The Faculty Senate Academic Assessment Committee (AAC) is committed to a [vision [illegible])-3( )-45(S)13(en
leads to continuous program improvements and benefits students. Annual assessment reporting informs decision making and resource allocation aimed at improving student learning and success. It also enables the AAC to analyze assessment across the institution and to respond to UA System, Board of Regents

the dean

Last year's example activity centered around the planned execution of community engagement through outreach events. The UAA Student Chapter of American Chemistry Society Club was reactivated following a covid-lapse. Multiple outreach activities took place in the community, such as a Chemistry community poetry competition, lab coat tie-dye events, liquid nitrogen ice cream, and other in-person chemistry demonstrations.

Looking back on last year's report, it is evident that a course or assignment was not identified, rather an 'activity' was noted, it was performed by many chemistry majors as a co-curricular activity. If we were to add anything, it would be the professional presentation skills that are assessed in Chem 481 and 482; students are required to present research papers to their peers modeling the appropriate presentation skills that would be acceptable at a national conference.

Students would likely point to their experience in Chem A418: Chemical Instrumentation and Methods. The course involved a mock conference where students were required to present a poster in the CPISB atrium on the topic of their chosen individual research project. They would likely state that although much of the curriculum is oriented towards knowledge acquisition, there were several examples where communicating laboratory findings (at the lower and upper division) were assessed.

The best example for 'effective communication' is the mock conference that is held annually in the CPISB Atrium. Any chemistry student is invited to participate, although Chem 418 students are required to communicate the findings of their independent research project to

their peers and a panel of judges. This is intended to assess effective skills in communicating with professional chemists across a range of subdisciplines in the chemical sciences.

SLO #1: Understand and critically solve problems related to Physical and Natural Sciences and present those solutions for the advancement 2

A's, B's, and C's at 28.5, 25.4, and 17.5% respectively. These are in-line with 3-yr rolling averages of 27.5% D,F,W with 25.8, 25.2, and 18.0% for A,B,C's respectively. Among many factors in a comprehensive assessment plan, this information indicates that AY21-22 saw only nominal changes in student grades from previous years, indicating academic progress is good.

Faculty were all unified in the interest of developing 'tracks' for the chemistry major. This consists of a recommended list of courses that can be taken to satisfy job qualifications in the most high-demand outlets for chemistry majors: Pre-medical biochemistry, Biochemistry for the health sciences, Forensic chemistry, and Environmental chemistry. Faculty indicated Forensic Chemistry in particular is a 'hot' major across the nation and that many students have inquired about being able to study this area. The faculty believe that mapping these pathways will significantly increase student achievement with a defined focus area, while at the same time providing a broad-based education in the chemical sciences applicable across disciplines.

Course curriculum changes
Course prerequisite changes
Changes in teaching methods
Changes in advising
Degree requirement changes
Degree course sequencing
Course enrollment changes (e.g., course capacity, grading structure [pass/fail, A-F])
Changes in program policies/procedures
Changes to Program Student Learning Outcomes (PSLOs)
College-wide initiatives (e.g., High-Impact Practices)
Faculty, staff, student development
Other
No changes were implemented in AY2

Two items:
1) Last year, chemistry faculty wanted to ensure past suggestions on implementing high-impact practices would be facilitated by new faculty hires. When hiring replacement faculty for recent departures became feasible on a limited basis, we selected two new faculty who have both been excellent additions to the department and have demonstrated strong commitments to these assessment initiatives for student success.
2) The chemistry department modified it's Math prerequisites recently for Chem 103 and 105 to College Algebra or Aleks score=65. While this switch has helped D,F,W rates, faculty note issues with applied math skills; no course exists at UAA that assess this topic relevant to intro chemistry.

Student success depends on many aspects of a student's experience. On the academic program level, it can relate to correct placement, course sequencing, standardized pre-requisites across sets of courses, the intentional use of high-impact practices, proactive advising, course scheduling practices, etc.

UAA has selected the below metrics as student success metrics for accreditation.

In response to faculty questions and concerns about reporting on these data without more discussion and training, we will spend AY23 exploring together what equity data are and are not, how they can be used responsibly, and what programs can do to close equity gaps in student achievement on the below metrics, as well as to improve overall student achievement on them. UAA has a team participating in the NWCCU Data Equity Fellowship, and that team will help to guide these conversations.

Metric	Definition	Rationale
UNDERGRADUATE COURSE PASS RATES BY COURSE LEVEL (Undergraduate lower-division, undergraduate upper-division).	The percentage of students who receive a passing grade (A, B, C, P) for all undergraduate students in a course offered by a program compared to the same rate calculated for all courses at that level. Based on a 5-year	Low pass rates are one critical way to identify courses that are barriers to student success and degree completion. Failing k2(u)te

Metric	Definition	Rationale

The UAA Pharmacy Program Dean recently indicated that UAA Chemistry students are frequently the best and most-prepared group of incoming students to their program.
Two students graduated with an M.S. in Interdisciplinary Sciences with concentration in Analytical Chemistry. One is now a staff researcher for the Applied Environmental Research Center; the other is now manager of an analytical testing facility in China.
Chemistry majors have been recognized repeatedly by COH WWAMI advisers for their preparedness for medical school and high rate of acceptance. This year's WWAMI cohort has three recent UAA Chemistry graduates.

I appreciate the department's continued attention to D,F,W rates. The examples given about changing prerequisites and promoting high impact practices are good and deserve follow up to determine impact. A larger conversation about these rates is planned for the College and Chemistry's input will be important.

The Chemistry Department's idea of providing suggested pathways for various occupations is appreciated and encouraged, however these should be guidance for students and not formal tracks and requirements for degree. The program provides opportunities in CHEM 418 to give poster presentations as a “communication of laboratory findings” exercise.

:  1/9/2023