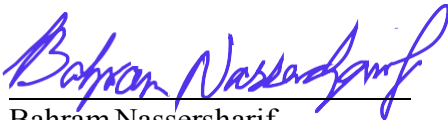


Serial Number #19-20-25

TO: President David Dooley
FROM: Bahram Nassersharif, Chairperson of the Faculty Senate

1. The attached BILL titled, the Curricular Report #2019-20-11 from the Graduate Council to the Faculty Senate: Accelerated Online Graduate Certificate in Fisheries Science (FIS), is forwarded for your consideration.
2. This BILL was adopted by vote of the Faculty Senate on April 16, 2020.
3. After considering this bill, will you please indicate your approval or disapproval. Return the original, completing the appropriate endorsement below.
4. In accordance with Section 10, paragraph 4 of the Senate's By-Laws, this bill will become effective May 7, 2020 three weeks after Senate approval, unless: (1) specific dates for implementation are written into the bill; (2) you return it disapproved; or (3) the University Faculty petitions for a referendum.



Bahram Nassersharif
Chairperson of the Faculty Senate

April 16, 2020

ENDORSEMENT

TO: Chairperson of the Faculty Senate

FROM: President of the University

- a. Approved_____.
- b. **Approved with Notification to the University of Rhode Island Board of Trustees** X.
- c. Disapproved_____.



Signature of the President

April 30, 2019 2020
(date)

THE GRADUATE SCHOOL - UNIVERSITY OF RHODE ISLAND
NEW PROGRAM REPORT FROM THE GRADUATE COUNCIL TO THE
FACULTY SENATE
CURRICULAR REPORT 2019-2020-11; 6 April 2020

At Meeting No. 531 held on 06 April 2020, the Graduate Council approved the attached proposal that is now submitted to the Faculty Senate.

SECTION I
ABSTRACT AND BACKGROUND INFORMATION

ABSTRACT (modified from proposal)

The Graduate Council approved a proposal from the College of the Environment and Life Sciences (CELS) to create a ***new 7-week accelerated Online Graduate Certificate in Fisheries Science (FIS)***. The expertise needed to help manage fisheries for sustainability is a demand that expands globally. Students and professionals in both the international and domestic markets seek expertise and advanced credentials in fisheries science and fisheries management to not only prepare them for jobs in government and non-profit sectors but to advance them in jobs currently held. The online FIS certificate will follow the online academic calendar and include four 7-week online courses that develop core competencies in sustainable fisheries management, including stock assessment, fisheries ecology, and fisheries management. These courses already exist and will need to be reformatted for this purpose. This certificate will also require a capstone summer experience (2 course options) to provide crucial hands-on experience.

BACKGROUND (modified from proposal)

The FAO 2018 The State of World Fisheries and Aquaculture highlights the importance of fishing and aquaculture to food security and nutrition, ending poverty, and to local and global economies. The management of fisheries for long-term sustainability is a complex interaction between the fish, the marine environment, fishers, farmers, scientists, environmentalists, managers and the public. Students and professionals in both the international and domestic markets seek expertise and advanced credentials in fisheries science and fisheries management. The Online Graduate Certificate in Fisheries Science will provide students with advanced training including quantitative and communication skills, and scientific and technical knowledge in natural and social sciences.

SECTION II
RECOMMENDATION

The Graduate Council approved the proposal to create a ***new 7-week accelerated Online Graduate Certificate in Fisheries Science (FIS)*** at its Meeting No. 531 held on 06 April 2020, and forwards it to the Faculty Senate with a recommendation for approval.

**Abbreviated Proposal form
For All Programs including Certificates
No New Funding**

A Proposal for: 7-week accel. ONLINE GRADUATE CERTIFICATE IN FISHERIES

Date: 01/14/2020

A. PROGRAM INFORMATION

A1. Name of institution: University of Rhode Island

A2. Name of department, division, school or college
Department – Fisheries, Animal and Veterinary Science (FAVS)
College – Environment and Life Sciences (CELS)

A3. Title of proposed program and Classification of Instructional Programs [\(CIP\) code](#)
Program title – Online Graduate Certificate in Fisheries Science (FIS)
Classification code (CIP) – 03 Natural Resources and Conservation

A4. Intended initiation date of program change. Include anticipated date for granting first degrees or certificates, if appropriate.
Initiation date – Fall 2020
First degree date – Summer 2021

A5. Intended location of the program – University of Rhode Island, Kingston, RI

A6. Description of institutional review and approval process

	<u>Approval Date</u>
Department	2/21/2020
College	3/2020
CAC/Graduate Council	
Faculty Senate	4/6/2020
President of the University	4/30/2020

A7. Summary description of proposed program (not to exceed 2 pages)

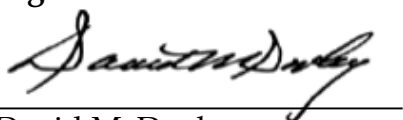
The FAO 2018 The State of World Fisheries and Aquaculture highlights the importance of fishing and aquaculture to food security and nutrition, ending poverty, and to local and global economies. Fish and aquaculture production will continue to expand over the next decade, upwards of 18% by 2030, as required to meet the demand of protein consumption by the global population. In turn, nearly 60 million people are directly employed through this sector. The management of fisheries for long-term sustainability is a complex interaction between the fish, the marine environment, fishers, farmers, scientists, environmentalists, managers and the public.

The expertise needed to help manage fisheries for sustainability is a demand that expands globally. Students and professionals in both the international and domestic markets seek expertise and advanced credentials in fisheries science and fisheries management to not only prepare them for jobs in government and non-profit sectors but to advance them in jobs currently held. The intent is to update skills and knowledge to employ the most up to date techniques for analyzing, management and communicating.

The online FIS certificate will follow the online academic calendar and include four 7-week online courses that develop core competencies in sustainable fisheries management, including stock assessment, fisheries ecology, and fisheries management. This certificate will also require a capstone summer experience (2 course options) to provide crucial hands-on experience. Course format and learning activities will emphasize collaborative real world problem solving, oral and written communication, and the use of state-of-the-art analysis tools and technologies. On completion of the FIS online graduate certificate, students will have the knowledge and skills to: 1) apply knowledge in a variety of disciplines and practical skills to address real-world problems in food security, as it relates to seafood; and 2) find employment in agencies and businesses involved in research, scholarly, and problem-solving endeavors in the field of Sustainable Fisheries.

Applicants will be expected to provide: (1) college transcripts certifying successful completion of a bachelor's degree in a biological, environmental, or other scientific field, (2) two letters of recommendation from peers, mentors, or colleagues attesting to the students ability to complete graduate level course work, and (3) a personal written statement explaining why the student is seeking a University of Rhode Island Online Graduate Certificate in Fisheries Science. Accepted students will complete a sequence of three 3-credit classes and two 1-credit seminars provided online followed by the capstone summer session for 3 credits. Since this is an online program, the expectation is that it will ultimately be funded through revenues generated by the program itself, and no additional revenue will be required.

A8. Signature of the President



David M. Dooley

A9. Person to contact during the proposal review

Name: Marta Gomez-Chiarri
Title: Professor and Department Chair, FAVS
Phone: 401-874-2917
Email: gomezchi@uri.edu

Name: Donald DeHayes
Title: Provost/VP Academic Affairs
Phone: 401-874-4410
Email: officeofprovost@etal.uri.edu

A10. List and attach any signed agreements for any cooperative arrangements made with other institutions/agencies or private companies in support of the program.

N/A

B. RATIONALE: There should be a demonstrable need for the program.

B1. Explain and quantify the needs addressed by this program, and present evidence that the program fulfills these needs.

The Online Graduate Certificate in Fisheries Science will provide students with advanced training including quantitative and communication skills, and scientific and technical knowledge in natural and social sciences. The need for these skills is evident worldwide. The main target audience for the Online Graduate Certificate in FIS is international students. URI conducts fisheries extension and research work locally, regionally, and internationally. Projects in Indonesia and Africa, specifically Ghana and Malawi, demonstrate that the need for trained expertise is desired and the pool of candidates are eagerly waiting. URI has established dual degree programs in Indonesia and Ghana. From Indonesia alone, over 20 ministry staff members have enrolled at URI to earn graduate degrees many specifically targeting fisheries and have gone back to Indonesia to be rewarded with promotions in the Ministry. The addition of an Online Graduate Certificate in Fisheries Science would provide the ability of many more in country professionals the value added to advance their degrees without having to leave their jobs and less funding needed.

Therefore, we anticipate significant interest (at least 12 students per year) in the Fisheries Science Graduate Certificate. The stand-alone certificate will appeal to working professionals who want to enhance their fisheries expertise. Moreover, at the conclusion of the online certificate, students can continue to pursue other Online Certificates in MESM (NRE, already approved, and GIS, under development) or can pursue professional opportunities with the benefit of additional skills and credentials. Each online certificate would be reasonably priced to make them attractive relative to similar opportunities at other universities. An opportunity to obtain a master's degree within a single year or less of study on-campus in the U.S. and one to two years online will be appealing to international employers and governments that value a highly skilled workforce.

B2. What is the economic need and workforce data related to the program?

In 2016, commercial and recreational fisheries throughout the United States generated approximately 1.7 million jobs in the U.S. economy. In addition, commercial and recreational fishing together generated \$212.2 billion in sales impacts, \$64.2 billion in income impacts, and \$99.5 billion in value-added impacts throughout the economy. The FAO 2018 The State of World Fisheries and Aquaculture highlights the importance of fishing and aquaculture to food security and nutrition, ending poverty, and to local and global economies. Fish and aquaculture production will continue to expand over the next decade, upwards of 18% by 2030, as required to meet the demand of protein consumption by the global population. In turn, nearly 60 million people are directly employed through this sector.

B3. Provide information on jobs available as a result of successfully completing the certificate or degree: job titles, job outlook/growth, and salaries.

According to the Bureau of Labor Statistics, the job outlook for Agricultural and Food Scientists from 2018 to 2028 is expected to grow around 7%, faster than average. In particular, for fisheries biologists projected job growth is approximately 5%. The average salary for 2018 was \$67,760. Most positions only require a bachelor's degree related to marine and fishery sciences; however, advanced degrees are highly recommended. Jobs are available in government or non-project organizations. Employees work on boats, collecting samples and documenting statistics, others conducting experiments and in supervisory levels, in both marine and fresh water environments, as well as in fish hatcheries.

C. INSTITUTIONAL ROLE: The program should be clearly related to the published role and mission of the institution and be compatible with other programs and activities of the institution.

C1. Explain how the program is consistent with the published role and mission of the institution and how it is related to the institution's academic planning.

This program builds upon and complements undergraduate and graduate programs at URI in Aquaculture and Fisheries Science. We anticipate significant interest from students based on enrollment in the existing Graduate Certificate in Aquaculture and Fisheries and MESM that are already available to on-campus students. We will build on our on-campus program to expand online education at URI.

The URI Academic Strategic Plan for 2016-2021 established 6 key goals for focusing on innovation with impact. This program fits the URI Academic Plan in the following ways: *Goal 1: Transform undergraduate and graduate student learning and academic support with a firm commitment to student success and the development of knowledgeable, skilled, and engaged citizens prepared for an ever-changing world.* This Online Graduate Certificate in Fisheries Science is designed to provide students the skills and knowledge to employ the most up to date techniques for analyzing, management and communicating. "Expand online course offerings for all students and for targeted populations (adult learners)" is a specific action of Goal 1 that it directly addressed through this Online Certificate in that its target audience is fisheries professionals who can obtain a stand-alone Certificate in FIS or the option to continue on and obtain an online Master degree in MESM.

Goal 2: Achieve high-impact, translational, and innovative research, scholarship, and creative work addressing State, regional, and world challenges to improve health, environmental sustainability, economic development, and the human experience. This program is designed to provide students with the tools needed to addressing those challenges. Fisheries and aquaculture are areas of growth worldwide, and a major focus of the Rhode Island economic plan.

Goal 3: Advance the internationalization of the University, develop students as engaged global citizens, and create meaningful international strategic partnerships. We envision building on existing relationships with international partners, particularly in Indonesia and Ghana, to attract students to the Online Graduate Certificate in Fisheries Science. We have been leaders at URI in the development of globally-relevant programs, establishing international partnerships in teaching, research, and outreach. This program builds upon these local and global programs in aquaculture and fisheries.

Goal 4: Diversity & Inclusion. Our programs place an emphasis on the intrinsic value of preserving local food cultures and biodiversity, which is reflected in our courses, research, extension and service efforts.

D. INTER-INSTITUTIONAL CONSIDERATIONS: The program should be consistent with all policies of the Council on Postsecondary Education pertaining to the coordination and collaboration between public institutions of higher education.

D1. Estimate the projected impact of this program on other public higher education institutions in Rhode Island (e.g. loss of students or revenues), provide a rationale for the assumptions made in the projections, and indicate the manner in which the other public institutions were consulted in developing the projections. Have you communicated with other institutions about the development of this program

and have any concerns been raised related to role, scope, and mission or duplication.

We do not anticipate an impact on other public higher education institutions in Rhode Island, either in the form of loss of students or revenues. We will be targeting non-traditional students, generally international, for whom the benefits of distance learning would be particularly attractive and whom would probably not attend if the online program were not available. We have not directly communicated with other institutions about this program.

D2. Using the format prescribed by the Council on Postsecondary Education, describe provisions for transfer students (into or out of the program) at other Rhode Island public institutions of higher education. Describe any transfer agreements with independent institutions. The institution must also submit either a Joint Admissions Agreement transition plan or the reason(s) the new program is not transferable (see [Procedure for Strengthening the Articulation/Transfer Component of the Review Process for New Programs](#)).

N/A. Students in programs that qualify to apply for the Online Graduate Certificate in Fisheries Science are covered under existing agreements for undergraduate programs already established at URI.

D3. Describe any cooperative arrangements or affiliations with other institutions in establishing this program. (Signed copies of any agreements pertaining to use of faculty, library, equipment, and facilities should be attached.)

No such arrangements exist.

D4. How does this program align to academic programs at other institutions?

Students in marine related majors at other institutions will be able to apply to complete this graduate certificate.

D5. Are recipients of this credential accepted into programs at the next degree level without issue?

The focus on quantitative skills and application of data-driven approaches to fisheries science and management will strengthen the ability of students to be accepted into other institutions for next degree levels. In addition, the credentials obtained will serve as a professional certificate enabling those not interested in pursuing a next degree level the ability to directly seek employment upon completion of the certificate requirements.

D6. How does this program of study interface with degree programs at the level below them?

Students in biological, agricultural or environmental related majors at URI and other institutions will be able to apply to complete the Online Graduate Certificate in Fisheries Science as soon as they fulfill the requirements of the application process.

D7. If external affiliations are required, identify providing agencies. (Indicate the status of any arrangements made and append letters of agreement, if appropriate.)

No such affiliations are required.

D8. Indicate whether the program will be available to students under the New England Board of Higher Education's (NEBHE) Regional Student Program (RSP).

No, it will not be.

E. PROGRAM: The program should meet a recognized educational need and be delivered in an appropriate mode.

E1. Prepare a typical curriculum display for one program cycle for each sub-major, specialty or option, including the following information:

- a. Name of courses, departments, and catalog numbers and brief descriptions for new courses, preferably as these will appear in the catalog.**

Program requirements: 14 credits of graduate coursework, includes 2 credits of seminar and 3 credits of summer capstone (either EVS 505 or AFS 597)

The following pre-existing on-campus courses will be developed as online courses specifically to support this program (descriptions are course descriptions from course catalog).

AFS 501 Professional Development in Fisheries and Aquaculture: Formulate learning outcomes and develop professional internships for new AFS graduate students through interaction with faculty, develop skills in environmental communication, leadership, and ethics. (Seminar, 1 cr.)

AFS 502 Seminar in Fisheries and Aquaculture: Presentation of proposed, ongoing and completed major projects by AFS graduate students. Discussion among graduate students, faculty, and other mentors on project design, methods, analysis, and presentation. (Seminar, 1 cr.)

AFS 415 Fisheries Ecology: Ecological characteristics of fishes and shellfishes in capture fisheries worldwide. Relationship between aspects of fishing, habitats, and community structure along with assessment methods. (Lecture, 3 crs.)

AFS 531 Fisheries Stock Assessment: A quantitative approach to describing the processes of fish growth and mortality, the estimation of stock size, the prediction of stock yield, and management practices. Spreadsheets and other computer applications will be used for analysis and modeling. (Lecture, Lab; 3 crs.)

AFS/OCG 560 Ecosystem-Based Fisheries Science and Management: The scientific components of ecosystem-based fisheries management: climate variation, trophic interactions, habitat, bycatch, and human dimensions. Classes emphasize problem-solving through case studies of domestic and international fisheries. (Lecture, 3 crs.)

AFS 597 Professional Internship in Fisheries Science and Management: Supervised work performed with an environmental agency, nongovernmental organization, or private firm as part of the requirements of the AFS graduate degree programs. (Practicum, 3 crs.)

EVS 505 Environmental Leadership in Practice: Explores theory and practice of leadership in the context of environmental problems and natural resources management. Emphasis on effective leadership and communication approaches across environmental organizations. (Practicum; 3 crs.)

- b. Are there specializations and/or tracks/options/sub-plans/concentrations? If so, describe required courses in area of specialization or tracks/options/sub-plans/concentrations.**

No specializations are available.

- c. Course distribution requirements, if any, within program.**

Students are required to take a pre-defined sequence of courses.

Core courses in Fisheries (9 credits):	AFS415 (3 cr.), AFS531 (3), AFS/OCG560 (3)
Seminar courses (2 cr):	AFS501 (1), AFS502 (1)
Capstone experience (3 cr.)	Choose either EVS505 (3 cr.) or AFS597 (3).

- d. Total number of free electives available after specialization requirements are satisfied.**

None.

- e. Total number of credits required for completion of program or for graduation. Present evidence that the program is of appropriate length as illustrated by conformity with appropriate accrediting agency standards, applicable industry standards, or other credible measure, and comparability of lengths with similar programs in the state or region.**

Students will be required to complete 14 credits over the course of 12 months to earn the Online Graduate Certificate in Fisheries Science, which is in line with similar programs elsewhere. Online certificates from the 10 universities that participate in the Natural Resource Distance Learning Collaborative typically require 12-18 credits and run 9-12 months.

- f. Identify any courses that will be delivered or received by way of distance learning (refer to [Policy on Distance Learning, Council on Postsecondary Education, State of Rhode Island and Providence Plantations](#)).**

All courses except for the Capstone summer experience will be delivered by way of distance learning. The Capstone Summer Experience (EVS505) will include a 2-week intensive hands-on component that will be based out of URI. The Internship (AFS597) will be supervised online (distance learning).

- g. Is the program content guided by program-specific accreditation standards or other outside guidance?**

No.

- E2. Describe certification/licensing requirements, if any, for program graduates and the degree to which completion of the required course work meets said requirements. Indicate the agencies and timetables for graduates to meet those requirements.**

None.

- E3. Include the learning goals (what students are expected to gain, achieve, know, or demonstrate by completion of the program) and requirements for each program.**

Goal 1: Know the fundamental principles of fisheries science and how human activities affect environmental condition.

- 1.1 Students demonstrate technical capacity knowledge in core principles of the natural sciences associated with their professional goals.

- 1.2 Students demonstrate technical capacity and knowledge in core principles of the social sciences associated with their professional goals.
- 1.3 Students are able to evaluate or apply statistical procedures to describe quantitative data, discern patterns and trends in data, or perform inferential tests of hypotheses.
- Goal 2: Integrate multidisciplinary aspects of real-world fisheries problems and create practical, viable solutions to those problems.
 - 2.1 Students demonstrate the ability to work with real-world fisheries problems and create effective, practical solutions to those problems.
- Goal 3: Determine the current state of scientific knowledge of a fisheries issue and effectively communicate the scientific problem and possible solutions to diverse audiences.
 - 3.1 Students demonstrate an ability to discover the state of scientific knowledge of a fisheries problem and develop a practical solution to a fisheries problem.
 - 3.2 Students demonstrate the ability to effectively communicate scientific solutions to multiple audiences including the public, decision-makers, stakeholders, and scientists.

E4. Demonstrate that student learning is assessed based on clear statements of learning outcomes and expectations.

The student learning goals and outcomes of the Online Graduate Certificate in Fisheries Science are the same goals and learning outcomes of the MESM program (slightly modified to focus them on fisheries issues and problems as particular examples of environmental issue or problem. As such will be assessed along with the MESM program and by the MESM Assessment Rubrics (e.g. slightly modified from Knowledge in STEM, Integrate and Apply, Problem Solving, Global Learning.)

E5. Provide an assessment plan detailing what a student should know and be able to do at the end of the program and how the skills and knowledge will be assessed. Consult with the [Office of Student Learning, Outcomes Assessment, and Accreditation \(SLOAA\)](#) to prepare a [Learning Outcomes Assessment Plan](#) for student learning assessment. Following consultation, submit a final draft of the plan to the Chair of the [Learning Outcomes Oversight Committee](#) (LOOC) for approval by the full Learning Outcomes Oversight Committee.

See assessment plan attached to the proposal.

F. FACULTY AND STAFF: The faculty and support staff for the program should be sufficient in number and demonstrate the knowledge, skills, and other attributes necessary to the success of the program.

F1. Describe the faculty who will be assigned to the program. Indicate total full-time equivalent (FTE) positions required for the program, the proportion of program faculty who will be in tenure-track positions, and whether faculty positions will be new positions or reassignment of existing positions. What are the minimal degree level and academic/technical field requirements and certifications required for teaching in this program?

This is an online program and the expectation is that it will ultimately be funded through revenues generated by the program itself. This program will continue with existing CELS faculty / staff; however, the source of funding that pays for the faculty / staff will now be from

this certificate tuition/revenue. Since this is a graduate certificate program, all instructors will either have a Ph.D. in the relevant fields or will have a master's degree and a minimum 10 years of professional experience in a relevant field. The program will require one Lecturer (or similar title) to provide ongoing support and integration with the MESM program. The FAVS Department Chair will be responsible for program oversight (see section H for more details). Laura Skrobe, a Research Associate III who has been in the FAVS department for 20-years, will be responsible for developing and delivering all course content. Once the Online Graduate Certificate in Fisheries Science is operational, Skrobe will be supported by tuition revenue from the program (0.70 FTE).

- G. STUDENTS: The program should be designed to provide students with a course of study that will contribute to their intellectual, social, and economic well-being. Students selected should have the necessary potential and commitment to complete the program successfully.**

- G1. Describe the potential students for the program and the primary source of students. Indicate the extent to which the program will attract new students or will draw students from existing programs and provide a specific rationale for these assumptions. For graduate programs, indicate which undergraduate programs would be a potential source of students.**

The primary types of students who would be attracted to the Online Graduate Certificate in Fisheries Science include international students, professionals working in the field who want to update their skills, and people who want to work in the field of fisheries but need additional skills to be more competitive. There is a strong need for this program from International partners from countries that the University already has a strong collaboration with including Indonesia and Ghana. The objective is to attract new students, particularly students who may not be able to enroll in on-campus programs due to cost, location, or lack of schedule flexibility. We expect that employees from international agencies or governments (such as the Indonesia Ministry of Fisheries or Ghana Higher Education institutions) will be interested in the program. This program will also be useful for employees in State (Rhode Island Department of Environmental Management), Federal (NOAA, NMFS, US EPA, USDA ARS) or non-governmental (The Nature Conservancy, Save the Bay) agencies.

- H. EVALUATION: Appropriate criteria for evaluating the success of a program should be developed and used.**

- H1. List the performance measures by which the institution plans to evaluate the program. Indicate the frequency of measurement and the personnel responsible for performance measurements. Describe provisions made for external evaluation, as appropriate.**

Program performance will be measured by three metrics: 1) Number of applicants per year, 2) Number of certificates granted per year, and 3) Number of students who enroll in the MESM program. Each metric will be evaluated annually by the Program Coordinator in conjunction with faculty and staff involved in the program.

a. Performance measures to evaluate the program.

Metric	Successful Beyond Expectations	As Expected	Does not Meet Expectations
Number of applicants per year. The larger this number, the more successful the program.	Over 15	1-15	0
Number of certificates granted per year. A student should be able to complete the certificate in 12 months if they take 1 class during each online session. Part time students should be able to complete the program in 2 years. If students fail to complete the requirements in these time windows, we will have to determine what the obstacles are.	Over 10	1-10	0
Number of students who apply to MESM. Since we envision this program as a gateway to MESM, the number of students who apply to MESM will be an indication of our success in providing students with useful skills and information that inspire them to pursue a Master's degree.	Over 10	1-10	0

I. IS THE PROGRAM FINANCIALLY VIABLE?

- II. ALL PROPOSALS: Complete the Rhode Island Office of Postsecondary Commissioner [Budget Form](#) demonstrating that existing funds are sufficient for carrying out the program. The completed proposal with Budget Form requires review by the URI Budget and Financial Planning Office. Proposers shall request a Statement of No Financial Impact from the URI Budget and Financial Planning Office.**

Ultimately, the goal is for the revenue share from this program to cover the cost of staff salaries and other program expenses. The initial year of the program will be supported through URI Online Program Development Seed Grant. During the initial years of program development, institutional support will be required to offset the difference between revenues and expenses when enrollment is still growing. See attached budget sheets and State of No Financial Impact from the URI Budget and Financial Planning Office.

Attachments:

1. Program Assessment Plan
2. Budget form and No Financial Impact letter
3. Library Impact



March 5, 2020

Dear Dr. Marta Gomez-Chiarri,

As Chairperson of the Learning Outcomes Oversight Committee (LOOC), I am pleased to send you an update regarding the status of the Online Graduate Certificate in Fisheries Science Assessment Plan. The LOOC Sub-Committee, comprised of three faculty members, has carefully review the Plan and commends you on launching this program. The Sub-Committee has confirmed its approval.

I am attaching three (3) documents that you will need to include in your proposal after this approval granted from the LOOC. Each document is saved as a pdf. (Please inform me if you require a different format.).

Thank you for your patience with this process, and best of luck in the final stages of approval.

Respectfully,

Susan Trostle Brand,
Chair, LOOC
Professor,
School of Education

NEW CERTIFICATE ASSESSMENT PLAN REVIEW

Date SLOAA review:
2/2020
Date LOOC* review:
3/2020

*(LOOC Chair and review

Academic Program/Degree: ONLINE Graduate Certificate in Fisheries Science

College: College of Environmental and Life Sciences

Date New Program Assessment Plan Submitted: February 2020

Faculty Member(s) Submitting Plan Proposal: Marta Gomez-Chiarri, Laura Skrobe

F E E D B A C K	Strengths:
	SLOAA: <ul style="list-style-type: none"> The Assessment Plan and proposal details the technical and practical skills, knowledge and abilities students will acquire as they earn this online graduate certificate. The certificate highlights the integration of skills with immediate application within a global fisheries and seafood industry context. The curriculum blends online courses and seminars with in-person, hands-on summer immersion experiences. The curriculum ensures a critical base level of knowledge is acquired in fisheries and related sciences. The certificate seeks to benefit from the Master's program in Environmental Science Management (MESM) by adopting and adapting course and program learning outcomes and preparedness for learning measurement practices. The certificate highlights the integration of multiple skills with immediate application within a global context providing opportunities for the development of professional and technical skills within the fisheries and seafood industry evidenced through a capstone project (Internship or leadership practicum).
	LOOC: <ul style="list-style-type: none"> A clear connection was made between goals and measurable outcomes. An intended group of approximately 15 students is reasonable. This plan is well organized and comprehensive The two-year plan is well articulated within the two-year timeline with a reasonable progression from introduced to reinforced to emphasized. Integration of real-world problem solving via internship is a program strength.
	Suggestions for improvement:
	SLOAA: N/A LOOC: Additional clarity could be added to the sentence, "Learning goals will be discussed with students in AFS 501 (and EVS 501) to establish baseline." An explanation could be provided as to how learning goals will be used, through discussion alone, to establish a baseline and, later, how the baseline will be applied.
	Issue(s) of note:

SLOAA: <ul style="list-style-type: none"> Program provided a well-constructed timeline for assessment which aligns to and supports the program-level assessment efforts of MESM. Evaluation of student performance and learning for MESM students versus online certificate only students could be useful. 		
LOOC: N/A		
Assessment Plan Designation:		
1 X	2 _____	3 _____
The Assessment Plan is ready for implementation.	The Assessment Plan can be implemented after minor revisions, as indicated, and does not require further review.	The Assessment Plan requires revisions, and should be submitted for further review after revisions, by date: _____

Program Information		Reviewer Ratings & Comments				
Information box complete		Yes	Incomplete	Suggestions:		
Criteria		Efficacy of Plan Description & Content				Suggestions for improvement
		Less Developed	Developing	Well Developed	Not addressed	
PART I	1. Program goals					
	a. Broad statements of program learning goals	—	—	—	—	
	b. Limited in number (ideally 2-5)	—	—	—	—	
PART II	2. Learning outcomes/competencies					
	a. Linked to goals (numbered 1.1 etc.)	—	—	—	—	
	b. Each goal is represented by at least one outcome	—	—	—	—	
	c. Statements are observable/measurable	—	—	—	—	
	d. Directed at what students will know or be able to do	—	—	—	—	
	e. Reasonable number (ideally 1-3 per goal)	—	—	—	—	
	3. Curriculum Map					
	a. Program requirements are listed, developmentally when possible	—	—	—	—	
	b. Outcomes are linked to appropriate requirements	—	—	—	—	

[A timeline for assessment is N/A: At this time, certificates are not included in the institutional timeline for program-level assessment.]		Reviewer Ratings & Comments				
Criteria		Efficacy of Plan Description & Content				Suggestions for improvement
		Less Developed	Developing	Well Developed	Not addressed	[A timeline for assessment is N/A: At this time, certificates are not included in the institutional timeline for program-level assessment.]
P A R T III	4. Assessment Timeline (3-year plan)					
	a. Assessment Reporting Period 1 is thoroughly presented	—	—	—	—	
	b. Assessment Reporting Periods 2 and 3 are presented	—	—	—	—	
	c. All goals are represented by at least one outcome somewhere in the 3 reporting periods	—	—	—	—	
	d. Requirements are clearly stated and connected to outcomes (from Curriculum Map)	—	—	—	—	
	e. Evidence is stated for each designated outcome	—	—	—	—	
	f. Selection of evidence takes advantage of existing indicators	—	—	—	—	
	g. Evidence is stated in enough detail to guide assessment activities	—	—	—	—	
	h. Evidence is feasible for collection within the timeline	—	—	—	—	
	i. Methods for quantifying evidence are stated for each designated outcome	—	—	—	—	
	j. Methods are appropriate for evidence	—	—	—	—	

ACADEMIC PROGRAM ASSESSMENT PLAN

Date SLOAA review:
2/2020

Date LOOC* review:
3/2020

*(LOOC Chair and review

All new programs and certificates must have clearly articulated program goals (Section I) and student learning outcome statements linked to curriculum and course experiences/requirements (Section II). The Curriculum Map guides programs in to present the extent to which their student learning outcomes are aligned with courses and other program requirements intended to provide students with opportunities to develop and master the learning outcomes by graduation. Each program (not certificates) will also create an Assessment Timeline (Section III) indicating when and how learning outcomes assessment will take place. All undergraduate and graduate programs are encouraged to create a six-year (3 rounds) Assessment Plan to guide assessment reporting.

If you have questions or need assistance, please contact the Office of Student Learning, Outcome Assessment, and Accreditation (SLOAA) at assess@uri.edu.

Program Information	
Program:	Online Graduate Certificate in Fisheries Science (FIS)
Academic year plan submitted:	2020
Degree(s):	Certificate
Department Chair:	Marta Gomez-Chiarri
Program Director:	Marta Gomez-Chiarri
Accredited Program:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes; specify year next accreditation report due: _____
Published learning outcomes (URL):	<i>Upon program approval, post goals/outcomes to program website and forward URL to: assess@uri.edu</i>

Section I. Program Goals: Broad, general statements of what it means to be an effective program in terms of student learning outcomes; what the program wants students to know and be able to do upon completion of the program. Goals should relate to the mission of the department, college, and university in which the program resides. Success in achieving Goals is evaluated directly or indirectly by measuring specific outcomes (Section II) related to the goal.

Graduates will:

Goal 1	Know the fundamental principles of fisheries science and how human activities affect environmental condition.
Goal 2	Integrate multidisciplinary aspects of real-world fisheries problems to create practical, viable solutions to those problems.
Goal 3	Determine the current state of scientific knowledge of a fisheries issue and effectively communicate the scientific problem and possible solutions to diverse audiences.

*Add/delete lines as necessary

PROGRAM ASSESSMENT PLAN

Section II. Curriculum Mapping: Across the top of the matrix, list courses and other requirements for the program. Order the requirements from left to right in rough chronological/developmental sequence and add a standard description of your program requirements. Down the side, list program student learning outcomes associated with goals. Using the **Map Key** below, indicate the degree to which an outcome will be taught and assessed in relevant courses and by other program requirements. Use “*” to identify the best assessable moments in the curriculum.

Map Key I = Outcome Introduced for Mastery R = Outcome Reinforced for Mastery E = Outcome Emphasized for Mastery * = Courses included in program assessment Student Learning Outcomes (Competencies) by Goal: Statements of observable, measurable results of the educational experience, linked to program goals (Section I), that specify what a student is expected to know or be able to do throughout a program; these must be detailed and meaningful enough to guide decisions in program planning, improvement, pedagogy, and practice.		Course Numbers/Program Requirements: In addition to specific courses, this can include internships, portfolios, and other requirements not associated with a course number, such as thesis/dissertation proposals, thesis/dissertation defenses, and comprehensive examinations.									
		AFS 501, 1 cr. (Seminar)	AFS 415, 3 cr. (Natural Science)	AFS 531, 3 cr. (Quantitative)	AFS 560, 3 cr. (Natural & Social Sci)	AFS 502, 1 cr. (Seminar)	EVS 505 OR AFS 597, 3 cr. (Capstone Exp: internship or leadership practicum)				
Goal 1	1.1 Students demonstrate technical knowledge in core principles of the natural sciences associated fisheries science.	I	I/ R	R	E	R	E				
	1.2 Students demonstrate technical capacity and knowledge in core principles of the social sciences associated fisheries science.	I			I R	R	E				
	1.3 Students are able to evaluate and apply statistical procedures to describe quantitative data, discern patterns and trends in data, or perform inferential tests of hypotheses.		I /R	R	E		E				
Goal 2	2.1 Students demonstrate the ability to work with real-world fisheries problems and create effective, practical solutions to those problems.	I	I /R		E	R	E				
Goal 3	3.1 Students demonstrate an ability to discover the state of scientific knowledge of a fisheries problem and develop a practical solution to a fisheries problem.	I	R		E	R	E				
	3.2 Students demonstrate the ability to effectively communicate scientific solutions to multiple audiences including the public, decision-makers, stakeholders, and scientists.	I			I R	R	E				

*Add/delete lines as necessary

PROGRAM ASSESSMENT PLAN

[NOTE: At this time, certificates are not yet included in the University's biennial assessment reporting program.]

Section III. Assessment Timeline: Indicate when and how student learning will be assessed based on learning outcome statements and expectations. Refer to the curriculum map to propose an assessment timeline in which the program will plan to assess student learning outcomes. Specify a 6-year plan for assessment to represent **3 two-year reporting periods:**

- Assessment Reporting Period 1: the first academic year in which the program would plan to assess at least one outcome.
- Assessment Reporting Period 2: follows two years later, with plans defined for assessing another outcome(s).
- Assessment Reporting Period 3: follows two years later, with plans defined for assessing additional outcome(s).

All goal areas should be assessed by at least one outcome within the 6-year plan.

Academic Years	Student Learning Outcome(s) <u>WHICH</u> outcome(s) will you examine in each period (use number(s) from curriculum map, e.g. 1.1)?	Course(s) and Other Program Requirements <u>WHERE</u> will you look for evidence of student learning (i.e., what course(s)/program requirements)? Designate for each outcome.	Assessment Evidence of Student Learning <u>WHAT</u> direct/indirect student work or other evidence of student learning will you examine in order to generate conclusions and recommendations? Designate for each requirement.	Assessment Method of Student Learning <u>HOW</u> will you look at the evidence; what means and process will you use to evaluate student learning (e.g., rubric, analysis of test scores, etc.)? Designate for each evidence source.
Assessment Reporting Period 1 Report Due May 20XX*	1.1	AFS 415, AFS 501 AFS 502 and AFS531 or AFS560	Learning goals will be discussed with students in AFS501 to establish baseline. Evaluation of presentations of capstone projects in AFS502; test scores and term project in AFS 415 and 531	Knowledge in STEM rubric will be used to assess projects (415, 531) and presentation scores (502). Comparison of AFS501 and AFS415 (I) with AFS502 and AFS531 or 560 (R, E) will show progression in LO
Assessment Reporting Period 2 Report Due May 20XX	1.2, 1.3	AFS 560 or AFS 531	Learning goals will be discussed in EVS501 to establish baseline. Evaluation of final projects in AFS 560 or AFS 531	Evaluation of projects for at least 5 students will be assessed using rubrics (Social Sciences for 1.2 and Quantitative Literacy for 1.3)
Assessment Reporting Period 3 Report Due May 20XX	2.1, 3.1, 3.2	AFS 502 and EVS 505 or AFS 597	Learning goals will be discussed in AFS501 to establish baseline. AFS 502 (presentation of grad project) Internship report (AFS 597) Leadership practicum (EVS 505) Written project (paper)	Learning goals and outcomes will be assessed by Problem Solving and Integrate and Apply rubrics. Comparison with AFSS501 (I) with AFS502, AFS597 or EVS505 will show progression in LO

* Initial reporting year is established by the program and will depend on the anticipated timeframe for program implementation.

ACADEMIC PROGRAM ASSESSMENT PLAN

All new programs and certificates must have clearly articulated program goals (Section I) and student learning outcome statements linked to curriculum and course experiences/requirements (Section II). The Curriculum Map guides programs in to present the extent to which their student learning outcomes are aligned with courses and other program requirements intended to provide students with opportunities to develop and master the learning outcomes by graduation. Each program (not certificates) will also create an Assessment Timeline (Section III) indicating when and how learning outcomes assessment will take place. All undergraduate and graduate programs are encouraged to create a six-year (3 rounds) Assessment Plan to guide assessment reporting.

If you have questions or need assistance, please contact the Office of Student Learning, Outcome Assessment, and Accreditation (SLOAA) at assess@uri.edu.

Program Information	
Program:	Online Graduate Certificate in Fisheries Science (FIS)
Academic year plan submitted:	2020
Degree(s):	Certificate
Department Chair:	Marta Gomez-Chiarri
Program Director:	Marta Gomez-Chiarri
Accredited Program:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes; specify year next accreditation report due: _____
Published learning outcomes (URL):	

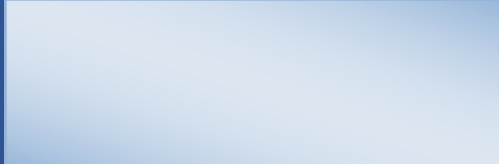
Section I. Program Goals: Broad, general statements of what it means to be an effective program in terms of student learning outcomes; what the program wants students to know and be able to do upon completion of the program. Goals should relate to the mission of the department, college, and university in which the program resides. Success in achieving Goals is evaluated directly or indirectly by measuring specific outcomes (Section II) related to the goal.

Goal 1	Know the fundamental principles of fisheries science and how human activities affect environmental condition.
Goal 2	Integrate multidisciplinary aspects of real-world fisheries problems and create practical, viable solutions to those problems.
Goal 3	Determine the current state of scientific knowledge of a fisheries issue and effectively communicate the scientific problem and possible solutions to diverse audiences.

*Add/delete lines as necessary

PROGRAM ASSESSMENT PLAN

Section II. Curriculum Mapping: Across the top of the matrix, list courses and other requirements for the program. Order the requirements from left to right in rough chronological/developmental sequence and add a standard description of your program requirements. Down the side, list program student learning outcomes associated with goals. Using the **Map Key** below, indicate the degree to which an outcome will be taught and assessed in relevant courses and by other program requirements. Use “**” to identify the best assessable moments in the curriculum.

<div></div> Student Learning Outcomes (Competencies) by Goal: Statements of observable, measurable results of the educational experience, linked to program goals (Section I), that specify what a student is expected to know or be able to do throughout a program; these must be detailed and meaningful enough to guide decisions in program planning, improvement, pedagogy, and practice.		Course Numbers/Program Requirements: In addition to specific courses, this can include internships, portfolios, and other requirements not associated with a course number, such as thesis/dissertation proposals, thesis/dissertation defenses, and comprehensive examinations.											
		AFS 501, 1 cr. (Seminar)	AFS 415, 3 cr. (Natural Science)	AFS 531, 3 cr. (Quantitative)	AFS 560, 3 cr. (N & Social Science)	AFS 502, 1 cr. (Seminar)	EVS 505 or AFS 597, 3 cr. (Capstone Exp.)						
Goal 1	1.1 Students demonstrate technical capacity knowledge in core principles of the natural sciences associated with their professional goals.	I	I R	R	E	R	E						
	1.2 Students demonstrate technical capacity and knowledge in core principles of the social sciences associated with their professional goals.	I			I R	R	E						
	1.3 Students are able to evaluate or apply statistical procedures to describe quantitative data, discern patterns and trends in data, or perform inferential tests of hypotheses.		I R	R	E		E						
Goal 2	2.1 Students demonstrate the ability to work with real-world fisheries problems and create effective, practical solutions to those problems.	I	I R		E	R	E						
Goal 3	3.1 Students demonstrate an ability to discover the state of scientific knowledge of a fisheries problem and develop a practical solution to a fisheries problem.	I	R		E	R	E						
	3.2 Students demonstrate the ability to effectively communicate scientific solutions to multiple audiences including the public, decision-makers, stakeholders, and scientists.	I			I R	R	E						

*Add/delete lines as necessary

PROGRAM ASSESSMENT PLAN

Section III. Assessment Timeline: Indicate when and how student learning will be assessed based on learning outcome statements and expectations. Refer to the curriculum map to propose an assessment timeline in which the program will plan to assess student learning outcomes.

Specify a 6-year plan for assessment to represent **3 two-year reporting periods:**

- Assessment Reporting Period 1: the first academic year in which the program would plan to assess at least one outcome.
- Assessment Reporting Period 2: follows two years later, with plans defined for assessing another outcome(s).
- Assessment Reporting Period 3: follows two years later, with plans defined for assessing additional outcome(s).

All goal areas should be assessed by at least one outcome within the 6-year plan.

Academic Years	Student Learning Outcome(s) <u>WHICH</u> outcome(s) will you examine in each period (use number(s) from curriculum map, e.g. 1.1)?	Course(s) and Other Program Requirements <u>WHERE</u> will you look for evidence of student learning (i.e., what course(s)/program requirements)? Designate for each outcome.	Assessment Evidence of Student Learning <u>WHAT</u> direct/indirect student work or other evidence of student learning will you examine in order to generate conclusions and recommendations? Designate for each requirement.	Assessment Method of Student Learning <u>HOW</u> will you look at the evidence; what means and process will you use to evaluate student learning (e.g., rubric, analysis of test scores, etc.)? Designate for each evidence source.
Assessment Reporting Period 1 Report Due May 20XX*	1.1	AFS 415, AFS 501 AFS 502 and AFS531 or AFS560	Learning goals will be discussed with students in AFS501 to establish baseline. AFS502 – evaluation of presentations of capstone projects Test scores and term project in AFS 415 and 531	Knowledge in STEM rubric will be used to assess projects (415, 531) and presentation scores (502). Comparison of AFS501 and AFS415 (I) with AFS502 and AFS531 or 560 (R, E) will show progression in LO
Assessment Reporting Period 2 Report Due May 20XX	1.2, 1.3	AFS 560 or AFS 531	Learning goals will be discussed in EVS501 to establish baseline. Based on final projects in AFS560 or AFS 531	Evaluation of projects for at least 5 students will be assessed using rubrics (Social Sciences for 1.2 and Quantitative Literacy for 1.3)
Assessment Reporting Period 3 Report Due May 20XX	2.1, 3.1, 3.2	AFS 502 and EVS 505 or AFS 597	Learning goals will be discussed in AFS501 to establish baseline. AFS 502 (presentation of grad project) Internship report (AFS597) Leadership practicum (EVS 505) written project (paper)	Learning goals and outcomes will be assessed by Problem Solving and Integrate and Apply rubrics. Comparison with AFSS501 (I) with AFS502, AFS597 or EVS505 will show progression in LO

* Initial reporting year is established by the program and will depend on the anticipated timeframe for program implementation.

Materials Evaluated:

Observation Date and Time:

Name of Evaluator:

Class (Course code and name):

*** Total number of students, from freshmen to seniors**

Full assessment of each course involves at least one of the knowledge elements, and the reasoning, the application, and the communication elements as they apply to the chosen.

Social Dimensions of Aquaculture and Fisheries Rubric			
Elements	Competent (3)	Approaches Competency (2)	Beginning Competency (1)
Knowledge option 1: Articulate the importance of social factors (economics, culture, policy) on aquaculture and fisheries.	Demonstrates a full understanding (e.g. accurately identifying at least 80% of the key concepts and providing supporting details) of how economic forces, cultural factors, policies, regulations, codes, and laws impact issues in aquaculture and fisheries.	Key issues and concepts are described, but some (e.g. between 60 and 80%) of the facts or details are missing or are not accurate.	Many (more than 60%) of the concepts are not described or are not accurate.
Knowledge option 2: Articulate the importance of diversity, equity and justice in aquaculture and fisheries.	Demonstrates a full understanding (e.g. accurately identifying at least 80% of the key concepts and providing supporting details) of the equity and justice issues surrounding aquaculture and fisheries.	Key issues are described, but some (e.g. between 60 and 80%) of the facts or details are missing or are not accurate.	Many (more than 60%) of the concepts are not described or are not accurate.
Reasoning: Analysis, evaluation and synthesis of the evidence.	Identifies and logically organizes almost all relevant evidence. Uses appropriate and comprehensive critical thinking skills and habits of mind to analyze, evaluate, and synthesize evidence. Reaches informed conclusions based on the evidence.	Identifies and organizes most of the relevant evidence. Uses partial critical thinking skills and habits of mind to analyze, evaluate, and synthesize evidence. Reaches informed conclusions based on the evidence.	Identifies some relevant evidence and omits most of the other evidence. Uses unclear, inappropriate, or incomplete critical thinking skills and habits of mind to analyze, evaluate, and synthesize evidence. Reaches incomplete or inaccurate conclusions based on the evidence.
Communication: Demonstrates knowledge and reasoning through oral, written, visual, dramatic, or mixed media presentation.	Almost all ideas in the presentation are expressed in a way that provides evidence of the student's knowledge and reasoning processes. The presentation is well focused with a well-defined thesis. Presentation shows substantial evidence of organization. Presentation shows attention to the details.	Most ideas in the presentation are expressed in a way that provides evidence of the student's knowledge and reasoning processes. The presentation demonstrates a focus and thesis with several narrative gaps. Presentation demonstrates adequate evidence of organization. Presentation has mistakes in attention to the details.	Some ideas in the presentation are expressed in a way that provides evidence of the student's knowledge and reasoning processes. The presentation demonstrates an inadequate focus and thesis. Presentation demonstrates inadequate evidence of organization. Presentation has insufficient attention to the details.
Application: Extension of knowledge to practice in aquaculture and fisheries at the local and global scales.	Synthesizes knowledge of the global implications of individual and societal issues (for example: health, economics, politics, resource use and management, consumption, etc.) in order to make sophisticated, appropriate, and workable decisions relating to those issues.	Identifies the knowledge of the global implications of individual and societal issues (for example: health, economics, politics, resource use and management, consumption, etc.) that is needed in order to make sophisticated, appropriate, and workable decisions relating to those issues.	Identifies global implications of individual and societal decisions relating to aquaculture and fisheries issues (for example: health, economics, politics, resource use and management, consumption, etc.).

*Developed by the FAVS Department at URI based on a modification of a social science rubric from Sweetwood's Illinois Studies.
(https://www.sweetwoodilstudies.com/uploads/3/3/4/8/.../social_science_rubric.pdf)*

Materials Evaluated:

Observation Date and Time:

Name of Evaluator:

Class (Course code and name):

PROBLEM SOLVING VALUE RUBRIC

for more information, please contact value@aacu.org

Definition

Problem solving is the process of designing, evaluating, and implementing a strategy to answer an open-ended question or achieve a desired goal.

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

	Capstone	Milestones		Benchmark
Define Problem	Demonstrates the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors.	Demonstrates the ability to construct a problem statement with evidence of most relevant contextual factors, and problem statement is adequately detailed.	Begins to demonstrate the ability to construct a problem statement with evidence of most relevant contextual factors, but problem statement is superficial.	Demonstrates a limited ability in identifying a problem statement or related contextual factors.
Identify Strategies	Identifies multiple approaches for solving the problem that apply within a specific context.	Identifies multiple approaches for solving the problem, only some of which apply within a specific context.	Identifies only a single approach for solving the problem that does apply within a specific context.	Identifies one or more approaches for solving the problem that do not apply within a specific context.
Propose Solutions/Hypotheses	Proposes one or more solutions/ hypotheses that indicates a deep comprehension of the problem. Solution/ hypotheses are sensitive to contextual factors as well as all of the following: ethical, logical, and cultural dimensions of the problem.	Proposes one or more solutions/ hypotheses that indicates comprehension of the problem. Solutions/ hypotheses are sensitive to contextual factors as well as the one of the following: ethical, logical, or cultural dimensions of the problem.	Proposes one solution/ hypothesis that is “off the shelf” rather than individually designed to address the specific contextual factors of the problem.	Proposes a solution/ hypothesis that is difficult to evaluate because it is vague or only indirectly addresses the problem statement.
Evaluate Potential Solutions	Evaluation of solutions is deep and elegant (for example, contains thorough and insightful explanation) and includes, deeply and thoroughly, all of the following: considers history of problem, reviews logic/ reasoning, examines feasibility of solution, and weighs impacts of solution.	Evaluation of solutions is adequate (for example, contains thorough explanation) and includes the following: considers history of problem, reviews logic/ reasoning, examines feasibility of solution, and weighs impacts of solution.	Evaluation of solutions is brief (for example, explanation lacks depth) and includes the following: considers history of problem, reviews logic/ reasoning, examines feasibility of solution, and weighs impacts of solution.	Evaluation of solutions is superficial (for example, contains cursory, surface level explanation) and includes the following: considers history of problem, reviews logic/ reasoning, examines feasibility of solution, and weighs impacts of solution.
Implement Solution	Implements the solution in a manner that addresses thoroughly and deeply multiple contextual factors of the problem.	Implements the solution in a manner that addresses multiple contextual factors of the problem in a surface manner.	Implements the solution in a manner that addresses the problem statement but ignores relevant contextual factors.	Implements the solution in a manner that does not directly address the problem statement.
Evaluate Outcomes	Reviews results relative to the problem defined with thorough, specific considerations of need for further work.	Reviews results relative to the problem defined with some consideration of need for further work.	Reviews results in terms of the problem defined with little, if any, consideration of need for further work.	Reviews results superficially in terms of the problem defined with no consideration of need for further work.

Materials Evaluated

Observation Date and Time:

Name of Evaluator:

Class (Course code and name):

*** Total number of students, from freshmen to seniors**

5 of the listed outcomes in the STEM Knowledge URI rubric are evaluated in this rubric

Elements	Competent (3)	Approaches Competency (2)	Beginning Competency (1)
Identifies facts, vocabulary, definitions, terms, concepts, people	Correctly identifies or recalls most or all (e.g. 80% or more) of the requested factual information	Correctly identifies or recalls much (e.g. 70%) of the requested factual information	Correctly identifies or recalls some (e.g. 69% or less) of the requested factual information
Recognizes concepts or tools relevant for application to a task	Selects most or all (e.g. 80% or more) relevant concepts for solving a problem; shows thorough awareness of what principles, methods, and concepts are relevant to a problem situation	Selects many (e.g. 70%) relevant concepts for solving a problem; grasps the main points for making the connections to the problem, but misses some	Selects few (e.g. 69% or less) of the relevant concepts for solving a problem; misses a number of useful connections of concepts and/or misses the main “key” that could unlock the problem
Asks questions or frame hypotheses relevant to the task	Poses a question (or questions) that can be addressed within the discipline; does this with a high degree of efficiency, accuracy, and thoroughness	Poses a question (or questions) that can be addressed within the discipline; does this with mixed or moderate degrees of efficiency, accuracy, and thoroughness	Misses the major discipline---linked question(s); focuses on irrelevant aspects; misses major aspects of the problem; and/or poses the wrong question
Collects information relevant to address the task – e.g. data; literature sources	Uses appropriate sources (literature or sample); cites/describes sources correctly; is careful, thorough, specific, accurate, and precise in recording and presenting information	Uses some appropriate sources; cites sources; is careful enough in recording and presenting information to have a reasonably accurate overall perspective on the problem	Misses the most important sources; uses inappropriate sources; does not cite, or incorrectly cites sources; is sloppy, imprecise, or incomplete in ways that may lead to a significantly distorted perspective on the problem
Analyzes: <u>Applies</u> concepts to address the task	Applies relevant concepts thoroughly and correctly to solve a problem	Applies some but not all of the relevant concepts to solve a problem; achieves only part of the correct answer after applying the concepts	Concepts are misapplied; incorrect use of concepts leads to incorrect answer
Analyzes: <u>Deconstructs</u> an argument by indicating claims and/or evidence and <u>contextualizes</u> evidence within theoretical framework	Correctly describes the logic and/or evidence used to convey an argument; distinguishes between facts and inferences; accurately compares and contrasts positions; effectively builds a cogent synthesis	Generally follows the reasoning of the argument but misses some elements of the argument; correctly describes some important aspects of the evidence and logic but not all; builds a reasonable synthesis but misses important points	Argument is misunderstood; synthesis is ill-conceived or not present
Analyzes: <u>Evaluates</u> support for claims and <u>justifies</u> conclusions	Critically evaluates and justifies conclusions by examining strengths and weaknesses of an argument	Demonstrates some ability to critically evaluate and justify conclusions by examining strengths and weaknesses of an argument; misses some important strengths or weaknesses	Does not take an evaluative position or takes a position on weak evidence; does not defend position when called for or conclusions are not supported by evidence
Innovates: <u>Demonstrates</u> innovative and creative thinking with regard to an idea, claim, question, form or performance	Creates a novel or unique idea, claim, question, form or performance using or recognizing creative risk-taking	Experiments with creating a novel or unique idea, claim, question, form or performance	Reformulates a collection of available ideas

BUDGET AND FINANCIAL PLANNING

Adams House, 85 Upper College Road, Kingston, RI 02881 USA

p: 401.874.2509

web.uri.edu/budget

DATE: February 26, 2020

TO: Nasser Zawia
Dean, Graduate School

FROM: Linda Barrett
Director, Budget and Financial Planning

SUBJECT: Proposal for an online Graduate Certificate in Fisheries

As requested In an email from Meredith Silvia, Associate Director of Finance in the College of Environment and Life Sciences, dated February 13, 2020, the Budget and Financial Planning Office has reviewed the budget related to the proposal for an online Graduate Certificate In Fisheries.

The Budget and Financial Planning Office, including communication with Enrollment Services and with the Vice Provost of Faculty Affairs, concurs that the Graduate Certificate in Fisheries will have a small positive net revenue impact on the Fund 106 budget as it has been presented.

Please let us know if you require any further information.

cc: Donald DeHayes	Cheryl Hinkson
Dean Libutti	Colleen Robillard
Matt Bodah	Anne Veeger
John Kirby	Art Gold
Michelle Peach Lang	Marta Gomez-Chiarri
Margaret Benz	Joanne Lawrence
John Humphrey	Kelly Slocum
Diane Goldsmith	Laura Skrobe
Brenton DeBoef	Meredith Silvia
Deborah Messner	

Office/BudgetImpactStatements/GradCertinon!Ineinfisheresscience/BudgetImpactStatementLetter.final

ACADEMIC PROGRAM BUDGET FORM

Use this form for programs that can be pursued on a full-time basis, part-time basis, or through a combination of full-time and part-time attendance. **Page 1 of 3**

Choose one: ☐ Full-time ☐ Part-time ☐ Combination of full- and part-time

REVENUE ESTIMATES

	Year 1 2021		Year 2 2022		Year 3 2023		Year 4 2024	
Tuition: In-State								
Tuition: Out-State								
Tuition: Regional								
Mandatory fees per student								
FTE # of New Students: In-State								
FTE # of New Students: Out-State								
# of In-State FTE students transferring in from the institution's existing programs								
# of Out-State FTE students transferring in from the institution's existing programs								
Tuition: One Rate	\$11,625		\$11,625		\$11,625		\$11,625	
# of New Students	8		10		16		16	
TUITION AND FEES	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs
First Year Students								
In-State tuition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Out-of-State tuition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Regional tuition								
Mandatory fees	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
One-Rate Tuition	\$93,000.00		\$0.00		\$0.00		\$0.00	
Second Year Students								
In-State tuition			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Out-of-State tuition			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Regional tuition								
Mandatory fees			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
One-Rate Tuition			\$116,250.00		\$0.00		\$0.00	
Third Year Students								
In-State tuition					\$0.00	\$0.00	\$0.00	\$0.00
Out-of-State tuition					\$0.00	\$0.00	\$0.00	\$0.00
Regional tuition								
Mandatory fees					\$0.00	\$0.00	\$0.00	\$0.00
One-Rate Tuition					\$186,000.00		\$0.00	
Fourth Year Students								
In-State tuition							\$0.00	\$0.00
Out-of-State tuition							\$0.00	\$0.00
Regional tuition								
Mandatory fees							\$0.00	\$0.00
One-Rate Tuition							\$186,000.00	
Total Tuition and Fees	\$93,000.00	\$0.00	\$116,250.00	\$0.00	\$186,000.00	\$0.00	\$186,000.00	\$0.00
GRANTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
CONTRACTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
OTHER (Specify)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Grants, Contracts, Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL	\$93,000.00	\$0.00	\$116,250.00	\$0.00	\$186,000.00	\$0.00	\$186,000.00	\$0.00

NOTE: All of the above figures are estimates based on projections made by the institution submitting the proposal.

ACADEMIC PROGRAM BUDGET FORM

Use this form for programs that can be pursued on a full-time basis, part-time basis, or through a combination of full-time and part-time attendance

Page 2 of 3

EXPENDITURE ESTIMATES

	Year 1 2021		Year 2 2022		Year 3 2023		Year 4 2024	
	Additional resources required for program	Expenditures from current resources	Additional resources required for program	Expenditures from current resources	Additional resources required for program	Expenditures from current resources	Additional resources required for program	Expenditures from current resources
PERSONNEL SERVICES								
Administrators								
Faculty	7,121		7,335		7,555		7,781	
Support Staff	2,732		2,814		2,898		2,985	
Others	35,499		36,563		37,660		38,790	
Fringe Benefits 43.4%	19,683		20,273		20,881		21,507	
Total Personnel	65,035	\$0.00	66,985	\$0.00	68,994	\$0.00	71,063	\$0.00
OPERATING EXPENSES								
Instructional Resources	9,650		7,195		10,698		13,304	
Other (specify)	2,000		5,980		6,330		6,506	
Total Operating Expenses	11,650	\$0.00	13,175	\$0.00	17,028	\$0.00	19,810	\$0.00
CAPITAL								
Facilities								
Equipment								
Other								
Total Capital	-	\$0.00	-	\$0.00	-	\$0.00	-	\$0.00
NET STUDENT ASSISTANCE								
Assistantships								
Fellowships								
Stipends/Scholarships								
Total Student Assistance	-	\$0.00	-	\$0.00	-	\$0.00	-	\$0.00
TOTAL EXPENDITURES	76,685	\$0.00	80,160	\$0.00	86,022	\$0.00	90,873	\$0.00

NOTE: All of the above figures are estimates based on projections made by the institution submitting the proposal.


Personnel: Faculty-faculty advisor for 2 weeks summer salary; Support Staff-fiscal clerk to coordinate procurement on on-site experience logistics; Others - Professional staff to deliver the program. Fringe: Average fringe for Faculty, Support Staff and Others. Instructional Resource Matlab or similar software, computers, on-site learning experience expenses including: Capn' Bert research vessel use, in-state transportation, honoraria for on-site learning experience. Other Operating: travel for international coordination and instructor professional development, telephone, certificate printing, postage, office supplies.

ACADEMIC PROGRAM BUDGET FORM

Use this form for programs that can be pursued on a full-time basis, part-time basis, or through a combination of full-time and part-time attendance. **Page 3 of 3**

	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024
BUDGET SUMMARY OF COMBINED EXISTING AND NEW PROGRAM				
Total Revenue	\$93,000.00	\$116,250.00	\$186,000.00	\$186,000.00
Total Expenses	\$76,685.00	\$80,160.00	\$86,022.00	\$90,873.00
Excess/Defeciency	\$16,315.00	\$36,090.00	\$99,978.00	\$95,127.00
BUDGET SUMMARY OF EXISTING PROGRAM ONLY				
Total Revenue	\$0.00	\$0.00	\$0.00	\$0.00
Total Expenses	\$0.00	\$0.00	\$0.00	\$0.00
Excess/Defeciency	\$0.00	\$0.00	\$0.00	\$0.00
BUDGET SUMMARY OF NEW PROGRAM ONLY				
Total of Newly Generated Revenue	\$93,000.00	\$116,250.00	\$186,000.00	\$186,000.00
Total of Additional Resources Required for Program	\$76,685.00	\$80,160.00	\$86,022.00	\$90,873.00
Excess/Deficiency	\$16,315.00	\$36,090.00	\$99,978.00	\$95,127.00

NOTE: All of the above figures are estimates based on projections made by the institution submitting the proposal.

From: Meredith Silvia meredithc@URI.EDU 
Subject: CELS: Budget statement for Grad Online Certificate - FIS

Date: February 13, 2020 at 2:46 PM

To: John Stone john_stone@uri.edu

Cc: Marta Gomez-Chiarri gomezchi@uri.edu, Becky Sartini bsartini@uri.edu, Laura Skrobe lskrobe@uri.edu

MS

Dear John,

On behalf of Dr. Marta Gomez-Chiarri, and per Faculty Senate process, the following documents are attached for your review of the Online Graduate Certificate in Fisheries Science:

Full Proposal Form (without course proposal)
Academic Program Budget Form

Per the guidelines, we are requesting a Statement of No Financial Impact from the URI Budget and Financial Planning Office. The proposal does not require JCAP review/approval, as it is a certificate program.

This is a new URI Online program with an anticipated roll-out of Fall 2020. The program will be delivered by existing staff that are currently paid on various college funds. Once the program is live, the existing staff, along with program related expenses, will be paid by the revenue share. This program will be Fund 100.

Each worksheet's tab contains relevant notes for revenue and expense projections. For example, the tuition revenue is based on the graduate in-state per credit fee for all enrolled.


The CELS Curriculum Committee deadline is **February 21st at 5pm**. We hope it is possible to have a decision by that time.

Please let me know if you have any questions or need additional information.


Thank you,
Meredith

Meredith A. Curfman Silvia
Associate Director, Finance
College of the Environment and Life Sciences
411 Center for Biotechnology and Life Sciences (CBLS)
University of Rhode Island
Kingston, RI 02881
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FY21-24 FIS
Acade...20.xlsx



FIS Certificate
Propos...20.pdf

LIBRARY IMPACT STATEMENT (New Program Proposal)
LIBRARIAN'S ASSESSMENT

The Collection Management Officer will complete this form as requested, assessing library materials and collections as detailed below, returning. Subject selectors who receive requests for Library Impact Statements for new programs should forward those requests to the CMO.

Program: Online Graduate Certificate in Fisheries Science_____

Department, College: FAVS/CELS_____

Faculty Member: Marta Gomez-Chiarri and Laura Skrobe_____

Date returned to Faculty: 2/17/2020_____

Librarian Completing Assessment: Joanna M. Burkhardt_____

Collection Management Officer: Joanna M. Burkhardt_____

Assessment of:

- Suitability of existing library resources;
- New library resources required to support the program;
- Information skills education required by the students; and
- Funds needed for library materials and services.

Please include:

1. What library holdings already exist in relevant subject categories? How much money is now allocated in the program subject area?

The library has current and historic materials in relevant subject categories. The allocation for the purchase of monographs for FAVS for 2019-20 is approximately \$3,500. The cost of database subscriptions is not broken out by department or college.

2. Does URI have the essential journals as noted in the Faculty Questionnaire?

URI has online access to all of the essential journals and all of the recommended journals listed on the Faculty Questionnaire.

3. What new resources are required to support the program (including media, electronic, or other non-print materials)?

No new library resources are required for the support of this program.

4. What information mastery sessions will be required for the students?

Information mastery sessions are not required for students in this program. Instructors of individual courses may make an appointment for library instruction for students by contacting the Instruction Unit of the Public Services Department in the library.

5. What is the approximate cost to acquire the materials necessary? Which of these will be continuing costs?

There are no new costs to the library for the support of this program.