



Academic Program Review

Program Name: Biological Sciences - Doctor of Philosophy

Academic Year 2025/2026

Recent Recommendations

Using your most recent review, please respond to all feedback and recommendations.

Response:

SLOA Feedback - Feedback on the mid-cycle program review for the PhD included:

- Remove the information related to employment outcomes (current SW #3 of 3) from the SLOA plan but retain it as an internal departmental assessment tool
- Use more "action" words
- Split "mastery of knowledge" and "contribute to original scientific knowledge through research" into separate SLOs
- Create a new assessment tool for "mastery of knowledge"
- Have assessments reflect learning outcomes while students are enrolled in the program, as opposed to tracking them post-graduation
- We accepted these suggestions and have revised the SLOs for the program (see below).

High Impact Practices Feedback - The reviewers commented that HIPs in Biological Sciences are positive and meaningful. They requested more information and concrete examples of HIPs and how they foster student success, which we have attempted to do in this document.

Student Learning Outcomes

Describe the assessment of your student learning outcomes (SLOs). Discuss your findings, changes you are making, and what you hope to see as a result.

Response:

The SLOs (from the 2023 mid-cycle review) that apply during the period of this review focused on three outcomes: 1. mastery of and contribution to biological knowledge, 2. oral and written communication skills, and 3. ability to obtain employment relevant to the student's field of study.

1. Graduates of the PhD. program will be proficient scientists with mastery of the knowledge of their discipline and the ability to contribute original scientific knowledge through research

The primary means by which a developing scientist demonstrates both a command of the state of knowledge in one's field and the ability to contribute to that body of knowledge is through publication, particularly in peer-reviewed journal articles. The publication process takes time. To account for a time lag and capture the totality of a student's dissertation publications, we modified this SLO during mid-cycle review in 2023 by adding a 4-year duration to the criteria for assessing this SLO. : "Graduates will publish their research in peer-reviewed scientific publications at an average rate of at least two dissertation-related publications within four years of graduation".

Criterion 1. Graduates will publish their research in peer-reviewed scientific publications at an average rate of at least two dissertation-related publications within four years of graduation - To assess the frequency of publications over time, we calculated the percentage of graduates publishing at least one dissertation or other article, and the average number of theses or other publications per graduate. Around October 2025, we assessed the publication activity of students graduating from the Biological Sciences (BIOS) PhD program during the period of review, FY22 - FY25, and also surveyed those who graduated between FY18 and FY25 and had had a full 4 years in which to publish. We used the following methods to locate publications: Scopus search, Google Scholar search, Reports of Advisory Committee, and annual departmental activity reports by graduate students, and flagged publications identified as either authored or co-authored by the graduate and attributed to UAF.

Because publication of articles during graduate school that are not dissertation-related is important to professional development and future employment success, we chose to also quantify non-dissertation publications. All articles from the survey were tabulated and categorized as either dissertation research (student was first author and title was dissertation-related) or other research (the product of side projects or other collaborations while at UAF).

Students graduating during the period FY18-21, who had had at least four years to publish their dissertation, published an average 3.4 dissertation and 5.1 total articles. Students graduating during the current period of review, FY22 - 25, did nearly as well, publishing an average 2.3 dissertation and 4.4 total articles over that period ([Fig. 1A](#)). The percentage of graduates with at least one dissertation publication was very high: 94% for both FY22-25 and FY18-21 ([Fig. 1B](#)).

If the goal is to capture all publication of dissertation chapters, the 4-year lag after graduation appears somewhat useful, but it is also clear that 4 years are not necessary to capture the fact that PhD graduates of the program are publishing well. This is not surprising, because PhD students in the Biological Program are encouraged to publish at least one peer reviewed article prior to graduation.

We conclude that the vast majority of graduates in the program are demonstrating mastery of the science related to their dissertation - as evidenced by their ability to publish in peer-reviewed journals - and contributing original science to the larger scientific community through publication.

2. Strong oral and written communication skills

Three criteria were identified for assessing this SLO: 2a. Effective public presentation of the dissertation during the defense; 2b. Frequency of presenting dissertation findings to broad audiences: at least 30% of MS students per year; 2c. Publication of research in peer-reviewed journals.

Criterion 2a. PhD students will present and defend their dissertation effectively in a public setting - We put this criterion in place during the mid-cycle review in 2023, and did not start accumulating reviews of dissertation defense public communication quality until 2024. Following the public presentation of the student's dissertation, graduate advisory committee members are asked to complete a quantitative assessment evaluating six aspects of their communication quality and provide qualitative written feedback. A copy of the rubric is provided here as a pdf ([Fig. 2](#)), although the actual assessment is distributed as a Google Form. Two Ph.D. students who graduated during FY25 were reviewed by members of the graduate committee in this manner. Both gave excellent defense seminars. The average score for those students was 4.95 and 5.00 out of a possible 5 points. As more students undergo this review, the data will provide a useful assessment of the department's success at helping students to develop their communication skills.

Criterion 2b. At least 50% of Ph.D. students will present their work to audiences outside committee meetings each year - To assess this criterion, we summed the number of presentations self-reported by each student via the Graduate School's Report of Advisory Committee and an annual departmental activity report. Using these data, we found that on average across the four years of review, students did not meet the 50% benchmark in FY22 (48%) and FY23 (32%), but did meet the benchmark in FY24 (52%), and FY25 (57%) ([Fig. 3](#)).

While there is room for improvement, it is encouraging that students presented their work more often in later years. It is possible that lingering reluctance to travel following the pandemic affected student participation in meetings and conferences in FY22-23.

Overall, students averaged 0.7 presentations annually per student across the four years. Presentations took place at meetings and conferences at a range of local, regional, national, and international venues, and included both oral presentations and posters.

Presentation activity is important for professional development, as well as building communication skills. The department will continue to encourage Ph.D. students to present their work to broad audiences. However, we note that internal opportunities to apply for travel funds have become more restricted in recent years, and federal grant funds may become more restricted as well. This may reduce the students' ability to travel to meetings in the future and undermine our capacity to meet this SLO.

2c. Publication of research in peer-reviewed journals - See assessment of SLO #1.

3. Graduates will obtain employment relevant to their field of study

Criterion 3. At least 80% of Ph.D. graduates from the program will obtain employment in a field relevant to biological sciences or research within two years of graduation - To assess this criterion, we used the following means to survey student employment: direct email contact with student, inquiries to former advisors, and web searches including government lists of employees, NGO websites, Google, LinkedIn, and ResearchGate. Whenever possible, we attempted to verify web sources of employment through direct contact with the student or advisor.

We were able to ascertain employment type for all Ph.D. students graduating during the period of review. Results of the employment survey are shown in [Fig. 4](#). Of those graduates, 95% were employed: 10% were university faculty, 30% were postdoctoral researchers, and 45% as professional scientists working at the state, federal, university, or private levels. Another 5% were working as writers and 5% self-employed. One FY25 graduate (5%) was job hunting. These results exceed our benchmark of 80% employment.

We conclude that the majority of graduates from the Biological Sciences Ph.D. program obtained employment broadly relevant to their field of study.

Did you make any curricular changes based on your most recent SLOA? If so, discuss what changes were made. If no changes were made, please discuss the strengths of your curriculum based on the assessment of your outcomes.

Response:

Yes, we changed the program SLOAs in several ways.

As of 2017, all Baccalaureate programs are required to embed communication outcomes within their SLOA Plans. This is optional for non-Baccalaureate programs.

Communication outcomes in the SLOA plan are: **Embedded**

Check the checkbox to certify completion of the following tasks:

☒ Upload supporting documents to the Supporting Documents folder. This includes artifacts, rubrics, and other documents related to your SLOA.

☒ Upload your most recent SLOA to the Supporting Documents folder, even if no changes have been made since the last review.

Have changes been made to your SLOA document since your last review? **Yes**

If so, please summarize what changes were made.

Response:

The new [2025 SLOA](#) is different from the [2023 SLOA](#) in these ways:

- We shifted the assessment of the student's command of knowledge relevant to their subject area and the scientific method to an assessment of the quality of the student's research proposal (already a requirement of the degree program), to be completed by the student's graduate advisory committee. This is now SLO #1. The quality of the student's command of knowledge and the scientific method in the research proposal will be evaluated using a new rubric ([Fig. 5](#)), which is quantitative with space for qualitative written feedback. This evaluation will occur at the end of the student's second year, while there is still time for improvement if needed. We also developed guidelines for an effective proposal ([Fig. 6](#)), which will be embedded in the relevant part of our departmental website.

- We separated the written (now SLO #2) and oral communication (now SLO #3) assessments, which were previously combined into the same SLO.

- The new SLO #2 focuses on effective communication in writing. Assessment is based on the quality of the required written research proposal. The new proposal rubric ([Fig. 5](#)) embeds a quantitative evaluation of writing quality, with space for qualitative feedback for written communication. This will be assessed before the end of the student's second year in the program, giving students time to improve their science writing skills if warranted.

- The new SLO #3 focuses on effective communication in speech and will be assessed by evaluating the quality of the student's dissertation defense using a rubric that was established at the mid-cycle review.

- We established a new SLO (#4) focused on the importance of communicating scientific findings to the broader scientific community. (This SLO was part of SLO #1 in the 2023 SLOA.) Assessment criteria for the new SLO #4 include publication and oral communication (e.g. at meetings and conferences) of the dissertation research findings.

- We heeded the advice of reviewers and confined our evaluation of publication success (part of SLO #4) to students currently in the program. The criterion now states that at least half of the students will publish at least one peer-reviewed publication on dissertation research prior to graduation. We have shared with Ph.D. students the strong recommendation that they publish at least one peer-reviewed article prior to graduation for decades, so the change here will be in how we assess the publication SLO; not what we communicate to students.

- We removed an assessment of post-graduate employment from the SLOA, as suggested by reviewers, but will continue to collect the data for internal departmental purposes.

High Impact Practices

Please indicate which high impact practices are currently being implemented in relation to the program's student learning outcomes.

- | | |
|---|---|
| ☐ Capstone Courses & Projects | ☒ Graduate Level Research |
| ☐ Collaborative Assignments & Projects | ☒ Writing-Intensive Courses |
| ☐ Diversity/Global Learning | ☒ Publications |
| ☐ ePortfolios | ☒ Communications |
| ☐ First-Year Seminars and Experiences | ☒ Scholarly Activities |
| ☐ Internships | ☐ Studios |
| ☐ Service or Community-Based Learning | ☐ Practicum |
| ☐ Undergraduate Research | ☐ Other |
| ☐ Labs | ☐ None of these |

Discuss how the HIPs in the program are reflected in the SLOA. If you have identified HIPs that are not included in the SLOA, please consider an update.

Response:

Graduate Level Research - Graduate research is the basis for the Ph.D. student's dissertation and an important scholarly activity in the program.

Writing Intensive Courses - Many of our Ph.D. students take BIOL F604 Scientific Writing, Editing and Revising in the Biological Sciences as they start to write their dissertation. In that course, students learn about the practice of science writing and complete a full scientific paper / chapter of their dissertation. Perhaps more importantly, graduate advisors and graduate committee members typically provide useful feedback on drafts of the research proposal, grant proposals, and the dissertation. This mentorship is critical to the successful development of writing skills in graduate school.

Publication - Contribution of research findings to the larger scientific community is part of SLO #1 "Graduates of the Ph.D. program will be proficient scientists with mastery of the knowledge of their discipline and the ability to contribute original scientific knowledge through research". Our expectation is that the majority of graduates will both do publication-quality research and take the next step to publish.

Communications - Communication is directly addressed by SLO #2 "Graduates will have strong oral and written communication skills". Students are expected to communicate both in writing - as addressed above - and in speech. The department encourages students to communicate broadly and well by providing assessment and feedback on the public oral presentation portion of their dissertation defense, and by encouraging students to present regularly at meetings and conferences.

Scholarly Activities - Scholarly activity is embedded in SLO #1. Students learn scholarly practices by interacting with faculty and other graduate students, taking courses, reading the scientific literature, and in the process of doing their dissertation research. Students demonstrate they are scholars by producing publication-quality research and presenting research to broad audiences; e.g. by attending meetings and conferences.

Student Success

Please reference the [Resources tab](#) for information on accessing the Student Success Data Dashboard and contacting your designated data liaisons.

Student Success Data Trends

Persistence: **Increase**

Pass Rates: **No Change**

Student Credit Hours: **NoChange**

Majors: **No Change**

Degrees Awarded: **NoChange**

Other Trends (if applicable):

Persistence was 79 - 87% in FY22 and FY23 and rose to >90% in FY24 and FY.

Pass rates in graduate courses were high: >94% throughout the period of review.

Annual SCH load varied between 10.9 - 12.5 with no clear trend.

Majors were variable between 28 and 35 with no clear trend during the period of review. The department attempted to increase outreach and enrollment in this program by collaborating with the Enrollment Communication Team at the Office of Management and Budget to revise the UAF webpage advertising the Biological Sciences PhD program. The result is a colorful, public-facing and informative [webpage](#) that highlights the program's strengths.

Degrees were quite variable over time, with 1 - 8 graduates per year

Achievement Disparities

Discuss any achievement disparities identified in your disaggregated student success data and explain how you plan to address them.

Response:

Gender - The Biological Sciences Ph.D. program has been majority [REDACTED] since FY03, and over the period FY00 to FY25 the representation of [REDACTED] increased linearly from 46% to 77%

(Fig. 7). The increase in [REDACTED] Ph.D. students in biology appears to be a national trend; for example the National Science Foundation reported an increase in the percentage of [REDACTED] doctoral students in the life sciences from 47% in 2000 to 56% in 2020 (NSF (2021) Doctoral Recipients from U.S. Universities: 2020. Report NSF-300). During the four years under review, the percentage of [REDACTED] in the Ph.D. program accelerated at a rate that appears exponential, from 58% to 77%. It is not immediately obvious what the department can or should do to address this growing gender disparity, but we will discuss it as a faculty.

Race and Ethnicity - Most students in the Ph.D. program identify as [REDACTED]. There was little change in the number of [REDACTED] or [REDACTED] Ph.D. students across the period of review, and only small changes in the representation of other racial groups, and a small increase (n = 2) in the number of students of [REDACTED] ethnicity in FY24 and FY25.

Faculty in the department have made efforts toward better outreach to minority communities. For example, Dr. [REDACTED], working with colleagues from UAA and UAS, manned a 3-day virtual information booth to provide information about biology programs across the three UA campuses during the 2021 Society for the Advancement of Chicanos, Hispanics and Native Americans in Science (SACNAS) meeting. The department will continue to work to recruit from diverse student populations.

Eligible - None of the students in the program were [REDACTED] eligible. Virtually all of our Ph.D. students are funded by a combination of teaching and research assistantships. The department does not accept M.S. students without at least two years of funding (typically a combination of teaching and research assistantships) planned in advance.

[REDACTED] - The percentage of Ph.D. students who were [REDACTED] climbed steadily from 9% in FY22 to 20% in FY25.

Pass Rates - The data for graduate course pass rates are not broken out by program. Overall, graduate course pass rates are consistently high: 93% or higher. Pass rates for male and female students are similar. The same is true for [REDACTED] and [REDACTED] students. Students of all age categories have a pass rate that is consistently above 87% (one exception: age [REDACTED] was 50%, 2 of 4 courses). Pass rates by race are consistently above 83% for all groups with 2 exceptions: [REDACTED] students in 2025 (50%; 1 of 2 courses) and students who did not report race in 2022 (67%, 2 of 3 courses passed). Given that the instances of low pass rates are likely the result of a single student having a difficult semester, we do not see any programmatic issues. We will address the existing gap by working to inform graduate students of existing support mechanisms and available help and provide support to students experiencing difficulties.

Closing the Loop

Please discuss how your student learning outcomes are reflected in high impact practices and student success data.

Response:

- Our SLOs are focused on preparing graduate students for the challenges of being a professional scientist; someone who can use and build on information in the literature, perform original research, and communicate their findings to a broad community both inside and outside the university. Our high impact practices - including graduate level research, writing intensive experiences, publication, communications, and scholarly activities - are all geared toward assisting students to become more independent as practitioners and communicators of science. The employment and publication successes of our graduate students serve as evidence that we have been successful at meeting our goals.

Academic Program Profile

The following questions help show how your program supports the university's mission, connects with other UA programs, engages with the community, contributes through service courses, and supports student success after graduation. Please use this section to highlight the value your program brings to students, the university, and beyond.

UAF's Mission:

The University of Alaska Fairbanks is a Land, Sea, and Space Grant university and an international center for research, education, and the arts, emphasizing the circumpolar North and its diverse peoples. UAF integrates teaching, research, and public service as it educates students for active citizenship and prepares them for lifelong learning and careers.

In what ways does your program advance UAF's mission?

Response:

The BIOS Ph.D. program serves UAF's mission by educating students in biological science, scientific research, and effective communication focussed on the circumpolar North, while providing a global perspective. The individualized research focus of the program is intended to produce graduates who can apply evidence and creativity to problem solving, synthesize ideas, analyze data, and communicate well, thus preparing them for science-based careers and lifelong learning.

How is your program related to others in the UA system?

Response:

Neither UAA nor UAS offer a PhD in Biological Sciences.

Who are your key community or external partners?

Response:

The Department of Biology and Wildlife maintains a long-standing and productive partnership with the Institute of Arctic Biology (IAB) and the Museum of the North, both of which support faculty and graduate student research and provide access to valuable facilities. These research institutes administer graduate research assistantships to graduate students in the program. IAB has also provided annual competitive summer fellowship opportunities for MS and PhD students for many years.

Partnerships with state and federal agencies provide important sources of support for Biological Sciences graduate students. The department has long partnered with the Alaska Cooperative Fish and Game Research Unit (AKCFGRU), whose members teach biology and wildlife courses at the graduate level and mentor graduate students. Students often work as research assistants on, and build their thesis research around, projects funded by the Alaska Department of Fish and Game, the US Fish and Wildlife Service, and the National Park Service. The National Science Foundation (NSF) and the National Institutes of Health (NIH) fund graduate research through research grants to faculty and graduate student fellowships. The Alaska INBRE (IDeA Network of Biomedical Research Excellence) program provides graduate research assistantships to support biomedical and one-health-related research.

What role do your services courses play, if any?

Response:

We do not have graduate service courses intended as such, although occasionally students from other programs will take our courses. For example, graduate students pursuing degrees in NRE and CFOS have at times taken our Research Design and Scientific Writing courses.

The department's undergraduate service courses play an important role in support the BIOS graduate programs by providing opportunities for graduate teaching assistantships.

How do your graduates succeed after leaving the program?

Response:

Our graduate students have excellent employment outcomes, as can be seen in [Fig. 4](#) and is detailed in the assessment of SLO #3 above.

Submitter and Collaborator Names:

Anja Kade, Denise Kind, Knut Kielland, Diane Wagner, Diana Wolf

Submitter Email:

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Committee Review

Program Name: Biological Sciences – Doctor of Philosophy

Academic Year 2025/2026

Overall Recommendations

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

- | | |
|--|--|
| ☒ Insufficient Narratives | ☐ Report Incomplete |
| ☐ Address Achievement Gap | ☐ 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

Response:

The SLOs emphasize developing a strong foundation in biological knowledge, generating new knowledge through research, and effectively communicating these results through published papers and oral presentations. They have been effectively revised to directly address the SLOs and to provide well-defined and measurable criteria that are responsive to student needs. High impact practices are leading to strong rates of graduation, publication, and job placement.

The SLOs explicitly evaluate student productivity after graduation, which provides evidence of employment and publication success, and demonstrates the connection between academic and professional careers. The program has strong and active industry partners.

However, there is a puzzling emphasis on the dissertation proposal relative to the dissertation itself, and unexpectedly little emphasis on evaluating the underlying intellectual merit of the student's work. The program does not specify an outcome related to course work and comprehensive exam, nor any assessment of whether the course work has contributed to the student realizing the program's goals.

Student Learning Outcomes Feedback

- | | |
|---|--|
| ☐ Strong | ☐ Developing |
| ☒ Requires Minor Revision | ☐ Requires Major Revision |

The committee generally found that the SLOs are strong, and are tied directly to the program's goals. Outcomes are both clear and measurable – for example, 50% of graduates will publish a peer-reviewed paper within 4 years of graduation. Appropriate revisions to the SLOs have been implemented since last the review, by separating oral and written communication outcomes, adding a rubric for the research proposal, and adding a new SLO for presenting scientific research to a broad scientific community. However, one committee member noted that although the program includes a number of graduate level courses, there are no SLOs associated with this course work.

Student Learning Outcomes Assessment Feedback

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

SLOA Feedback Narrative:

The committee found the SLOA plan to be well organized, with clearly identified linkages between SLOs, SLOAs, and program goals. The assessments are well aligned with the desired learning outcomes, and are clearly measurable.

The committee recognizes the thoughtful addition to the SLOAs of a new assessment focused on evaluating a student's command of scientific knowledge. This assessment is conducted through the committee's review of the research proposal using a newly developed rubric. As part of this, the program has developed a document providing guidelines for effective written proposals.

One committee member noted that the SLOA plan places far more emphasis on the dissertation proposal than it does on the dissertation itself. The plan indicates that all faculty will participate in evaluating thesis defense oral presentations. But there appears to be no evaluation of the quality of the written dissertation - neither for its intrinsic intellectual merit, nor for the quality of the scientific writing. Also, it is noted that this program includes course work and a comprehensive exam, both of which generate grades. However, these grades appear to have no role in the SLOA plan, which is surprising.

Student Success and Equity Feedback

Narrative:

The program has multiple measures of student success, none of which point to any significant concerns. Data presented for the review period did indicate a notable excess of [REDACTED] over [REDACTED] - reaching as high as ~77% during 2024-2025. This is not a concern; rather, it could be seen as a major success that should not be overlooked. One committee member noted that the only gender categories tracked are "men" and "women", whereas demographic gender data would now typically include some form of "other" or "not specified" category.

The program is conducting outreach to attract a more diverse student body. Faculty are actively engaged in this process, including presenting at the SACNAS meeting and other recruitment activities and collaborations. The program currently has strong retention and graduation rates and an increase in [REDACTED] students. Graduate course pass rates remain consistently high (93%), with occasional low rates linked to very small cohorts rather than systemic issues. The program's attention to these outlier cases is appropriate.

High Impact Practices Feedback

Narrative:

The description of the HIPs is well-organized, clear, data-supported, and well aligned with SLOA. HIPs include writing intensive courses, graduate level research, publication in peer-reviewed journals, presentations, and other scholarly activities. In particular, the program offers graduate student skills building courses in research design (BIOL 602) and scientific writing (BIOL 604) that utilize collaborative working groups and peer review. HIPs are well integrated into the degree program, which indicates the program's strong commitment to student success.

Profile Feedback

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

Financial Feedback

- | | |
|--|---|
| ☐ High Tuition Revenues | ☒ High Grant Revenues |
| ☐ Operates at Low Cost | ☒ Productive Faculty |
| ☐ Opportunities to Increase Revenue | ☐ Low Enrollment |

Reviewer Names:

Mark Conde, Carrie Baker, Chris Maio

Dean Review

Program Name: Biological Sciences – Doctor of Philosophy

Academic Year 2025/2026

Dean Feedback

Overall feedback narrative:

This is a strong program unique to UAF in the UA system. It is a flagship program for Alaska's research university that provides high-quality learning opportunities, and SLOs are well-developed and assessed. I agree with the comments of the committee. I have no concerns about the sustainability or quality of this program.

Recommendation to University-Wide Committee

Vice Provost Review

Program Name: Biological Sciences – Doctor of Philosophy

Academic Year 2025/2026

Vice Provost Feedback

Overall feedback narrative:

The assessment for the MS and PhD in Biological Sciences is nearly identical given the similarity of the programs. The program followed the guidance from the 2023 mid-cycle review and revised the SLOA and SLOs, which are very strong and appropriately assess graduate knowledge, skills, and abilities. For the 2027 mid-cycle review, the program must differentiate the SLOs between the MS and PhD to reflect differences in breadth, depth, and proficiency of skills and knowledge. Four SLOs were provided, each with clear assessment procedures and implementation plans, and the program included artifacts, rubrics, and data used to assess the SLOs. The narrative overview of SLO assessments was excellent and should be commended. The program noted curricular changes but did not elaborate beyond referencing the SLOA revision; future reviews should include details on these changes and their impact. Closing the loop on assessment is essential for NWCCU expectations and should include evidence for each SLO to demonstrate meaningful, evidence-based improvements that enhance program quality and student learning.

The program reports strong student success outcomes, including persistence rates above 90%, sustained degree completion, and growth in first-generation doctoral students from 9% to 20%. Gender representation exceeds national trends for █████ in life sciences. Graduates demonstrate high scholarly productivity, with 94% publishing at least one dissertation-related paper and an average of 4–5 total publications during the program. Writing-intensive coursework and advisor feedback support strong communication skills, and 95% of graduates report employment within two years in faculty positions, postdocs, government agencies, NGOs, and professional science roles. While these outcomes are impressive, the review would benefit from further discussion of advising quality, advisor training, committee effectiveness, and support structures for underrepresented students. Time-to-degree is a critical factor for doctoral persistence and career outcomes but is not analyzed in this review. Future reviews should include strategies to address these areas and track equity-focused metrics.

The HIPs were clearly identified and well documented, with substantial evidence showing integration into the curriculum and alignment with the SLOA. Graduate-level research remains a cornerstone of the program, and additional HIPs demonstrate strong contributions to student learning and professional development.



Department Profile and Financial Data

Department Name: **Biology and Wildlife**

Last updated: 2025/2026

Department Profile and Financial Data

This section aligns with Board of Regents Policy 10.06 and supports systemwide consistency in academic program review. Responses are maintained across review cycles and may not need to be updated annually. Please review your previous answers and update only if necessary.

When answering the following questions, refer exclusively to the standardized Financial Data Template provided by UAF. Work with your data liaison to interpret the template accurately. Do not include any additional or alternative data — consistency across programs is essential. To maintain integrity and standardization across all of UAF it is very important that you do not provide any additional or alternative data from this template.

Confirmation of Review

Have you reviewed the information in this section and made any necessary updates? **No**

Financial Data Spreadsheet

☒ I have reviewed the Financial Template for updates and accuracy.

Cost Effectiveness

Please describe strategies such as instructional efficiency, shared resources, cross-listed courses, or other ways your department uses resources thoughtfully.

Response:

<most recent version is in MS file> While acknowledging that we do not know the total SCH per departmental FTE for other departments, the magnitude of Biology and Wildlife's SCH/FTE (273-326) indicates that the department is extremely efficient. The following practices contribute to the Biology and Wildlife Department's high efficiency. First, we rarely hire adjuncts except for sabbatical or leave replacements. The courses we need taught to support our programs and service are on faculty workloads, even GER and foundational courses. Having regular faculty teach courses puts individuals with a strong and broad commitment to student and departmental success in charge of the instruction, fostering continual course improvement. This, in turn, encourages student success and well being. Second, we teach stacked and cross-listed courses whenever it makes sense pedagogically. This can make the difference between a course that is chronically underenrolled and one that is not. For example, we recently cross-listed BIOL F377 Conservation Biology with both Wildlife (WLF) and Natural Resources and Environment (NRM), and we are currently working on a second upper division course cross-listing with NRM for next year. This is a good use of college resources and helps to break down disciplinary and programmatic silos. Third, our small but powerful departmental staff is conscientious about careful spending practices and record keeping. We keep our course fees up to date by comparing expenses with fees frequently and adjusting fees accordingly. Fourth, we revisit the undergraduate curricula annually, discuss curricular challenges, and are open to curricular redesign in order to meet academic, practical, and financial challenges. Most years that results in only small alternations to the curriculum and the recognition and resolution of subject-related gaps in curriculum, and sometimes it results in more sweeping change. A recent example of efficiency through modification of the undergraduate curriculum is our current establishment of 1-credit add-on research capstone courses, which will run side by side with traditional 3-4 credit content-based courses. Separating the high-intensity research experience from the regular content-based course will permit larger enrollments in the content-based course than is feasible under our current model, in which the capstone project is a required part of the course for all students, whether they need it for graduation or not.

Associated Programs

Program Name	Degree Type
Biological Sciences	M.S.
Biological Sciences	B.S.
Biological Sciences	B.A.
Biological Sciences	Minor
Wildlife Biology and Conservation	M.S.
Wildlife Biology and Conservation	B.S.
Wildlife Biology and Conservation	Minor
Wildlife Ecology and Society	B.A.
Earth Systems Science, Ecosystems Concentration	M.S.
Earth Systems Science, Ecosystems Concentration	Ph.D.
Climate and Environmental Change	B.S.

Collaborator Name(s):

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Financial Data

Department Name: **Biology and Wildlife**

Academic Year 2025/2026

	FY2023	FY2024	FY2025	For Data Entry Staff	For Programs and Review Committees
Total Student Credit Hours (SCH)	6450	8101	8687	Provided in SCH tab in the student success data provided by PAIR.	
Service SCH	2832	3646	3911	Sum rows labeled as "In unit, outside department, Service" and "Outside unit, Service" in the SCH tab of the data provided by PAIR.	
Department FTEs	23.63	24.84	31.55	FTE = Full-time equivalent employee. This field will auto-populate from the FTE Worksheet below.	
Total SCH per Department FTE	272.96	326.13	275.34		
Service SCH per Department FTE	119.85	146.78	123.96		

Majors in Programs	629	684	729	Sum for all programs from the Majors Total tab in the data provided by PAIR.	
Department FTE's	23.63	24.84	31.55	This field will auto-populate from the FTE Worksheet below.	
Majors per Department FTE	26.62	27.54	23.11		

Total Unrestricted Expenditures				Total Expenditures made from budgets with an F1 or F7 fund type designation, from provided cycle report data filtered by Data Liaison	
Total Restricted Expenditures				Total Expenditures made from budgets with revenue of the F2 or S2 fund type designation, from provided cycle report data filtered by Data Liaison	
Total Unit/Central Support Allocated to Program(s)				Expenses incurred for direct support of instruction within orgs identified as central or academic support, if applicable	
Total Expenditures					

Tuition Revenue				Receipts to college from tuition generated by the department/program (F1). NOTE: under the current 80/20 percent tuition distribution model generating units receive 80%. PLEASE USE PAIR REPORTED SCH.	Receipts to college from tuition generated by the department/program, based on the campus's active tuition distribution model, which determines how much the unit receives of their generated tuition, and how much the campus keeps (in addition to the out-of-state surcharges) to support central offices/functions. The current distribution model is 80/20, where the unit/college receives 80% of their generated in-state tuition.
State Appropriation Revenue				Appropriations for current funds operation of the university from the general fund of the State of Alaska through the annual budget cycle. This category also includes TVEP and State Mental Health Trust funds, if allocated to the department. (F1)	Appropriations for current funds operation of the university from the general fund of the State of Alaska through the annual budget cycle.
Restricted/Sponsored Project Revenue				Revenue from external sponsors; includes grants, contracts, sponsored projects & restricted (grant) accounts funded by UA Foundation funds (F2/S2)	Revenue from external sponsors; includes grants, contracts, sponsored projects & restricted (grant) accounts funded by UA Foundation funds
Fees				Course Fees (9159)	
Other UA Receipts/Revenue				e.g. Performance and Sales Receipts, Space Rental Revenue, Indirect Cost Recovery (F1/F7); NOTE: COURSE FEES (9159) REPORTED ABOVE	
Total Revenue					

Workload Allocation	FY2023	FY2024	FY2025	
Teaching Units	305.5	316.75	328	Department faculty's workload units assigned to teaching
Service Units	126	136.25	163	Department faculty's workload units assigned to service
Research Units	350.17	310.7	324	Department faculty's workload units assigned to research

Full-Time Equivalent Worksheet*	FY2023	FY2024	FY2025	
Faculty FTEs	10.99	11.07	12.7	Base assumption: 12-month full-time = 1.0 FTE. 9-month = 0.75 FTE. Split appointments are multiplied by the % of effort assigned to this department. Part-time are multiplied by the % of effort assigned. F9 faculty on sabbatical count as 67% of one 9-month 0.75 FTE (or 0.50 FTE).
Adjunct FTEs	1.2	1.15	0.84	Base assumption: 40 units/credits = 1.0 FTE. Total # of credits taught by adjuncts in a year divided by 40 = the FTE of adjuncts in that year.
Staff FTEs	3.15	3.98	5.31	Base assumption: 12-month full-time = 1.0 FTE. 9-month = 0.75 FTE. Split appointments are multiplied by the % of effort assigned to this department. Part-time are multiplied by the % of effort.
Graduate TA/RA FTEs	8.29	8.64	12.7	Base assumption: 40 hours/week for 12 months = 1.0 FTE. 9-month = 0.75 FTE.
Total Department FTEs	23.63	24.84	31.55	Sum of all employee FTEs

*Note: FTE definitions and calculations for the purpose of Academic Program Review are different than for other institutional reporting processes (e.g. OMB or IPEDS reporting)

Information last updated by: Laycie N. Schneckeburger

Date: 9/26/2025