



Academic Program Review

Program Name: Oceanography - Master of Science

Academic Year 2025/2026

Recent Recommendations

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

Response:

Overall recommendations from last review were: Improve time to degree, Develop online offerings/options, Increase retention/persistence, and improve/reduce SLOA to those that are measurable. The first recommendation is confusing because as stated then "In the last 2 years MS degrees have reduced to 2.6 years (from 2.9). This duration is typical for duration at other oceanography institutions." The update average is 2.95 over the past 5 years. We have developed more online offerings since the review at both the undergraduate and graduate level. The last 2 years show persistence numbers of 100%. Other recommendations centered around SLOA (see below)

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:

We reduced the number of SLOA (as recommended in the last review) from 5 to 3 that are more tractable. SLOA 5 from last review was removed as recommended. SLOA 2 and 4 from last review were combined. Criteria, Goals and implementation timelines are more consistently presented. Distinction between expectations for the MS and PhD degrees is now explicit within SLOAs, specifically the MS requires one presentation and one publishable (published or not before graduation) thesis chapter. We consider public presentation and peer-reviewed publication to be implementation of learning outcomes because achieving these metrics indicates students have learned essential skills to conducting science as a professional. Through the process of public presentation and peer-reviewed publication students receive feedback on how to improve upon these essential skills.

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:

The Integrative Oceanography class was implemented at mid-cycle review - student feedback to it has been positive. With the recent expansion of oceanography faculty, several older elective revived and updated, with additional new courses in development. After retirement of its previous instructor, our Fisheries Oceanography course is undergoing major revision.

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?

If so, please summarize what changes were made.

Response: [Yes](#)

See above. The old SLOA were difficult to evaluate quantitatively beyond did they pass classes, conduct field work, defend their dissertation and graduate. We now provide metrics that are easily quantified, specifically oral presentation/posters at national meetings, publishable chapters and peer-reviewed products

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 Collaborative | ☒ Graduate Level Research |
| ☒ Assignments & Projects Diversity/Global | ☒ Writing-Intensive Courses |
| ☒ 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:

Oceanography is a collaborative multidisciplinary activity that at the MS graduate level results in the production of a defensible single chapter thesis. The ultimate proof of scholarly activity in Oceanography is to present your research to peers at meeting and publish it graduate within level the results scientific in the literature. These metrics are now explicit in our latest SLOAs. The HIP selected above are part of course work required for all students and/or implemented as part of fieldwork activities, during the development, defense and publication of their thesis plus during attendance to professional 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: **Increase**

Majors: **Decrease**

Degrees Awarded: **No Change**

Other Trends (if applicable):

Historically OCN and MBI were housed under a single unit within CFOS (Marine Science & Limnology), although the departments separated sometime ago courses were only designated as either OCN or MBI (rather than MSL) beginning in F2023. That historical data cannot be pulled apart. As such there are several metrics that are only available for 2 years (i.e. pass rates by program/level, SCH by level/modality, financial data).

Departmental: The vast majority of Oceanography majors are supported by competitive awards to faculty members which imposes limits on the number of students within the program. The number of majors declined from 2022-2024 coincident with a reduction in faculty and external funding cycles. 2025 reflects the addition of several TT faculty that have secured funding to support students. SCH for majors had remained stable. The low course pass rates is driven by undergraduate offering, particularly the OCN F111X "The Oceans" course that fulfills the science general education requirement of non-science majors. Given the low number of graduate majors, and the 3 year completion timeline, high variability in degree completion should be expected. Persistence changes are driven by loss of only one or two students given sample size (<20), the larger dip 2022-2023 (3 students) reflect the departure of a faculty member and their associated students.

Trends by program: There has been a strong shift in the number of students away from the masters to the doctoral program largely due to faculty capitalizing on R1 initiatives. There are several instances of the same student shifting from the MS to PhD program within these metrics. SCH had remained relatively stable and similar between the 2 degrees. Course pass rate is limited to only 2 years of data (when tracking was disentangled from MBI) and confirms the lower rates for undergraduates. The 94% graduate pass in 2024 represents 2 failures in a field of 34, while the 90% in 2025 (6 of 60) is nonsensical because graduate enrollment has not doubled between these years as data suggests. As per departmental summary, the low number of majors, and the 3 year completion timeline, high variability in degree completion should be expected. Persistence changes are driven by loss of only one or two students given sample size (<20).

SCH: Is also limited to 2 years of data. The continued growth our undergraduate degree in Fisheries and Marine Sciences (MMS) has resulted in large increases credit hours for OCN courses at all levels, particularly at the upper level as the initial cohort moved through. Internal vs in/out unit is impossible to interpret because of the intermingling for OCN, MBI and FISH courses within the MMS). Course modality shows there is similar preference distance and face-to-face offerings, with similar relative increases in both over the past year. In terms of demographics, SCH does not appear to differ consistently or statistically with gender, race, age, ethnicity or first-gen status either in aggregate or with the MS or PhD degrees.

Demographics: Majors overall 2/3-3/4 [REDACTED], mostly [REDACTED], with 10-15% [REDACTED], a large majority over 25 and only a small percent [REDACTED]. Percent degrees for demographic metrics cannot be interpreted due to small sample size. Persistence for majors does not appear to be consistently related to gender, race, age, ethnicity or first-gen status. The MS degree is more dominated by [REDACTED] than the PhD and MS students are typically [REDACTED]. In the past 3 years the PhD program has become distinct dominated by [REDACTED]. Conclusion cannot be reached about the impact of race, ethnicity or first-gen status for either degree due to small samples size.

Based on 2 years of data: Undergraduate course pass rates do not appear to be related to gender, while [REDACTED] and [REDACTED] pass rates appear lower than [REDACTED]. Students [REDACTED] typically perform more poorly than those [REDACTED], ethnicity is inconclusive due to sample size, while data suggests [REDACTED] and [REDACTED] do more poorly. Impact of gender, race, ethnicity and age in graduate courses is inconclusive, although in one year [REDACTED] performed distinctly worse than [REDACTED].

Achievement Disparities

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

Response:

There are no consistent achievement disparities in the disaggregated data at the MS graduate level targeted by this review

Closing the Loop

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

Response:

The PAIR data does not reflect our major SLOA metrics of field experience, presentations at meetings and publications. Over the past 5 years all MS students have engaged in significant field plus lab activities. All 14 students that graduated during the review period have produced a single chapter thesis, with an average of 0.7 peer-reviewed works published by each student, and several more under review or in preparation. Each has presented at national meeting multiple times averaging 2.9 per student.

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:

Oceanography supports the needs of Alaska, its communities, the nation and the international community through research and training of the next generation of scholars and leaders that will monitor and manage the wise use of Alaskan and Arctic marine resources

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

This program interacts regularly with CFOS departments of Fisheries and Marine Biology that collectively offer out undergraduate program in Fisheries and Marine Sciences

Who are your key community or external partners?

Response:

Oceanography interacts with a number coastal communities, commercial entities and both state (ADF&G) and federal agencies (NOAA, BOEM, NPS, USFWS, USGS) many of whom are staffed by former Oceanography graduates.

What role do your services courses play, if any?

Response:

OCN F111X (The Oceans) is a 4-credit GER course that offers honors credit. It contributes a science course for UAF's general education requirement and to the Honor's College

How do your graduates succeed after leaving the program?

Response:

About half of our MS graduates go on to complete a PhD at UAF or elsewhere, a quarter has found positions as science technicians, information on the others is not up to date

Submitter and Collaborator Names:

Russ Hopcroft, Ana Aguilar-Islas, Christina Sutton, Luke Canady

Submitter Email:

rrhopcroft@alaska.edu

Committee Review
Program Name: Oceanography - Master of Science
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. 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 MS program in Oceanography graduates a relatively small number of students, with a recent decrease related to students taking advantage of RI funding to transition to a Ph.D. program. Due to small sample sizes, trends are difficult to assess, but a relatively high faculty to student ratio, grant support for most students, and sample opportunities for gaining field experience, presenting at conferences, and engaging in collaborative research are strengths of the program. The SLOAs need some adjustment and clarifications; the SLOA seems incomplete as the only metrics evaluated were number of presentations and publications; the modest number of students per FTE suggests the potential for increasing enrollment if funding can be secured. Some cost effectiveness through stacking is achieved, but links to other departments within CFOS (cross-listing) and other University programs (e.g. ESS) are unclear. Financial data was separated among CFOS departments for the first time this year and only 2 years of data are available for Oceanography due to the recent separation of MBI and OCN from what was one academic unit (MSL). It is a useful starting point but needs refinement.

Student Learning Outcomes Feedback

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

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:

A full assessment of SLOAs based on the metrics listed and the SLOA implementation plan (Were SLOA outcomes met?) and associative narrative are missing (for example evaluations of core course performance, thesis proposal, field courses, etc was not provided). The evaluation (under 'Closing the Loop') is limited to the average number of presentations and average 1 number of publications. No other metrics were considered, thus it is difficult to assess if SLOs are fully met.

Program specific mission statement in the SLOA Plan is missing, so it is unclear how the SLOA aligns with the UAF/CFOS mission.

The SLOA plan mentioned several forms, e.g., dissertation defense, project evaluation, core courses, proposal forms, field evaluation, etc. Where are these forms, what is being evaluated? How are the expectations different from PhD? For that matter, what are the expectations?

Overall, goals are the same between MS and PhD, except 1 conference presentation at the MS level, 2 at the PhD level. Make the scope difference more clear. Also, the minimum standard should be mentioned everywhere are all students expected to present twice or 80% of them? Provide some way to evaluate that the program accomplishes its objectives.

Make more clear what field/ship experience means to an oceanographer. What and how is performance evaluated? Does it matter as long as field work is being performed? How are expectations in field/ship work different between MS/PhD? For example, are PhD students more groomed towards becoming chief scientists? What would be involved etc.

Communication goals and assessment between MS and PhD are essentially the same. Except, MS students are expected to execute publishable research, but the instrumentation does not require publication of a thesis chapter. How is it evaluated? Committee/DC only is very subjective

The objective "prepared to work as entry level professional scientists" is not aligned with data collected to assess this

Student Success and Equity Feedback

Narrative:

All relevant metrics were adequately summarized and the trends described accurately capture data provided by the PAIR dashboard. Evaluation of these trends is challenging because OCN courses were recently separated from MBI courses (until two years ago, both were taught as MSL = Marine Science and Limnology). This, combined with small sample sizes, precludes meaningful interpretation of trends at this time. A fuller evaluation of trends should be conducted once multiple years of data under the new departmental structure (OCN/MBI) are available. Some potential discrepancies were noted that should be monitored, for example low pass rates of male and minority students. These should be addressed as necessary if they persist.

High Impact Practices Feedback

Narrative:

The HIPs are not well described in the APR. Rather they reference back to the SLOAs. In the SLOA HIPs are identifiable such as mandatory fieldwork and report writing. We suggest that the HIPs could be better described in the APR so that they can be more fully assessed.

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:

Cramb, Hennon, Horstmann, Hueffer, Kelley, Mueter

Dean Review

Program Name: Oceanography - Master of Science

Academic Year 2025/2026

Dean Feedback

Overall feedback narrative:

As with other CFOS thesis-based MS degrees, the Oceanography MS is a key degree program of the Oceanography Department, as is the PhD degree program, and benefits from collaboration with other CFOS department faculty. Prior minor issues with SLOAs, HIPs are being addressed. The program is very important to meeting Alaska's workforce needs related to aquatic ecosystems.

Recommendation to University-Wide Committee **No**

Vice Provost Review

Program Name: Oceanography - Master of Science

Academic Year 2025/2026

Vice Provost Feedback

Overall feedback narrative:

The program has made meaningful progress in revising its SLOA, especially in differentiating SLOs between the MS and PhD, and the faculty should be commended for this work. Additional refinement is still needed to ensure alignment between stated outcomes and assessment practices, particularly for SLO #3, where the communication-focused assessment does not match the broader objective as written. For the next mid-cycle review, the program should provide the required artifacts, rubrics, and data analyses to clearly demonstrate how SLOs are assessed, evaluated, and used to guide curricular changes and close the loop.

The program summarizes student success using PAIR dashboard trends and reports consistently high persistence supported by close faculty engagement, though the small cohort size limits broader interpretation of the data. Disaggregated pass-rate inconsistencies require deeper analysis and should be paired with concrete strategies for addressing equity gaps and strengthening retention and recruitment efforts. Developing clear, measurable approaches to support student success will improve the usefulness and completeness of future reviews.

While the program identifies HIPs and notes their alignment with the SLOA, the accompanying narrative does not include sufficient detail on implementation or assessment. Expanding this section to document how HIPs are measured, the courses in which they occur, and the evidence used to evaluate them will be essential for demonstrating continuous improvement in the next review cycle.



Department Profile and Financial Data

Department Name: **Oceanography**

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? **Yes**

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:

The majority of our 600-level courses have been stacked, making them more available to our undergraduates and increasing overall enrollment in these courses. The MS and PhD share the same core course requirements. Note that due to combined reporting (of OCN and MBI) financial data is incorrect for AY223/24 for some metrics. In particular, SCH is inflated in that year: it did not drop by 50% the following year.

Associated Programs

Program Name	Degree Type
Oceanography	PhD
Fisheries and Marine Sciences	BS

Collaborator Name(s):

Collaborator Email(s):



Financial Data

Department Name: **Oceanography**

Academic Year 2025/2026

	FY2023	FY2024	FY2025	For Data Entry Staff	For Programs and Review Committees
Total Student Credit Hours (SCH)	1382	679	914	Provided in SCH tab in the student success data provided by PAIR.	
Service SCH	1212	546	720	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	14	10	13.62	FTE = Full-time equivalent employee. This field will auto-populate from the FTE Worksheet below.	
Total SCH per Department FTE	98.71	67.90	67.11		
Service SCH per Department FTE	86.57	54.60	52.86		

Majors in Programs	14	14	18	Sum for all programs from the Majors Total tab in the data provided by PAIR.	
Department FTE's	14	10	13.62	This field will auto-populate from the FTE Worksheet below.	
Majors per Department FTE	1.00	1.40	1.32		

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	76.33	80	100.5	Department faculty's workload units assigned to teaching
Service Units	27	30	32	Department faculty's workload units assigned to service
Research Units	87.55	120	133.62	Department faculty's workload units assigned to research

Full-Time Equivalent Worksheet*	FY2023	FY2024	FY2025	
Faculty FTEs	5	6	7.12	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				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				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	9	4	6.5	Base assumption: 40 hours/week for 12 months = 1.0 FTE. 9-month = 0.75 FTE.
Total Department FTEs	14	10	13.62	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: **Luke canady**

Date: **october the 3rd in the year 2025**