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Chemistry BS

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College of Arts and Sciences

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In 2020, UAA launched a consensus-based, deliberative process to identify the key skillsets that help students achieve academic and post-graduation success. After a year-long process that included

competencie y o competencies through curricular (e.g., courses), co-curricular (e.g., internships, conferences), and extra-curricular (e.g., student clubs) learning experiences.

After the stakeholder-based process in AY20, UAA conducted a pilot project focusing on the core competency of Personal, Professional, and Community Responsibility (PPCR) This decision was based on input from the 2020 Annual Academic Assessment Retreat.

Question #1 below is designed to engage program faculty in thinking about how they can or already do promote student learning in this core competency.

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Building community within a student body is an essential aspect of growing and sustaining a program. Students, like all people, need community and support for each



other as well as purpose and opportunity to share with others. The chemistry department has developed innovative co- and extra- curricular opportunities for chemistry majors to collaborate with National and Local sections of the American Chemical Society (ACS), National Institute for Informal STEM Education, and local outlets.

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Chemistry faculty have been nationally recognized for outreach programs that connect chemistry undergraduates with young (and old) learners from all across the state of Alaska. During this time, 79 UAA undergraduate students have received formal outreach training. They have brought the joy of topics such as fluorescent slime, moving molecules, colorful chemistry, and many other activities to over 9600 community members across Alaska during 12 annual outreach events.

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We would like to continue outreach activities and providing co-curricular opportunities for students to disseminate their research findings at local, regional, and national symposia and conferences.

Example: Communicate effectively in a variety of contexts and formats Exceeded faculty expectations.



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The process remained largely unchanged from the previous year:

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Assessment results were presented and discussed during faculty meetings where all faculty were invited to participate.

Conversations with faculty were conducted individually with chemistry instructors and Dr. Tomco throughout the academic year

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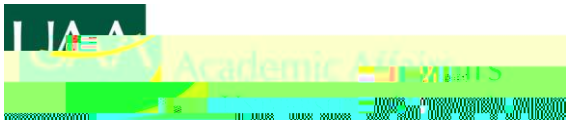
(Note, graph/figure insertions were disabled in the form fillable document provided this year)

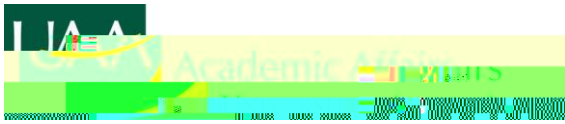
The composite distribution of grades assigned for all chemistry classes during AY20-21 were inspected (N=1,688). The data indicate a D,F,W rate of 24.6%, with 30.3, 21.6, and 14.4 % rates of A's, B's, and C's, respectively. These D,F,W rates are significantly lower than the 3-year composite average for all chemistry courses (27.7%), which include 24.6, 24.7, and 17.7 % composite averages of A's, B's, and C's, respectively. We are interested in monitoring this "Covid Bump", where grades assigned (students successfully demonstrating learning outcomes were met) were higher than they were at any other prior point in the department's history.

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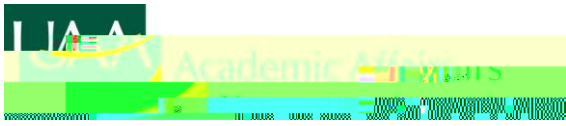
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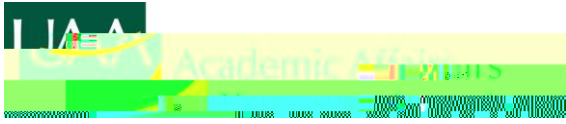
As covid spikes continue into AY21-22, the Chemistry department has had to continually re-assess and remain flexible with its position on in-person requirements to allow students to meet learning outcomes. The department recognizes that, where feasible, social distancing and online curricula can be used in limited cases to supplement laboratory exercise, but evidence from student and faculty conversations alike indicate that the laboratory component should remain in-person wherever feasible.





Metric	Definition	Rationale
JUNIOR GRADUATION RATE - BACCALAUREATE	<p>The percentage of students who graduate with a bachelor's degree within four years of first reaching junior class status (60 credits).</p> $\frac{T}{T + R}$	<p>Junior graduation rate (after 60 credits) can reflect a department's success in helping students complete their degrees. Within their first 60 credits, students typically focus on completing GERs and often switch majors. Tracking how long it takes students to complete their degrees after 60 credits, when many students have likely committed to a specific major, can provide actionable information for departments.</p>
<p>COURSE PASS RATES BY COURSE LEVEL (Undergraduate lower-division, undergraduate upper-division, and graduate).</p>	<p>The percentage of students who receive a passing grade (A, B, C, P) for all undergraduate students and (A, B, P) for graduate 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 trend. Included in the denominator for undergraduate courses are the grades D, F, W, I, NP, NB. Included</p>	





: *Jenny McNulty*

December 14, 2021