Mathematics - Bachelor of Art

Current Compliance Year: 2024-2025
Full review

Resources

Before completing this form:

- Review the resources available to assist you.
- The link in WorkZone directs you to your program's folder for this year's review, which includes:
  - A full copy of your previous report with the SLOA of record attached.
  - A folder with previous SLOAs as individual documents.
- The Resources folder contains:
  - Templates for creating or updating SLOAs.
  - Training materials from the SLOA and Program Review Training held in August.
- Additional tools and information can be found on the Academic Program Review Website.

If you have questions or concerns during this process, please reach out to mailto:uaf-accreditation@alaska.edu

Recent Recommendations

Feedback will include recommendations from the last Expedited Review or from your most recent review by your school or college. You may not see any feedback or recommendations until you have completed your first full or mid-cycle review.

No overall feedback was provided during your last review. No response is necessary.

Response to Previous Recommendations (if any):

(250 Word Limit)

Student Learning Outcomes

The previous Student Learning Outcomes Assessment has been submitted as its own report. Going forward you will use the following prompts to discuss the success of your most recent SLOA plan and address your assessment activities since your last SLOA report (typically the past two years or since your last program review).

Learning outcomes feedback from last review:
Strong alignment with SLOA plan

The program is using the ETS Major Fields Test in Mathematics to assess content knowledge. The program might consider what score they would count as meeting the learning goals for their students.

The exit survey is an indirect measure, which seems to focus more on students' experience in and satisfaction with the program than student learning outcomes.

The program is planning to have a faculty member as assessment coordinator, which is a good step. The program might consider that outcomes assessment is intended to be a collaborative learning experience for the program or department. This is an opportunity to share results and discuss how to enhance the students' experiences and make curricular decisions based on the results of assessments.

The program indicates having revised the SLOA plan to better assess the communication goals. Using final exams in several classes and reviewing them by a faculty committee seems to adequately assess this outcome.

SLOA plans are identical for the programs in your department. It is essential that different programs have different outcomes- if students are intended to learn the same things, how are the programs differentiated?

Discuss your SLOA findings, changes you are making and what you hope to see as a result:

We revised our SLOs to reflect previous feedback, by deleting the Program Outcome, and adding an Outcome focusing on foundational knowledge (Linear Algebra and Calculus 3, usually taken in the first two years of the degree in all concentrations) and an Outcome clarifying the difference between the BA and BS, which have **different degree requirements only**.

SLO1: In our review of final exam scores for Math F253X and Math F314, 72% of students demonstrated foundation mastery with a C (70%) or better for the course sections for which we had data. There are data concerns due to irregular data collection, but this provides baseline data.

SLO#2: We analyzed ETS scores for 32 students over 6 years; in 2018-2021, all students scored within or above the national average score range, while in 2022-24, 67 - 75% of students scored in the average score range.

SLO#3: Available final exams from Math F265, Math F401, Math F405 were collected. One proof problem from each student exam was selected and assessed on mathematical writing (but not argument correctness). Scores for each student were averaged. The data set was small and unreliable (due to the pandemic, small class sizes, and missing exams). However, students did show signs of increasing sophistication over their time between their introduction to mathematical proof writing as a written communication skill in Math 265, and using those skills in more advanced courses such as Math 401 and Math 405.

SLO#4: BA graduates completed 18 credits of humanities and social sciences and a minor complex.

Discuss the curricular changes made based on assessing your SLO. If you haven't made any curricular changes, please explain why not and address what you did notice in the review, including strengths of your curriculum through the assessment of your outcomes:

Through consideration of the ETS scores, we suggest ongoing prioritization of effective teaching in essential core courses, especially Calc 1-3, Math F314, and Math F265. This may be hampered by lack of staffing availability. Based on the ETS data, for students in the statistics concentration, we

recommend ensuring they take the ETS exam after they have taken corresponding upper-division math classes. (details in artifacts)

We need to do a better job collecting and retaining student success data, especially in Calc 3, Linear Algebra, Math F265, Math F401, Math F405; data analysis was hampered by several semesters of missing data due to non-saved gradebooks or missing exams.

Faculty should be asked to choose a problem on their final or comparable assessment for inclusion in our data collection, and the corresponding problem statement and responses should be retained for storage for use in this kind of analysis. Data for Math F265 should be kept a minimum of 10 years, and for Math 401 and 405 should be retained for a minimum of 6 years to facilitate the possibility of longitudinal analysis of students, including student names for tracking.

We also are implementing an accelerated BS/MEd and a new concentration in the MATH BS called Math for Secondary Education to help students who want to become highly qualified math teachers in high school to have a broad background in mathematical content areas corresponding to and supporting the courses they will likely teach.

Please note that we retain the BA Mathematics to help students who want to double-major in another BA discipline to not have to complete **both** the BA degree requirements of 18 credits of humanities and social sciences **and** the BS degree requirements of a year-long sequence in natural sciences. The **major** requirements for the BA and BS mathematics are identical. For non-double-majoring students, the BS in mathematics has fewer degree requirements to complete and the same rigor, which is why we see few students choosing the BA.

Supporting Documents

Please ensure that all relevant supporting documents, such as artifacts, rubrics, and student data, are uploaded to your designated Google folder in WorkZone or directly into Google Drive. *Note: Do not include any information that may identify students in your data.*

Updated SLOA?

If you are updating your SLOA document, please include it with your report and other supporting documents in your designated folder. It does not need to be filed separately in the "SLOA" folder.

Are communication outcomes embedded in the SLOA Plan?

As of 2017 all Baccalaureate programs were required to embed the communication outcomes within their SLOA Plans, this is optional for non-Baccalaureate programs. Please mark the appropriate box below.

Embedded:	X
Not Embedded:	

Student Success

To access the Student Success Dashboard please sign into a UA computer with VPN connection (if not on campus). You will need your UA credentials and it is best accessed with the most updated version of Chrome, Edge, Firefox or Safari browsers; Internet Explorer is not supported. You will need to filter the data to see your programs. If you need assistance in finding the data for your programs, please contact your data liaison or Julia Manfredini in the PAIR office.

Data Liaisons

Each school or college has a team of Data Liaisons to help you analyze the data provided in the portal and may be able to help you see your data in multiple contexts. You can find a list of data liaisons on the resources page for Program Review.

The college or school level committee will also have access to this data with the goal that by providing these visualizations data availability will be increased.

Data supplied within the dashboard linked below is intended for Academic Program Review and not for any other purpose.

Student Success Data Dashboard

Previous Feedback

The program provides a thoughtful discussion of equity gaps and ways they are planning on addressing them.

The program indicated a decline in majors, however according to the data, after decreasing majors from 11 in 2018 to 6 in 2019, the number of majors has steadily increased to 12 in 2022.

The program indicated an increase in degrees awarded, however, according to the data, there have not been any BA degrees awarded in this program since 2019.

The program is encouraged to review and discuss this data.

Student Success Data Trends:

Trend	Increase	Decrease	No Change
Persistence	X		
Pass Rates	X		
Student Credit Hours		X	
Majors		X	
Degrees Awarded			X
Other Trends (Explain in narrative below)			

Equity Gaps

Please discuss any equity gaps identified in your disaggregated student success data and explain how you plan to address them. Please contact your data liaison or make an appointment with Julia Manfredini to learn more about analyzing your data.

Equity data is for all students in math/stat courses at F113X and above and are not restricted only to students in the BA Mathematics degree.

There are equity gaps of about 3% for [redacted], a persistent ~10% gap in pass rates between [redacted] students and [redacted] students, and a gap in pass rates between [redacted] and [redacted] students on the one hand, and [redacted] and [redacted] students on the other hand, of about 10 - 15%. 2024 pass rates for [redacted] students showed a down-tick, but the percentage of [redacted] students as a proportion of the whole was also down. Similarly, there was significant variation

in the pass rates of HPI students, which we think is caused from the sample size and not any pedagogical changes. Having sample size data would help with our analysis: are the gaps from noisy data, an outlier semester, or reflecting a trend?

Overall, there seems to be a small but increasing trend of increasing pass rates across all equity categories; that is, though we still have gaps across equity categories, the increase in passing rates is shared by the lower-performing equity groups.

We are working to address these trends by offering courses in multiple modalities and by incorporating high-impact strategies into our GER and some major courses, including active learning and alternative assessment strategies which have been shown to increase success outcomes in particular for underrepresented groups.

Optional Data Explanation

Feel free to share more of your thoughts on the data provided.

Student success course-related data in the APR dashboard includes all degree-seeking students who took the course, regardless of major. Courses are limited to those taught by D6Math, so they are restricted to courses labeled MATH F113X and above.

The decrease in total SCH reflects overall enrollment trends at UAF, since 90% of SCH in MATH is for service teaching (that is, teaching of non MATH/STAT majors) and in particular the decline in engineering majors.

The graphs provided for persistence showed that students were persisting at a slightly higher rate in AY24 versus AY19. However, the total number of graduates has remained fairly consistent during this period.

Student pass rates were generally increasing from AY19 to AY24. Comparing students by gender, Pell status and age did not suggest much difference from the overall trend. Looking at students by race, again there was a general increase in the 5 year period, but looking at pairwise comparisons of the individual groups showed no significant differences.

We created accelerated programs for BS/MS Mathematics and BS Mathematics /MS Statistics and Data Science. In the dashboard, those students are being counted separately, but they are actually part of the BS Mathematics program.

High Impact Practices

According to the AAC&U, High-Impact Educational Practices "have been widely tested and have been shown to be beneficial to college students from many backgrounds." UAF is particularly interested in Undergraduate Research and/or Scholarly Activity because it is one of our mission fulfillment indicators, but all of these researched High-Impact Educational Practices should be reflected in your program's student learning outcomes and curriculum.

Previous Feedback

The program lists and thoughtfully discusses several high impact learning practices.

High-Impact Practices Used in this Program

Please select all high-impact practices your program is currently using from the list below. For any practices you select, provide details in the corresponding narrative section. In the narrative, discuss how your program is implementing these practices, including any successes, known issues, and solutions. If you are considering incorporating any of these practices in the future, share your plans. If your program is not using any of the listed high-impact practices, please use the 'Other or None of These' field to explain how your program supports student success.

Capstone Courses & Projects	X	Research (Graduate Level)	
Collaborative Assignments & Projects	X	Writing-Intensive Courses	X
Diversity/Global Learning		Publications	
ePortfolios		Communications	
First-Year Seminars & Experiences		Publications	
Internships		Scholarly Activities	
Service or Community-based Learning		Other (Please describe in box below)	
Undergraduate Research			

Collaborative Assignments & Projects

Majors engage in group work throughout their foundational courses and, depending on the instructor, in their upper division courses. For example, in Calculus 1, students work together in groups at the board to develop shared understanding of the course content. For weekly quizzes, students work together to find correct solutions and identify their errors. Variations of this approach are typically used in Precalculus and Calculus II. In Introduction to Mathematical Proof, a foundational course for math majors, students again work together to refine their understanding of how to write proofs and how to present proofs clearly and coherently in a way that is understandable to other students. In Senior Seminar, the capstone course for majors in the mathematics concentration, students work together to learn some advanced mathematical topic. In the Statistics Consulting Seminar, the capstone course for majors in the statistics concentration, students work with each other and scientists outside of DMS on data analysis projects.

Undergraduate Research

(250 Word Limit)

Diversity/Global Learning

(250 Word Limit)

ePortfolios

(250 Word Limit)

First Year-Seminars & Experiences

(250 Word Limit)

Writing-Intensive Courses

All majors take Math F265 Introduction to Mathematical Proof, where they learn how to communicate mathematical truth through writing. Their mathematical writing skills are refined in Math F401 Real Analysis and Math F405 Abstract Algebra, in which almost all the homework and exam questions involve written responses using paragraphs and complete sentences; students are graded on clarity of exposition as well as on mathematical correctness. All students in the major must take at least one of

these courses, and many take both. We have included assessment of student writing across the major as part of our assessment of student learning objectives.

Service-Learning and/or Community-based Learning

(250 Word Limit)

Internships

(250 Word Limit)

Capstone Courses & Projects

Math concentration majors are required to take Math F490 Senior Seminar, where they are tasked with learning mathematics independently and communicating it to their classmates via teaching individual lectures or part of the lectures of the course, given scaffolding and instructor support.

Statistics concentration math majors take STAT F464 Statistical Consulting Seminar, where they learn fundamentals of statistical consulting, participate in discussions with subject area scientists, and work as part of a team to devise and communicate a data analysis strategy designed to achieve researchers' goals.

Other or None of these (explain)

(250 Word Limit)

Program Profile and Financial Data

The program review elements in this section usually stay consistent for departments. Any responses you provide will be saved for your next review. Please carefully review the information below and make any corrections or updates as needed to ensure accuracy for the next program review cycle. If any sections are incomplete, please ensure that you provide the necessary information. This will allow you to start from an updated baseline when you revisit these elements in future submissions.

Financial Data Resources

The Board of Regents shapes program review, through BOR Policy 10.06, to support budget increase advocacy in the state legislature. The standardized financial data template should be analyzed with your data liaison to assess your program's capacity and resource status.

To keep integrity and remain standard across all of UAF it is very important that you do not provide any additional or alternative data.

Financial Template

Your data liaison may have uploaded your template to the Google folder for this program, or you may do so now.

Previous Financial Feedback

Feedback will be provided once you have completed a full review.

Previous Profile Feedback

Feedback will be provided once you have completed a full review.

Cost Effectiveness (250 Word Limit)

How does your department/program approach being cost effective?

DMS produced an average of about 6300 SCH/year over the last three years, an average of 277 SCH per departmental FTE (which includes faculty, staff, and student workers; all our faculty are on 9 month contracts which correspond to .75 FTE). The vast majority of this SCH (about 90%) is for undergraduate courses taken by students across the university; that is, for GER and "service" courses taken by students outside any degrees housed in the department.

Thus, while the 9 degrees housed with the department of Mathematics and Statistics have few majors and thus might seem very expensive given the number of FTEs in the department, these programs are supported by extensive teaching done by the department as a whole, which provides a large amount of teaching to a large number of students.

Overall, tuition revenue has increased under the period under review.

Program's Value to Mission (250 Word Limit)

The department provides mathematics and statistics training to all students at UAF, through General Education and foundational math courses for science and engineering. All GER Mathematics and Statistics courses and required mathematics courses for Engineering majors and Biology and Wildlife majors are taught in both in-person and asynchronous online modalities to increase student access to mathematics training. Some graduate courses in MATH and all graduate courses in STAT are offered remotely via webconferencing, to increase statewide access.

DMS provides a rigorous and challenging curriculum to Mathematics and Statistics majors at the undergraduate and graduate levels. It is the only source graduate training in mathematics/statistics in the State of Alaska.

Graduation rates for our undergraduate programs are comparable to national trends: about 1% of graduates nationwide are in mathematics and statistics, and mathematics baccalaureate graduates make up 0.9 – 1.5% of all UAF graduates.

Faculty are highly productive in research and in obtaining research funding, according to the norms of the discipline. Faculty research is diverse, with productive collaborations within the department, across the university (including with engineering, biology, and computer science faculty), and across the world.

Graduate programs support the undergraduate programs: most DMS graduate students are supported by teaching assistantships, primarily teaching recitations in precalculus and calculus, and providing tutoring and grading support for lower-division classes.

Baccalaureate graduates of our department are successful in graduate school and in finding employment, including as mathematics teachers at the secondary level. Department faculty are invested in all levels of the MATH/STAT curriculum.

Duplicative Programs (250 Word Limit)

We also have a Mathematics BS at UAF. The Mathematics BA is identical to the BS in terms of the major requirements and differs only in the "UAF Degree" requirements (18 credits of humanities and social sciences for the BA, plus a required minor complex; a year-long natural science sequence for the BS). The BA exists to facilitate double-majoring.

There are mathematics BS degrees at UAA and UAS. However, the degrees offered by UAF differ in some significant ways from those offered by the other two campuses. One feature of UAF's baccalaureate degrees in mathematics is that the design of the degree allows students to focus on taking courses in the area of mathematics that interests them, subject to a core set of courses that are required of every major; thus, students interested in working in industry can focus almost half their degree on courses in applied mathematics; students interested in graduate school can take a broad array of pure and applied courses, with the ability to focus on either discrete or continuous areas as they like; and students interested in secondary certification can take courses that satisfy the mathematics requirements of the State of Alaska. The degrees at UAA and UAS do not allow their students as much flexibility.

UAF's B.S. and B.A. degrees in Mathematics offer a concentration in Statistics (as well as a concentration in Mathematics), which does not seem to be an explicit option at UAA or UAS. Both UAF and UAA offer a minor in Statistics; UAS does not.

Note that the accelerated BS Math/MS Statistics and data science, and the BS Math/MS Math are not duplicative programs, since they include the BS degree as part of the accelerated degree.

Community or Other Partnerships (250 Word Limit)

- Baccalaureate Requirements: Mathematics—as an important part of the liberal arts—is a required part of the UAF baccalaureate curriculum
- Quantitative fields at UAF: DMS provides a solid mathematical background to students in quantitative fields across the university at all levels, including engineering, biological sciences, and natural sciences
- Partnership with Engineering: DMS and CEM have developed a joint course, ES/MATH F186 Applied Engineering Applications. This course presents mathematics firmly within the context of engineering applications to increase student motivation in subsequent mathematics courses by giving a framework for understanding how the more theoretical material is used.
- Partnerships with Alaska Department of Fish and Game: The statistics faculty in DMS have a long association with the Alaska Department of Fish and Game (ADF&G).
- Partnerships with The Office of Planning, Analysis and Institutional Research (PAIR)PAIR typically provides funding for one statistics MS student each year through a research assistantship. Students help support department staff and work on database management and analysis problems.
- Research Experience for Undergraduates: Professor [redacted] has a longstanding REU program in the summer supporting undergraduate research on modeling tsunamis.
- Partnerships with Biology and Wildlife: Faculty members [redacted] and [redacted] collaborate with faculty in Biology & Wildlife to help increase the quantitative knowledge of students and faculty in biology. Several Wildlife PhD students also complete MS Statistics and Data Science degrees.

Value of Service Courses (Optional) (250 Word Limit)

The department provides mathematics and statistics training to all students at UAF, through General Education and foundational math courses for science and engineering. All GER Mathematics and Statistics courses and required mathematics courses for Engineering majors and Biology and Wildlife majors are taught in both in-person and asynchronous online modalities to increase student access to mathematics training. Some graduate courses in MATH and all graduate courses in STAT are offered remotely via webconferencing, to increase statewide access.

All baccalaureate students take at least one course taught by our department, and we provide the majority of the quantitative training for students in science and engineering disciplines. Most of the teaching time in the department (80% - 90%) is for GER and other service teaching. Even for lower-division courses that meet major requirements, the majority of students are not math majors. Most of our time and effort recently has been focused on making this teaching (especially in the initial math courses taken by engineers) more robust and more focused on student success.

Post-Graduate Success (250 Word Limit)

Among recent BA and BS graduates of whose status we are aware, four are working in K-12 education; seven work in industry and government (including UA institutional research, Alaska Dept. Fish & Game, and the Dept. of Defense); and five are pursuing graduate degrees.

Submission

Submitter & Collaborator Names

Leah Berman, Submitter

Other faculty involved in the review:
Latrice Bowman
Ed Bueler
Jill Faudree
John Gimbel
James Gossell
David Maxwell
Kevin Meek
Tony Rickard
Gordon Williams
Scott Goddard
Julie McIntyre
Margaret Short

Submitter Email

lwberman@alaska.edu

UNIVERSITY OF ALASKA FAIRBANKS

Student Learning Outcomes Assessment Plan

BA Mathematics

College of Natural Science and Mathematics

Fall 2024

Expanded Statement of Institutional Purpose	Intended Objectives/Outcomes	Assessment Criteria and Procedures	Implementation (what, when, who)
MISSION STATEMENT: We shall provide a high quality mathematics education responsive to the needs of individual students and the diverse population of Alaska **GOAL STATEMENT:** To assure that our graduates attain a solid understanding of mathematics and are adequately prepared to succeed in the job market or advanced study.	Mastery of foundational material Students will attain mastery of foundational mathematical concepts at the baccalaureate level.	Review declared major students' performance in Calculus III and linear algebra.	Assessment committee reviews major assessments in Calculus III and linear algebra, once per course per assessment cycle. Count how many majors score more than 80% on final exams.
	Core upper-division knowledge Students will attain mastery of core mathematical concepts at the baccalaureate-level comparable to those at other institutions.	We will give the ETS Major Fields Test in Mathematics to all majors, preferably close to graduation.	Every spring the instructors of Math F490 and Stat F454 will require all students to take the Major Field Test in Mathematics. The Assessment Committee will review test results and discuss any needed changes.
	Communications Skills Students will understand and write formal mathematical arguments. They will demonstrate the ability to solve problems using mathematics and to independently craft effective written explanations of mathematical material.	Portfolios of major assessments (e.g., final exams) from at least two writing-intensive mathematics courses.	At the end of every semester, a selection of major assessments (e.g., final exams) in MATH F265, MATH F401, and MATH F405 will be retained. The communication skills of graduating students will be evaluated by the Assessment Committee on a two-year cycle by reviewing students' writing portfolios.
	Students take a breadth of courses in the humanities and social and physical sciences, consistent with the liberal arts tradition.	Students take an additional 18 credits in humanities and social science courses beyond general education requirements as part of the	Verified by transcript check for completion by majors.

Submitted by:

		BA degree requirements, along with a minor complex.	

Submitted by:

College or School Review Committee

The college or school committees set the tone for helping each program feel seen during this process. We have provided you with strength-based feedback tags to attach to this program review. Please select as many as applicable.

Overall Recommendations (tags)

Address Equity Gap	x	Consider Curricular Revisions	
Develop Online Offerings/Options		Improve Time to Degree	
Increase Enrollment		Increase Graduates	
Increase retention/persistence		Strengthen Advising Practices	
May be asked to share Effective Practices		Recommendation to University-Wide Committee	

Explanation of Overall Recommendations (narrative)

The department has a large number of programs and a large number of students taking courses from these multiple programs from a single group of faculty so that lower enrollment programs do not add to the overall program costs. The program meets the UAF Mission. They provide a thoughtful narrative that shows the department is actively collecting student data and modifying the curriculum based on that feedback. They have outlined several equity gaps in their data and should follow up on an analysis of curricular changes to address those data. This is a solid, strong program.

Student Learning Outcomes Feedback (tags)

Strong	x	Developing	
Requires Minor Revision		Requires Major Revision	

Student Learning Outcomes Assessment Feedback (tags)

Strong Alignment with SLOA Plan	x	Clear, Concise Presentation of Findings	x
Compelling Learning Story		Missing a Direct Measure	
Missing Active Verbs		Missing Curricular Connection	
Missing Collaboration within Department			

Student Learning Outcomes Assessment Feedback (narrative)

The program provided 4 SLOAs for the BAMathematics program. The department SLOA committee has revised their SLOAs to account for previous feedback. The current SLOAs are clear, specific and measurable. They detail that SLOA#4 is intended to provide an outcome for the BA program, given that the only difference between BA and BS degrees is the different degree requirements. SLO #4 as written is about students taking a range of courses and is not about the learning objective students should meet by doing so. This could be revised to reflect the learning objective students should meet through studying a broad range of subjects. SLOAs#1 and #2 are very strong and easily quantified using student test scores for the ETS and final exams from Calc III and linear algebra. SLOA#3 could be improved slightly by indicating how the "selection of major assessments" is chosen. Is it random, for example? Or some other method? Why not evaluate all students' work? Also it is unclear whether the communication skills of graduating students is assessed by a similar "selection" of student portfolios or by examining the student portfolios of all graduating students. Some clarification of these two items would provide for an excellent set of SLOAs. The faculty have provided a thoughtful narrative on proposed curricular changes resulting from the SLOA Assessments.

Student Success & Equity Feedback (narrative)

The faculty have provided a thoughtful analysis of data for all students in MAT classes at the F113X level and above. They note that these data do not only include students in the BA Mathematics program since many students across campus take MATH classes as service courses. They note that equity gaps exist between [redacted] students, [redacted] grant students, [redacted] and [redacted] students, and [redacted] and [redacted] students varying between ~3% and 10-15%. There is no discussion regarding [redacted] students. The faculty note that they are working to address the equity trends identified through introduction of various course modalities, and incorporating active learning and alternative assessment strategies in some classes to address the equity gaps identified. They note that SCH have decreased and attribute that to an overall decline at UAF, and in particular, engineering majors. Student persistence has increased although the number of graduates has remained static. Student pass rates have generally been increasing with no notable variation in any of the equity groups identified. The department is encouraged to come up with a plan for ongoing monitoring and tracking the effectiveness of their equity efforts, and refining their strategies based on these findings.

High-Impact Practices Feedback (narrative)

The program has identified 3 HIPs including capstone courses, collaborative assignments, and writing-intensive courses. The program has provided a narrative for each tagged HIP. The narrative does not really discuss how these HIPs relate to student success data. It is not clear how the HIPs relate back to the SLOAs, other than assessments of student writing portfolios being used to examine student communication skills for SLOA#3.

Profile Feedback

Mission-Centric to College and/or UAF	x	Unique within UA	
Collaborative with other UA Programs	x	Provides Job Placement for Graduates	x
Strong Post-Grad Success for Students	x	Strong Service Teaching Component	x
Strong Ties to Community or Industry			

Financial Feedback

High Tuition Revenues	x	High Grant Revenues	
Operates at Low Cost		Productive Faculty	x
Opportunities to Increase Revenue		Low Enrollment	