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Grace LeuBurke, Assoc Professor, Medical Laboratory Science; Chair Bridgett MayorgaAsst Dean, Allied HealttPitonAesssor, Diagnostic Medical Sonography; Member Karen Kurt,zTerm Asst Professor, Medical Laboratory Scimbeence; Me

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Programs in the Medical Laboratory Science department are articulated and designed to allow flexibility in degree completion. Entering as a cohort each fall semester, students seeking AAS in Medical LaboratoregohnTician or a BS in Medical Laboratory Science take the same medical laboratory science courses the first three semesters. With the AAS Medical Laboratory Technician degree, the fourth semester is their clinical rotation and completion of degree. However, they have the option of changing their major to the BS Medical Laboratory Science and continue with the cohort through the upper division classes. Since 2020, each fall col has had at least one declared AAS MLT student change their major can move up to the BS degree, the student can also move down from BS MLS to an AAS degree. Financial challenges, health, family circumstances, even military duties c degree. In these instances, we work with the students to graduate with the AAS MLT degree, providing them with the ability to work in a clinical laboratory. Since 2020, fifty percent AAS MLT graduatesall into this category. Therefore, our MLT program not only provides a pipeline towards a BS MLS degree, but also an avenue for student graduation when unexpected obstacles in their educational plans occur. AAS MLT graduates have the option to return to UAA, when they are able, to complete their BS MLS degree seamlessly with our articulated program

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When advising students entering our program, we emphasize the flexibility of the medical laboratory science p

students in the same cohort. Beginning in the Fall 2021, research surrounding bacterial antimicrobial resistance was embedded directly into MEDT A203 Clinical Microbiology curriculum, worthi is a required course for the MLT degree. MLT students are eligible to participate in the UAA MLS Research Team and encouraged to present at the UAA MLS Research

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In AY2223 faculty conducted research on the feasibility of implementing an online AAS Medic Laboratory Technology (MLT) managementers of the Advisory Board, statewide Laboratory

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surveys collected, only two sites in rural Alaska displayed strong interest in supporting a program indicating they had staff and resources to serve as a dedicated clinical affiliate practical rotations. The sites showing moderate to strong interest were asked about project student enrollment and each site thought they could2sspp dents1each year or a predicted cohort size of approximately 4 students a year. These projections did not seem promising in terms of longevity when deciding to build an online AAS MLT program. Furthermore, Alaskans can easily apply and get accepteding **anvaexdish**ing, NAAOLS accredited, online MLT program offered through Weber State. Developing an online MLT program at UAA would mean competing with an alreadejstwatellished program. Additionally, tuition for online classes at Weber Stateef fios: databilities of or -tubeah/Alaskan residents at \$291/credit hour. Developing a dedicated online curriculum for the AAS would require growing the program and an additional faculty member-peTesenionurriculum is currently articulated in conjunction witeh ENS Medical Laboratory Sa3cf nAn5612 792 . 1(p) 3(ro) - 3(g) 4(ra) 13(m) - 4(and

multifaceted project is challenging and a great way for students to usecal eative and crithinking for a real world situation.



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Outcomes 1ae and 2 are embedded into the curriculum of MEDT A132 and demonstrated by students during labs and at their practicum sites in MEDT A132L95aAM CCMEDT A1 respectivelTyphese outcomes were assessed in two ways. First, a summative assessment of exam scores from both the final exam in MEDT A132 and the lab practical scores in MEDT A132 are tracked. For this assessment scores were compiled stances the set the score score score and aligns with the knowledge base outlined in outcomes 1 and 2. Cumulative scores from the three semesters show an average exam score of 90% suignoges that students are learning the necessary professional requirements of the trade. Demonstration of these skills are assessed during three semesters of three semesters of the trade. Demonstrations. Cumulative scores of the lab practical fit three semesters and and after clinical rotations. Cumulative scores of the lab practical fit three semesters and an average score of 89% suggesting that students can demonstrate the skills required. Additionally, the students are evaluated during MEDT A195/C by trainers at clinical affiliate sites. The sites submit formal Task Objective evaluations and Core Abi

the Phlebotomy OEC in the assessment period have met or exceeded the expectations of the clinical sites and have earned 5/5 scores on the Cospel algorinhigtistatisticatory integration of these outcomes. The majority of clinical sites in Alaska require a national board exam certification from ASOP for phlebotomy employees. Students are introduced to the ASOP or ganization during MEDT A132 and continuutionantien definition and requirements are covered in lectures about the certification process which correlates to outcome 3. Addition many students in the Phlebotomy OEC program continue into the Medical Laboratory Science program, or Medical Assisting many of earn a higher degree. Outcome 3 and 4 is observed in the students that see the Phlebotomy OEC as a stepping stone in professional development.

The MEDT A132 course is asynchronous online and in-stloopdeso Bal synchronous meetings. Learning is facilitated by the instructor and students are given or powortmatheties store and ask questions. The recording is made available to the students that are not able to att the session. These synchronous sessions were implemented prior to the RSI standards because the instructor identified a need for givingstate oppodetunity to learn i-stakes w environment prior to testing. Additionally, three interactive learning tools were developed Course Arc. The activities are available to students in the MEDT A132 course and give stude an opportunity tomodes trate proper blood collection, handling, and processing techniques by

distance students report finding this activity useful especially since they are not able to simultaneously enroll in the laboratory course (MEDT A132L) like the local 92 reeAssions wa

when students first start their academic studies. Because the length of our MLS program is three years, due to the stacking of courses required by NAAOLS, it will take students more four years doomplete, unless they take t-meequaies ites in their freshman year.



Student employment rate in a clinical laboratory setting, within six months of graduating, past three years (2202228) has been Phlebotomy7%38 MLT (100%), MLS (97%). Qualtrics surveys from employers indicate high satisfaction in areas of entry level bench skills, interpersonal communication, and the ability to multitask. One recent comment from a local ry graduates are the best! Ready to work, eager to learn,

prepare students for entry level industry skills. It is important to develop lifelong lea Because esearch is embedded into the curriculum, students develop professionalism, leadership and commitment to science that continues on after graduation from UAA. Since 2020, there has been an increase in diversity in UAA MLS graduatesgpadsateg post degrees. Previous to implementation of research into the microbiology curriculum, only students seeking departmental honors conducted any type of research representing a white, female demograph55(o)5(r) - W*01n a white,

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The ratio of eouft-discipline credit/shoot total credit hours has remained st-**49**8% y at 42 Representing the consistency of courses reserved only for MLT and/or MLS cohorts. However, several courses are taken by other majors, which include MEDT A132, A132L, A302, and MEDT A250 Cultural Dissiety which we offer both Fall and Spring semester, increasing the number of seats available in AY 2023 from fifteen-ftoourtwicentayccommodate high levels of student interest.

The number of program graduates who continue education and graduates who return to UAA to pursue an additional program reflects the seamless nature of our programs when students who complete the Phlebotomy OEC and/or AAS MLT continue onto or returinettee totonemped S MLS degree program. These numbers are relatively consistent with a slight dip in 2022, possible related to the COVID pandemic and ability for students to continue their education.



The fivepear degree and or certificate awards for MLThele & ASE remains fairly constant from 2019 to 2022 showing that this is an option for students who are either unable to complete a BMLS degree. Having degree options within the Medical Eabenateopyogram provides additional avenues for griado. During the COVID pandewindiem, there was significant disruption in education for students, we had an inc Mease and PAAS botomy OEC degree completion demonstrating our ability to support converted at the equivalent appear to drop from 20192023. Having to adjust labornated ioray laboratory professionals, required a higher number of faculty to supervise the Biecover of the laboratory professionals, required a higher number of faculty to supervise the Biecover of the laboratory. This created a gap of

year 2022/23 over \$35,000 of kiimed dotations were provided to our program for student labs and research. It is also important to note that clinical sites accept students for semester long or rotations without any financial compensation from UAA. Our students are welcome and encouraged to be active participants in their rotations and often employed immediately after clinicals.

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To improve the quality of our program is to increase enrollment and interest in medical laboral science by providing open access to our courses. Collaboration with the Anchorage high school allow enrollment of senior students into MEDT A133 Basic Laboratory a Trech MEDT QUAS,34 Immunology and Serology would provide a strong introduction and hands on labs in a STEM field promoting UAA and interestot onlyn medical aboratory science assignment, but would also apply to other health related majors suchmeets opime, or nursing.



Recommendation has been met

The program completed an analysis and evaluation of the AAS as a pipeline and/or alternative t BS. While limited data is available on the function of the AAS as a pipeline, anecdotal data s it is indeed serving in this capacity. More importantly, the AAS offers a viable degree option

total hours remains consistent and is focused on out of discipline hours which provide foundat information for the Med Lenghrenets.

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The fivepear degree and or certificate awards for the AAS MLT degree remains fairly constant fr 2019 to 2022 showing that this is an option for students whom a balance teatid memplet eBSa MLS degree. Having degree options within the Medical Eabenaeopyogram provides additional avenues for graduation. During the COM Dw/ memoderhieor, e was significant disruption in education for students, we had an inc Meal senich PhAASB ot only OEC degree completion demonstrating our ability to support content strates and the equivalent appear to drop from 20192023. Having to adjanso faculty to strouw demonstratory professionals, required a higher number of faculty to supervise the Ebberset fety labs. Between 2019 and 2021, the MLS department had a high turnov feracooff ty, including program directors. This created a gap of leadership, and student advising created a breakdown of communication of the MLS program with first year advising counselors, transfer students, and prospective high school students during years. Since then we have emerged stronger starting 2022 to be defail of thirteen students, Fall 2023 cohort eighteen students, with our Fall 2024 cohort now at capacity.

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Cost of clinical laboratory reagents and equipment have increased, yet we have been able to reour laboratory course fees while providing robust student simulation labs-kolimodectly due to in financial donations. Clinical affiliatogosion goovie degeont donations for phlebotomy, blood banking, and clinical microbiology courses. Their continued support also has enabled our progr conduct research providing essential equipment for our surveillance studies surrounding the exposure and publi health risk from environmental antimicrobial resistant bacteria. In the acade year 2022/23 over \$35,000 of kiimod donations were provided to our program for student labs and research. It is also important to note that clinical sites rase equests are welcome and encouraged to be active participants in their rotations and often employed immediately after clinicals.

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This program is uniqcial II 7 equipment havese



on growing enrollment. As part of its recruitment strategy, the program will want to explore alig