and Multiskilled Worker, OE.
- Our records indicate that UAS Ketchikan served 254 students in fall of 2023 for 571 credit hours, and 272 students in the spring of 2024 for 418 credit hours.

Plans to Improve Program Learning:

As a result of the end-of-year analysis of the Marine Transportation program, the following improvements are recommended to enhance program learning, ensure compliance with industry standards, and support career success. These initiatives aim to strengthen program quality, faculty, staff, and student outcomes.

Faculty Expansion

- Explore the feasibility of hiring additional faculty members to support both the deck and engine room emphases.
- Expand the adjunct professor pool to provide flexibility in course offerings and expertise.
- Allocate funds to send potential adjunct faculty to USCG-required Train the Trainer courses to maintain compliance and high instructional standards.

Staff for Compliance Support

- Secure funding for staff positions to meet personnel intensive requirements for USCG compliance as well as safety in pool training, fire field exercises, open-sea simulations, and intensive equipment maintenance.

Internship and Career Development

- Ensure that students complete AAS and OE program completion documents.
- Explore additional avenues for students to complete internships to earn sea service credit toward maritime credentials.
- Develop a system for tracking student career success post-graduation to evaluate program effectiveness and industry placement.

Equipment and Facilities Upgrades

- Purchase additional equipment to reduce reliance on third-party facilities and enhance hands-on training opportunities.
- Update materials, facilities, and equipment used in maritime courses to ensure alignment with industry and USCG standards and technological advancements.

Curriculum and Learning Outcomes

- Continue reviewing and updating individual course Program Learning Outcomes (PLOs) to reflect best practices and industry needs. Revitalize Power Technology courses, with a focus on QMED, Outboard Motor Maintenance (Yamaha) and Hydraulics.
- Add the Proficiency in Survival Craft (PSC) course as an additional credit option for the Maritime Transportation AAS program.
- Expand curriculum development to include asynchronous and remotely delivered course options to increase accessibility and flexibility for students. Also, expand approved testing sites and proctors list, this enables a student to retake USCG approved courses at an approve test center closer to their home.

Conclusion: These improvements will enhance the Marine Transportation program's ability to deliver high-quality education, meet compliance and safety requirements, and better prepare our students for future maritime careers. Continued evaluation and industry collaboration will ensure sustained program excellence and student success.