The UAF Faculty Senate passed the following at Meeting #212 on February 8, 2016:

MOTION:

The UAF Faculty Senate moves to approve a new Master's of Arts Program in Marine Science, housed in the School of Fisheries and Ocean Sciences, Graduate Program in Marine Sciences and Limnology.

Effective: Fall 2016 upon all required approvals.

Rationale: Globally and locally, the ocean is changing, and harvest and development, such as oil and gas, are both increasing. There is increasing demand for trained scientists at various education levels, including professionals who have broad training at a graduate level, but who do not need in-depth research experience. While there are a variety of ocean-related degrees offered in Alaska and across the nation, currently no M.A. in any marine science field is offered at any institution in Alaska. The M.A. will complement existing degree programs by providing secondary education for professionals such as teachers, agency and industry employees. A Master of Arts in Marine Science would fill a niche for students who want an advanced degree understanding of marine sciences to promptly join the workforce, but do not have career goals that require undertaking original scientific research, as is done when completing M.S.-level thesis research. Recently, the interest in an MA degree in Marine Science has risen, and currently the only option for students is to receive a Master of Arts in a Marine Science-related topic through Interdisciplinary Studies. Letters of support from potential employers attest that students with an M.A. in Marine Science are in demand in Alaska now. The proposed M.A. in Marine Science will be offered by existing faculty currently involved in the Master of Science programs in Marine Biology and Oceanography, with the three curricula sharing many courses. Thus, this program will increase enrollment in existing courses and enhance revenue without increased costs, and will meet employment needs in the state of Alaska.

See the program proposal #11-GNP on file in the Governance Office, 312B Signers' Hall.

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Debasmita Misra
President, UAF Faculty Senate

APPROVAL: _____ DATE: 2/22/16
Chancellor's Office

DISAPPROVED: _____ DATE: _____
Chancellor's Office

Brief Statement of Program:

We envision a new graduate degree within SFOS/GPMSL, a M.A. in Marine Science. This degree will be offered by existing faculty currently involved in the Master of Science programs in Marine Biology and Oceanography, with the three curricula sharing many courses. The M.A. will differ from the two existing M.S. degrees in that it will require a larger number of elective courses to allow students to focus on coursework that is in line with their interests, while at the same time provide students with knowledge in a broad range of subject matters. The M.A. degree will place less emphasis on attaining in-depth knowledge of the scientific process through independent research; rather, students will select either a smaller project or a comprehensive literature review instead of completing a research thesis. Producing M.S. theses requires a significant investment of time and financial support. In GPMSL, most M.S. students receive stipends and tuition waivers that allow them to work full-time on their degrees. These are funded through their advisor's external grants or through competitive fellowships. In many cases, research projects are very time consuming, and additional time spent seeking funding for research expenses can also prolong the time to completion of the degree. In the last 25+ years, GPMSL M.S. programs in Marine Biology and Oceanography have graduated 125 students. Of these students, only 7% graduated in two years or less, with 39% graduating in three years or less. However, many students have taken longer to graduate, with 17% of these 125 graduates taking over five years to complete their degrees. A Master of Arts in Marine Science would fill a niche for students who want an advanced degree understanding of marine sciences to promptly join the workforce, but do not have career goals that require undertaking original scientific research as is done when completing M.S.-level thesis research. Recently, the interest in an MA degree in Marine Science has risen, and currently the only option for students is to receive a Master of Arts in a Marine Science related topic through the Interdisciplinary Studies Department. Offering a Master of Arts in Marine Science through GPMSL would provide a focused option for students who are not interested in a more general Interdisciplinary Studies degree.

This M.A. degree program is intended for college graduates and working professionals to pursue further study in marine sciences. The program will provide broadened and scholarly perspectives in the broad fields of marine biology and oceanography, sustainable use of ocean resources, and related societal impacts. This degree is designed to be relevant to those pursuing careers in a broad range of sectors, including (but not limited to) teaching, government policy, and industry.

Objectives:
The objective of this proposed Master of Arts in Marine Science degree program is to provide students with the knowledge base to be highly competitive in obtaining positions or advancing their careers in state and federal management agencies and /or related industries in Alaska and elsewhere. In meeting this need, the University of Alaska Fairbanks will become the University of Choice for educating today's marine science experts. As one of the premier Arctic Ocean sciences programs in the nation, the UAF School of Fisheries and Ocean Sciences Graduate Program in Marine Science and Limnology will educate the professionals who will work to oversee the sustainability of Alaska's healthy oceans in the face of changing climate and increased human impact. This proposed degree program will increase student recruitment and retention at UAF. It will also support the many agencies and industries with an interest in the health and sustainability of our ocean.

Career Opportunities:
Graduates who complete the Master of Arts in Marine Science degree would be competitive for a wide variety of agency, industry, and private sector positions, particularly within the State of Alaska. For example, graduates would be qualified for entry-level positions in government agencies such as the U.S. Fish and Wildlife Service, U.S. Geological Survey, National Ocean and Atmospheric Administration,

Bureau of Ocean Energy Management, etc. A student with a M.A. in Marine Science would have an academic advantage over those with undergraduate degrees in applying for these highly competitive positions.

The proposed new program will prepare students for success in a competitive job market by providing a more advanced curriculum than can be obtained in an undergraduate program. Students may be attracted to the M.A. as an alternative to the existing M.S. because completion of a research-based thesis project might not be necessary for their career goals, and following a path that does not require rigorous, time-consuming research would allow them flexibility to continue working on their current job and complete their degree relatively promptly. We envision students will be able to complete the degree within two years, compared to the average completion time of four years for our M.S. graduates because M.A. students will obtain their science communication and research synthesis skills through a small project or a literature review instead of through independent research, and external funding will not be necessary while in the program. The M.A. degree will better prepare students for the above-mentioned post-graduation employment possibilities quickly and inexpensively, make them more marketable than baccalaureate graduates and, consequently, produce employable students. The unique program that we propose to deliver will prepare our M.A. graduates for the specific requirements associated with the Alaska agencies and organizations listed above, and would also make them well qualified for similar jobs throughout North America.

Proposed Requirements and Catalog Layout:

The Master of Arts (M.A.) degree in marine science offers a broad degree program, which can include topics such as marine ecology, organismal biology, ecosystem processes, and oceanography. Students will select courses offered by the graduate program in marine sciences and limnology, and a variety of electives, which can also be from the fisheries program or the statistics or biology and wildlife departments. While the M.A. degree is primarily based on a project instead of a research-oriented thesis, M.A. graduate students still are afforded excellent opportunities for laboratory and field experiences through the Institute of Marine Science. Laboratory facilities are available in Fairbanks, the Seward Marine Center, the Juneau Center, and at the Kasitsna Bay Laboratory.

Students considering an M.A. in marine science should have a strong background in the various fields of oceanography, ecology, biology, molecular biology or biochemistry. Students are admitted on the basis of their ability and the capability of the program to meet their particular interests and needs. Faculty review requests for admission throughout the year. There is no financial support for students in this program.

M.A. Degree

1. Complete the following admission requirement:
    a. Submit GRE scores.
2. Complete the general university requirements.
3. Complete the master's degree requirements, including a comprehensive exam
4. Complete a project or literature review.
5. Complete a minimum of 12 credits from the following*:
   MSL F419--Concepts in Physical Oceanography—3 credits
   MSL F610--Marine Biology--3 credits
   MSL F615--Physiology of Marine Organisms--3 credits

MSL F650--Biological Oceanography--3 credits
MSL F620 or MSL 419--Physical Oceanography – 4 credits
MSL F630--Geological Oceanography – 3 credits
MSL F640--Fisheries Oceanography – 4 credits
MSL F660--Chemical Oceanography – 3 credits

6. Complete 2 credits of graduate seminars
   MSL 692--IMS Seminar
   MSL F601--Professional Development
   MSL F602--Proposal Writing
   MSL F605--Controversies in Science
7. Complete 2 credits of practical experience at either the 400 or 600 level. These may be independent studies or regularly scheduled classes such as:
   MSL F421/623--Field Course in Subtidal Ecology
   MSL F450/651--Marine Biology and Ecology Field Course
   MSL F456/656--Kelp Forest Ecology
   MSL F625--Shipboard Techniques
8. Complete 6 credits of graduate project or literature review. To be determine by the major advisor and student.
9. Complete 8 credits of electives. Electives will be selected based on student interest, relatedness to degree and approval by their major advisor.

Minimum credits required--30 credits
* Students must earn a B- grade or better in the core courses of the degree program before being eligible to take the comprehensive exam.

See next pages for the Resource Commitment Form, and the BOR Program Action Summary.

Resource Commitment Form

RESOURCE COMMITMENT TO THE PROPOSED DEGREE PROGRAM

Resources	Existing	New		Total
	College/School	College/School	Others (Specify)	
Regular Faculty (FTE's & dollars)	$ 5,006,900 # 55	None needed	None needed	$ 5,006,900 # 55
Adjunct Faculty (FTE's & dollars)	$ 0 # 5	None needed	None needed	$ 0 # 5
Teaching Assistants (Headcount)	$ 88,100 # 5	None needed	None needed	$ 88,100 # 5
Instructional Facilities (in dollars and/or sq. footage)	2232 sq ft	None needed	None needed	2232 sq ft
Office Space (Sq. footage)	16,755 sq ft	None needed	None needed	16,755 sq ft
Lab Space (Sq. Footage)	19,406 sq ft	None needed	None needed	19,406 sq ft
Computer & Networking (in dollars)	$ 64,900	None needed	None needed	$ 64,900
Research/ Instructional/ office Equipment (in dollars)	$ 232,500	None needed	None needed	$ 232,500
Support Staff (FTE's & dollars)	$ 4,381,651 # 85	None needed	None needed	$ 4,381,651 # 85
Supplies (in dollars)	$ 220,500	None needed	None needed	$ 220,500
Travel (in dollars)	$ 148,900	None needed	None needed	$ 148,900

Signature Dan Broadbent
Dean of College/School Proposing New Degree Program

10/8/15
Date

UNIVERSITY of ALASKA
Many Traditions One Alaska

Board of Regents Program Action Request
University of Alaska
Proposal to Add, Change, or Delete a Program of Study

1a. UA University (choose one) UAF	1b. School or College School of Fisheries and Ocean Sciences	1c. Department or Program Graduate Program in Marine Sciences and Limnology

2. Complete Program Title MA in Marine Science

3. Type of Program

☐ Undergraduate Certificate ☐ Associate ☐ Baccalaureate ☐ Post-Baccalaureate Certificate

☒ Master's ☐ Graduate Certificate ☐ Doctorate

4. Type of Action

☒ Add ☐ Change ☐ Delete

5. Implementation date (semester, year)

☒ Fall ☐ Spring ☐ Summer Year 2016

6. Projected Revenue and Expenditure Summary. Not Required if the requested action is deletion.
(Provide information for the 5th year after program or program change approval if a baccalaureate or doctoral degree program; for the 3rd year after program approval if a master's or associate degree program; and for the 2nd year after program approval if a graduate or undergraduate certificate. If information is provided for another year, specify (1st) and explain in the program summary attached). Note that Revenues and Expenditures are not always entirely new; some may be current (see 7d.)

Projected Annual Revenues to the University in FY 2019		Projected Annual Expenditures in FY 2019	
Unrestricted		Salaries & benefits (faculty and staff)	$
General Fund	$	Other (commodities, services, etc.)	$
Student Tuition & Fees	$146K	TOTAL EXPENDITURES	$ no additional
Indirect Cost Recovery	$	One-time Expenditures to Initiate Program (if >$250,000)	
TVEP or Other (specify):	$	(These are costs in addition to the annual costs, above.)	
Restricted		Year 1	$0
Federal Receipts	$	Year 2	$0
TVEP or Other (specify):	$	Year 3	$0
TOTAL REVENUES	$146K	Year 4	$0

Page # of attached summary where the budget is discussed, including initial phase-in: 32: (based on 6 in-state and 6 out-of state students at FY17 tuition rates). If calculated for the mature program of 20 students, tuition=$243K

7. Budget Status. Items a., b., and c. indicate the source(s) of the General Fund revenue specified in item 6. If any grants or contracts will supply revenue needed by the program, indicate amount anticipated and expiration date, if applicable.

Revenue source	Continuing	One-time
a. In current legislative budget request	$0	$0
b. Additional appropriation required	$0	$0
c. Funded through new internal UA university redistribution	$0	$0
d. Funds already committed to the program by the UA university[1]	$0	$0
e. Funded all or in part by external funds, expiration date	$0	$0
f. Other funding source Specify Type:	$0	$0

8. Facilities: New or substantially (>$25,000 cost) renovated facilities will be required. ☐ Yes ☒ No

If yes, discuss the extent, probable cost, and anticipated funding source(s), in addition to those listed in sections 6 and 7 above.

[1]Sometimes the courses required by a new degree or certificate program are already being taught by a UA university, e.g., as a minor requirement. Similarly, other program needs like equipment may already be owned. 100% of the value is indicated even though the course or other resource may be shared.

9. Projected enrollments (headcount of majors). If this is a program deletion request, project the teach out enrollments.

Year 1: 4	Year 2: 8	Year 3: 12	Year 4: 16

Page number of attached summary where demand for this program is discussed: 2-3

10. Number* of new TA or faculty hires anticipated (or number of positions eliminated if a program deletion):

Graduate TA	0
Adjunct	0
Term	0
Tenure track	0

11. Number* of TAs or faculty to be reassigned:

Graduate TA	0
Adjunct	0
Term	0
Tenure track	0

Former assignment of any reassigned faculty: 0
For more information see page (n/a) of the attached summary.

12. Other programs affected by the proposed action, including those at other MAUs (please list):

Program Affected	Anticipated Effect
Interdisciplinary Studies	Fewer students would receive a M.A. in a marine science related field through Interdisciplinary Studies if this specific degree were available.

Page number of attached summary where effects on other programs are discussed: 3

13. Specialized accreditation or other external program certification needed or anticipated. List all that apply or 'none': none

14. Aligns with University or campus mission, goals, core themes, and objectives (list):
-Promote UAF as Alaska's premier research enterprise in partnership with state and federal agencies, industry, Alaska Native organizations, and civic groups;
-Serve Alaska's diverse communities in ways that are increasingly responsive and accessible and enhance the social, economic, and environmental well-being of individuals and communities;
-Create or expand graduate programs in targeted areas of identified need and existing strengths;
-Enhance UAF's competitive advantage by attracting and keeping the best and brightest students, staff, faculty;
-Develop innovative approaches to managing University resources to support its mission and position it to meet challenges of the future.

Page in attached summary where alignment is discussed: 1-2

15. Aligns with Shaping Alaska's Future themes:

Page in attached summary where alignment is discussed: 1

16. Aligns with Academic Master Plan goals:

Page in attached summary where alignment is discussed: 2

17. State needs met by this program (list): Currently there is no MA in Marine Science in Alaska. This program would produce students with a broad knowledge base that would be useful to many entities (see letters). Students enrolled in this program have the opportunity to focus on topics of interest.

Page in the attached summary where the state needs to be met are discussed: 3

18. Program is initially planned to be: (check all that apply)

☒ Available to students attending classes at UAF campus(es).
☐ Available to students via e-learning.
☐ Partially available students via e-learning.

	Page # in attached summary where e-learning is discussed:

Submitted by the University of Alaska Fairbanks.
(choose one above)

_____/_____ _____/_____

Provost Date Chancellor Date

☐ Consensus Support of SAC ☐ Not Supported by SAC

☐ Recommend Approval by VPAAR
☐ Recommend Disapproval by VPAAR

_____/_____

UA Vice President for Academic Affairs Date

*Net FTE (full-time equivalents). For example, if a faculty member will be reassigned from another program, but his/her original program will hire a replacement, there is one net new faculty member. Use fractions if appropriate. Graduate TAs are normally 0.5 FTE. The numbers should be consistent with the revenue/expenditure information provided.

Attachments: ☐ Summary of Degree or Certificate Program Proposal ☐ Other (optional)

Revised: 04/20/2015