Academic Affairs
UNIVERSITY of ALASKA ANCHORAGE

3211 Providence Drive
Anchorage, AK 99508-4614
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2022 ANNUAL ACADEMIC ASSESSMENT REPORT FORM
(Due October 15 to the dean)

The Faculty Senate Academic Assessment Committee (AAC) is committed to a vision of assessment that 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, legislative, and Northwest Commission on Colleges and Universities (NWCCU) requests. We thank you for your continued support of and participation in this annual activity.

Starting in Spring 2021, UAA moved to one academic assessment reporting mechanism. The below form merges and streamlines the former Annual Academic Assessment Survey and the Annual Academic Assessment Report. It also incorporates questions about how academic programs contribute to student achievement of institutional core competencies and to student success.

This annual report will be due to the dean on October 15. Programs with suspended admissions and new programs in the first year of implementation are not required to complete this form.

These reports are public documents and will be posted on the assessment website. Responses are to be narrative only, and must be ADA- and FERPA-compliant. Do not embed any links, including to webpages or other documents. To be FERPA-compliant, do not include the names of any current or former students. Rather, use statements such as, "In AY22 four program graduates were accepted to graduate programs in the field." Programs with specialized accreditation or other external recognitions must comply with restrictions regarding what can be published, as per the accreditor or external organization. Do not include appendices. Appendices to this form will not be accepted.

The form uses narrative, text, and drop-down boxes. Narrative boxes have a character limit, which includes spaces. When using text and drop-down boxes, if you want to undo an answer, press "Control-Z" or "Command-Z."

Note: To ensure the fillable fields function correctly, the form must be completed in Microsoft Word. It will not function properly in Google Docs. Programs that wish to record collaborative discussion of the report might consider creating a separate document to take notes, before entering final responses in the official fillable form.

For technical assistance with this form, email Academic Affairs (uaa.oaa@alaska.edu).

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PROGRAM SECTION (Due to the dean on October 15)

After completing the Program Section, the program should email this form to the dean, with a copy to the appropriate community campus director(s) if the program is delivered on a community campus.

Submission date: 10/14/2022

Submitted by: Eric Klein, Assistant Professor, Department of Geological Sciences, esklein@alaska.edu

Program(s) covered in this report: BS Geological Sciences
(Programs with suspended admissions and new programs in the first year of implementation are not required to complete this form.)

If you selected "Other" above, please identify. *(100 characters or less)*

College: College of Arts and Sciences

Campuses where the program(s) is delivered: ☒**Anchorage** ☐**KOD** ☐**KPC** ☐**MSC** ☐**PWSC**

Specialized accrediting agency (if applicable): N/A.

If explanation is necessary, such as only some of the certificates and degrees are covered by the specialized accreditation, briefly describe:

INSTITUTIONAL STUDENT LEARNING CORE COMPETENCIES

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 students, faculty, staff, administrators, alumni, and employers, the UAA community identified four core competencies at the heart of a quality UAA education. Students develop mastery of these 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 is phasing in the integration of the core competencies into ongoing processes, including program student learning outcomes assessment. Personal, Professional, and Community Responsibility (PPCR) was integrated into the AY21 Annual Academic Assessment Report. The AY22 Annual Academic Assessment Report now also integrates Effective Communication.

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

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1. **A.** ***Personal, Professional, and Community Responsibility: The knowledge and skills necessary to promote personal flourishing, professional excellence, and community engagement.***

- **If last year you provided your program's current or planned example of an intentionally designed course, assignment, or activity that develops and showcases the student learning in this core competency, please discuss that implementation and any observations you have regarding how well it is working.** ***(500 characters or less)***

  We have a current course that fosters this competency (PPCR): GEOL 310 Professional Practices, where students learn about the expected behavior of a professional geoscientist, including writing professional reports and delivering oral presentations. This course appears to work well in supporting the PPCR competency as students practice working in groups, networking, communicating ideas, learn ethical behavior, and interact with potential employers in the community (e.g., through career fairs).

- **If last year you *did not* identify a current or planned example of an intentionally designed course, assignment, or activity that provides students the opportunity to develop and showcase this core competency, please identify one now.** ***(500 characters or less)***

B. ***Effective Communication: The knowledge and skills necessary to engage in effective communication in diverse contexts and formats.***

- **What would you hope a student would say if asked where in your program or support service they had the opportunity to develop proficiency in this core competency?** ***(500 characters or less)***

  Students in the BS Geology program would likely say that different aspects of this core competency are developed in every course in the department. Throughout their studies in different courses students have opportunities to grow their communication skills through report writing, oral and poster presentations, analyzing data, constructing graphs and figures, creating maps, working as a team during field activities, and group research projects.

- **Provide your program's current or planned example(s) of an intentionally designed course, assignment, or activity that showcases the student learning in this core competency.** ***(500 characters or less)***

  Although there are many opportunities to showcase this competency, the best example is the geology career fair. At this geology focused career fair, students have an opportunity to meet with different employers and communicate their backgrounds, skills, interests, and future employment plans. Students often use materials from courses in the Department, like resumes, figures from student research projects, and stories about field experiences. Another example is the Core Workshop in GEOL 331 where students make geologic interpretations and then share these with a broad audience.

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PROGRAM STUDENT LEARNING OUTCOMES

2. Please list the Program Student Learning Outcomes your program assessed in AY22. For each outcome, indicate one of the following: Exceeded faculty expectations, Met faculty expectations, or Did not meet faculty expectations.

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

1. Identify and describe lithologies and formations in a field setting: N/A
2. Construct geologic maps, surficial maps, and geological sections: N/A
3. Use appropriate equipment and techniques as required by professional geologists: N/A
4. Demonstrate critical thinking skills through synthesis of geologic information: Met faculty expectations
5. Critically evaluate their own and others work for accuracy, fairness, clarity and scientific style: Exceeded faculty expectations
6. Produce professional quality reports using their own and other's data: Met faculty expectations

3. Describe your assessment process in AY22 for these Program Student Learning Outcomes, including the collection of data, analysis of data, and faculty (and other, e.g., advisory board) conversations around the findings. *(750 characters or less)*

The department evaluates SLOs through the assignment of a cumulative letter grade based on assessment of student performance in three key courses, as per the Geological Sciences Educational Effectiveness Assessment Plan adopted in October 2008 (accounting for modified course numbers).

- GEOL A310 Pro. Practices in Geology (early requirement in degree program) - Spring 2022
- GEOL A480 Geol. Field Methods (senior level required course) - Not offered in AY 21-22.
- GEOL A482 Geol. Field Investigations (capstone field mapping course) - Not offered in AY 21-22.

Guidance last year said to include assessment of entry level courses, but as some students in these courses are not Geology majors, therefore it is not a true assessment of Program SLOs.

4. What are the findings and what do they tell the faculty about student learning in your program? *(750 characters or less)*

The SLOs and outcomes (letter grades) for AY 2021-2022 that could be assessed are as follows:

iv. Demonstrate critical thinking skills through synthesis of geologic information: A -

v. Critically evaluate their own and others work for accuracy, fairness, clarity and scientific style: A-

vi. Produce professional quality reports using their own and other's data: B

These results are similar to AY 2020-2021.

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5. **Based on the findings, did the faculty make any recommendations for changes to improve student achievement of the Program Student Learning Outcomes? Please describe the recommended action, what improvement in student learning the program hopes to see with this change, the proposed timeline, and how the program will know if the change has worked. If no recommendations for changes were made, please explain that decision.** ***(750 Characters or less)***
   The faculty haven't made any explicit recommendations based on the AY 21-22 results. We continue to experience instability in areas of our required BS GEOL curriculum, specifically geophysics. Further, the Department feels the courses presented here (e.g., 310, 480, 482) are the best courses to assess Program SLOs, but last year only one of them was offered due to faculty shortages in our Department. Additionally, the assessment data collected in AY 20-21 didn't indicate major deficiencies in program learning outcomes requiring immediate attention. We are also continuing to offer many courses with an online option and some without required textbooks (e.g., 115) , which helps some students to participate and helps close equity gaps.

PROGRAM IMPROVEMENTS AND ASSESSING IMPACT ON STUDENT LEARNING

6. **In the past academic year, how did your program use the results of previous assessment cycles to make changes intended to improve student achievement of the Program Student Learning Outcomes? Please check all that apply.**
   ☐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 AY22.

   If you checked "Other" above, please describe. ***(100 characters or less)***

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7. **Do you have any information about how well these or other past improvements are working? Are they achieving their intended goals? Please include any data or assessment results that help you demonstrate this. *(750 characters or less)***

   Last year, we made some teaching method changes to 100 and 200-level courses: increasing content related to structural geology, geologic cross-sections & stratigraphy, and sedimentary rock forms. Based on one year, it appears that these changes have helped provide students with more information that could be helpful in upper division classes. However, future years will provide further evidence on the efficacy of these changes.

   We are also working to maintain a strong program in the future by addressing the issue of reduced enrollment through active and targeted recruitment (e.g., giving geology presentations to students at Anchorage high schools) and retention (e.g., highlighting fun geoscience field opportunities in lower division courses) efforts.

STUDENT SUCCESS AND THE CLOSING OF EQUITY GAPS

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.

8. **PROGRAMS ARE NOT REQUIRED TO RESPOND TO QUESTION #8 FOR THEIR REPORT DUE ON OCTOBER 15, 2022. IT IS HERE JUST FOR THEIR REFERENCE. Describe the actions your program is taking to improve student achievement on one or more of the following metrics. Also, describe any resulting improvements in student learning.**

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 trend. Included in the denominator for	Low pass rates are one critical way to identify courses that are barriers to student success and degree completion. Failing key courses correlates with low retention and more major switching. Mitigation strategies can be internal or external to the course itself, including, among

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Metric	Definition	Rationale
	undergraduate courses are the grades D, F, W, I, NP, NB. *Data source: RPTP end-of-term freeze files. Disaggregate as per accreditation.*	other things, the use of high-impact pedagogical practices, appropriate placement, course sequencing, tutoring, and other means to ensure student success within a particular course. This metric and the disaggregation of the data can inform planning, decision making, and the allocation of resources to programs and services designed to mitigate gaps in achievement and equity.
ANNUAL RETENTION 1ST TO 2ND FALL	Traditional measure of the % of first-time, full-time associate and baccalaureate degree-seeking freshmen who enter in a given fall term and return the following fall. *Data source: UA System Warehouse RPTP/DEDMGR end-of-term freeze files. Disaggregate as per accreditation on an annual basis.*	Following the student from the 1st fall to 2nd fall can indicate ongoing connections and support inside and outside of the classroom are motivating students to return to continue their studies at the institution. Continuing enrollment is a key factor in completion.
SEMESTERS TO DEGREE – GRADUATE PROGRAMS	The average number of semesters taken by students to complete any graduate degree or graduate certificate program. Determined by students who have graduated from a graduate program as their primary degree. 5-year trend. *Data source: UA System Warehouse RPTP/DEDMGR end-of-term freeze files. Disaggregate as per accreditation on an annual basis.*	Looking at the number of semesters graduate students take to complete their degrees illustrates how students progress through their degree programs (full-time, part-time, stop-out). This information on student behavior and completion can inform program structure and help the institution support students in a way that honors the time needed for rigorous intellectual engagement and growth and also ensures that students can complete in a timely manner.

9. **Do you have any examples of post-graduate success you want to highlight? For example, major scholarships, the percent of students who pass licensure examinations, the percent of students accepted to graduate programs, the percent in post-graduation employment in the field or a related field. *(750 characters or less)***

   One student (BS Geological Sciences 2021) is now an MS student at Texas Tech after receiving multiple attractive offers for grad school. A second student (who won our Excellence Scholarship last year) received an internship, and is still working, with a local geophysics company, Logic Geophysics & Analytics LLC. A third student, a current undergrad, attained a lucrative part time job

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as a process geologist with Red Dog Mine. A fourth student, a 2021 graduate, is now an environmental scientist with the State in Fairbanks. A fifth student, a current undergrad, earned an internship at the Alaska Geologic Materials Center this past summer, and is still working there part time. A sixth student (a recent graduate) landed a full time job with Alaska DNR doing hydrology work.

DEAN SECTION (Due to the program on January 15)

After completing the Dean Section and signing it, the dean should email this form to the program, and copy uaa_oaa@alaska.edu for posting. If the program is delivered on one or more community campus, the dean should consult with the appropriate community campus director(s) on the response and copy the appropriate community campus director(s) when emailing the response to the program.

1. **Based on the program's responses above, what guidance and support do you have for the program moving forward? *(750 characters or less)***

As the Geological Sciences Department, like many others, moves to a rotation of upper division courses it will be important for the program to design assessment practices around this rotation. In addition, the program is encouraged to seek ways to broaden courses assessed; and to perhaps consider ways to track changes that they discussed making in their 100-200 level courses.

2. **What is the program doing particularly well in terms of its processes for the assessment and improvement of student learning, for example, the achievement of the Program Student Learning Outcomes, the closing of equity gaps, or addressing the core competencies? *(750 characters or less)***

The Department does an excellent job of providing HIPs in their courses and designing courses, like 310, to prepare students for a career in the field. The connection between the newly integrated core competencies and GEOL 310 seems strong and clear and the case for success within the framework of this course is well stated. The geology career fair is a good example of encouraging interaction between students and their prospective employers post-UAA.

Dean's signature: Jenny McNulty **Date:** January 9, 2023