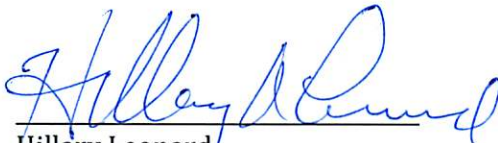


Serial Number #18-19-30

TO: President David Dooley
FROM: Hillary Leonard, Chairperson of the Faculty Senate

1. The attached BILL titled, Curricular Report No. 2018-19-15 from the Graduate Council to the Faculty Senate: Graduate Certificate in Natural Resources and the Environment, is forwarded for your consideration.
2. This BILL was adopted by vote of the Faculty Senate on May 2, 2019.
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 23, 2019, 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.


Hillary Leonard
Chairperson of the Faculty Senate

May 2, 2019

ENDORSEMENT

TO: Chairperson of the Faculty Senate

FROM: President of the University

- a. Approved ____.
- b. Approved subject to Notice of the Council on Postsecondary Education ✓.
- c. Disapproved ____.


Signature of the President

5.13.19
(date)

**THE GRADUATE SCHOOL - UNIVERSITY OF RHODE ISLAND
NEW PROGRAM REPORT FROM THE GRADUATE COUNCIL TO THE
FACULTY SENATE
CURRICULAR REPORT 2018-19-15; 29 April 2019**

At Meeting No. 523 held on 29 April 2019, 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 Online Graduate Certificate in Natural Resources and the Environment will follow the accelerated online academic calendar and include six 7-week courses that develop core competencies in natural resource management theory and practice, data management/quantitative analyses, and spatial mapping (i.e., GIS) and analysis.

BACKGROUND (modified from proposal)

International and domestic students seek expertise and advanced credentials in natural resource management to prepare them for jobs in government and non-profit sectors. Professionals in the field are also interested in updating their skills to employ state-of-the-art techniques for analyzing, managing and communicating data about natural resources. The Online Graduate Certificate in Natural Resources is designed to meet the needs of these students, and the online format will provide the necessary flexibility to accommodate international students, working professionals, and active duty and reserve service members.

**SECTION II
RECOMMENDATION**

The Graduate Council approved the proposal to create a **GRADUATE CERTIFICATE IN NATURAL RESOURCES AND THE ENVIRONMENT** at its Meeting No. 523 held on 29 April 2019, and forwards it to the Faculty Senate with a recommendation for approval.

**Full Proposal Form
For All Programs including Certificates
Requiring New Funding or Resources**

**A Proposal for: ONLINE GRADUATE CERTIFICATE IN NATURAL RESOURCES
AND THE ENVIRONMNET**

Date: 3/1/19

A. PROGRAM INFORMATION

A1. Name of institution University of Rhode Island

A2. Name of department, division, school or college

Department – Natural Resources Science (NRS)

College – Environment and Life Sciences (CELS)

A3. Title of proposed program and Classification of Instructional Programs ([CIP](#)) code

Program title – Graduate Certificate in Natural Resources and the Environment

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 – Spring 2020

First degree date – Fall 2020

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

A6. Description of institutional review and approval process

Department

College

CAC/Graduate Council

Faculty Senate

President of the University

Approval Date

2/28/19

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

International and domestic students seek expertise and advanced credentials in natural resource management to prepare them for jobs in government and non-profit sectors. Professionals in the field are also interested in updating their skills to employ state-of-the-art techniques for analyzing, managing and communicating data about natural resources. The Online Graduate Certificate in Natural Resources is designed to meet the needs of these students, and the online format will provide the necessary flexibility to accommodate international students, working

professionals, and active duty and reserve service members. Upon completion of the Online Graduate Certificate in Natural Resources and the Environment, students will 1) demonstrate the ability to manage contemporary natural resource challenges and 2) be able to translate data into effective communications about complex natural resource issues and solutions for various stakeholders.

The Online Graduate Certificate in Natural Resources and the Environment will follow the online academic calendar and include six 7-week courses that develop core competencies in natural resource management theory and practice, data management/quantitative analyses, and spatial mapping (i.e., GIS) and analysis. Since the target audience for this certificate is current and prospective natural resource managers working outside of academia, the courses will focus on tools and technologies that are both powerful and easily accessible, such as Google Sheets and web-based mapping tools. Course format and learning activities will emphasize collaborative real world problem solving and both oral and written communication—critical skills for modern day natural resource managers.

We expect 20-40 students to enroll in the certificate program each year. Applicants will be expected to provide 1) college transcripts certifying successful completion of a bachelor's degree in a biological, agricultural, or environmental field, 2) two letters of recommendation from peers, mentors, or colleagues attesting to the student's 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 Natural Resources and the Environment. Accepted students will complete a sequence of six 2-credit classes for a total of 12 credits, 4 each for GIS, data management and analysis, and natural resource management theory and practice. 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.

The Online Graduate Certificate in Natural Resources and the Environment will support URI efforts to recruit and retain students in two ways: as a stand-alone program and as a gateway to the Master of Environmental Science and Management (MESM) professional master's program. At the conclusion of the 12 credit online certificate, students can pursue professional opportunities with the benefit of additional skills and credentials. The stand-alone certificate will appeal to working professionals who want to enhance their natural resource management expertise. Courses in the certificate program will be aligned with requirements for the MESM program of study, allows students to obtain a master's degree (MESM) with two additional, on-campus semesters (9 months). This opportunity will be particularly attractive to international students, working professionals, active duty and reserve service members who would like to obtain a master's degree but cannot afford the time or tuition of two years at a U.S. university. The certificate will be reasonably priced to make it attractive relative to similar opportunities at other universities. International students in countries where URI has existing collaborations, such as Indonesia, would be particular targets for this program -- along with active recruitment of individuals associated with the military. An opportunity to obtain a master's degree with a single year of study in the U.S. and one year online will be appealing to international employers and governments that value a highly skilled workforce.

A8. Signature of the President

David M. Dooley

A9. Person to contact during the proposal review

Name: Art Gold

Title: Professor and Chair, NRS

Phone: 401-874-2903

Email: agold@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.

None

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

B1. State the program objectives.

Upon completion of the Online Graduate Certificate in Natural Resources and the Environment, students will 1) demonstrate the ability to manage contemporary natural resource challenges and 2) translate data into effective communications about complex natural resource issues and solutions for various stakeholders.

B2. Explain and quantify the needs addressed by this program, and present evidence that the program fulfills these needs.

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

Natural resource professionals work to meet the competing demands of producing natural resources for consumption while conserving biodiversity and ecological functions, challenges that are growing more intense in an era of human population growth and environmental change. The intended audience for this certificate is professionals currently working in natural resource fields who want to update their skills, international students, military service members, and people who are interested in a career in natural resources but require additional training to be more competitive on the job market. In addition to providing marketable skills as a stand-alone certificate, the Online Graduate Certificate in Natural Resources and the Environment is intentionally designed to be a gateway to URI's MESM program. Students who complete the online certificate could subsequently apply to the MESM program and earn a Master's degree after just 2 semesters on campus since all 12 of their certificate credits would count toward MESM course requirements. This option may be particularly appealing to our target audience, working professionals, international students and military personnel, who would benefit from the increased flexibility and lower cost of distance learning.

There are over 50,000 people in the U.S. currently working for government agencies and non-profit organizations as natural resource professionals ([Bureau of Labor Statistics](#)), many of whom need more advanced training to use and manage the proliferation of environmental data. In the developing world, there is a strong interest in natural resource management related to agriculture, fisheries, mining and forestry. Sustainable natural resource management is a significant challenge for these countries, and we will target early career professionals to provide them with the necessary skills apply data-driven approaches to manage complex environmental

problems. Veterans are frequently given preference for jobs in government and natural resource management. Completing an Online Graduate Certificate in Natural Resources and the Environment is something they can accomplish while on reserve or active duty to enhance their skills.

We note that URI's Market Opportunity Scan suggests that Natural Resources/Conservation is a low growth certificate field. However, the proposed certificate program includes a focus on geographic information science and data science, which are high growth fields for employment. The US Department of Labor identified geotechnology, including Geographic Information Systems (GIS), as one of the most important emerging and evolving fields, comparable to the fields of nanotechnology and biotechnology¹. Education in GIS and remote sensing is now a fundamental expectation required of the new generation of workforce in environmental science and natural resources management. GIS technologies are pervasive in the land management workplace and are critical support tools for resource conservation, land use planning, pollution abatement, water resources management, and environmental protection. In addition, given that this certificate offers the potential to complete the MESM degree with two full time semesters at URI, we expect considerable interest in the certificate. The MESM program has exhibited strong enrollment drawing students from URI, other institutions, international students and military service members. MESM graduates have been very successful in their employment, with positions in the private and public sector.

b. 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](#), employment of natural resource professionals including conservation scientists, foresters, and wildlife biologists, is expected to grow ~5-7% in the U.S. by 2026. We anticipate that the emphasis on managing, analyzing and applying spatial data will provide our students with an advantage in the job market. Salaries for natural resource professionals start at ~\$34,000 and with a mean annual wage of ~\$61,000.

B3. If an external advisory or steering committee was used to develop the program, identify committee members and their affiliations and describe the committee's role.

No external committee was used.

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 Natural Resources Science and MESM.

¹ Gewin, V, 2004. Mapping Opportunities, *Nature*, Vol. 427, Jan. 2004.

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 graduates prepared for an ever-changing world.* This Online Graduate Certificate in Natural Resources and the Environment is designed to provide students with the skills they need to manage and solve complex natural resource management problems. “Expanding online course offerings for all students and for targeted populations (adult learners)” is a specific action under Strategy 1 that this Online Graduate Certificate in Natural Resources and the Environment would address. Although not specifically mentioned as an action, the intentional design of this Online Graduate Certificate Program as a gateway to MESM for working professionals and international students would also address Strategy 6 “Focus on access and affordability and improve credit and degree completion rates for all undergraduate and graduate students, with specific attention in data reporting to underrepresented, economically disadvantaged, international, out-of-state, and in-state populations.” *Goal 2: Achieve high-impact, translational, and innovative research, scholarship, and creative work that addresses state, regional, and world challenges to improve health, environmental sustainability, economic development, and the human experience.* One of the primary goals of the Online Graduate Certificate in Natural Resources and the Environment is to train students to integrate natural resource management theory with quantitative data to improve environmental sustainability. *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, to attract students to the Online Graduate Certificate in Natural Resources and the Environment. We also see it as a strategy to expand opportunities for international students by creating an explicit connection between the Online Graduate Certificate in Natural Resources and the Environment and the MESM program so that students could obtain a master’s degree through a combination of 12 credits from the online certificate and 20-28 additional credits on-campus.

C2. Explain the relationship of the program to other programs offered by the institution.

This program is unique, but it is designed to have strong connections to MESM’s professional master’s program, which currently enrolls approximately 50 students. In addition to providing students with valuable skills as a stand-alone certificate, this program will serve as gateway to URI’s MESM program. Students who complete the Online Graduate Certificate in Natural Resources and the Environment will be able to subsequently apply to the MESM program and earn a Master’s degree after just 2 semesters on campus since all 12 of their certificate credits would count toward MESM course requirements. Annually, the MESM program attracts 4-5 international students and 1-3 active duty, reserve or veteran service members. We anticipate that even more students and employers would be drawn to the program if they could complete one year online followed by just two semesters on-campus.

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. List similar programs offered in the state and region, and compare the objectives of similar programs. If similar programs exist, how is this program different or why is duplication necessary?

There are no similar online programs in the State or the region, although several institutions offer on-campus certificates and degrees in related fields. Since this program is online, it provides a unique opportunity for working professionals, military service members and international students who would benefit from the increased flexibility and lower cost of an online certificate. The Natural Resources Distance Learning is a collaboration of 10 universities who provide more than 300 classes and multiple online degrees and certificates in a variety of natural resource management disciplines, but none of the affiliated universities are located in the Northeastern U.S. Virginia Tech is the closest to Rhode Island.

D2. Estimate the projected impact of 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?

As indicated above, there are no similar online programs at other public higher education institutions in Rhode Island. Since we will be targeting non-traditional students for whom the benefits of distance learning would be particularly attractive, we do not anticipate an impact on existing on-campus programs that cover related content. We have not directly communicated with other institutions about this program.

D3. 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*](#)).

Not applicable. Students in programs that qualify to apply for the Online Graduate Certificate in Natural Resources and the Environment are covered under existing agreements for undergraduate programs already established at URI.

D4. 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.

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

Students in biological, agricultural or environmental related majors at other institutions will be able to apply to complete this graduate certificate (see application information below in G4).

c. 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 natural resource management will strengthen the ability of students to be accepted into other institutions for next degree levels. It will also serve as a professional certificate enabling those who are uninterested in the next degree level to directly seek employment upon completion of the certificate requirements.

d. 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 Natural Resources and the Environment as soon as they fulfill the requirements of the application process (see application information below in G4).

D5. 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.

D6. 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: 12 credits of graduate coursework that consists of 4 credits of GIS (EVS 509 and EVS 511), 4 credits of data management and analysis (EVS 514 and EVS 515) and 4 credits of natural resource management theory and practice (EVS 518 and EVS 519).

Each of the required classes will be a new course developed specifically to support this program. The new course proposals will be submitted concurrently with this new program proposal.

EVS 509 Web-based Mapping 1: This course is designed to provide grounding in the conceptual foundations of GIS while developing competency using web-based GIS tools to explore and communicate spatial information.

EVS 511 Web-based Mapping 2: This course is designed develop expertise using web-based GIS tools to analyze spatial patterns and relationships that are relevant to environmental and natural resource management.

EVS 514 Environmental Data Management and Visualization: This course focuses on developing knowledge and skills to manage environmental datasets using best practices to ensure data quality as well as employing standard approaches to summarize and communicate findings.

EVS 515 Environmental Data Analysis: This course will provide a foundation for analyzing environmental datasets to inform scientific understanding and management decisions, with a particular focus on tools for natural resource management and monitoring.

EVS 518 Sustainable Natural Resource Management: This course provides an in-depth exploration of emerging and established approaches to sustainable natural resource management from a variety of disciplines.

EVS 519 Natural Resource Management Planning: This course presents frameworks for natural resource decision making that facilitate development of management objectives, evaluation and selection of management alternatives, and assessment of management outcomes.

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.

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 12 credits over the course of 12 months to earn the Online Graduate Certificate in Natural Resources and the Environment, 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, EVS 509, EVS 511, EVS 514, EVS 515, EVS 518 and EVS 519, will be delivered by way of 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. **Demonstrate that student learning is assessed based on clear statements of learning outcomes and expectations and provide an assessment plan.**

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

Upon completion of the Online Certificate in Natural Resources and the Environment graduates will 1) demonstrate the ability to manage contemporary natural resource challenges and 2) translate data into effective communications about complex natural resource issues and solutions for various stakeholders. Three specific learning outcomes support the overall program goals. Upon completion of the Online Graduate Certificate in Natural Resources and the Environment, students will be able to:

1. Manage, summarize, and synthesize data relevant to natural resource management;
2. Create solutions to natural resource management challenges using data driven approaches; and
3. Create appropriate data visualization and narratives around natural resource challenges for various stakeholders.

- b. **Demonstrate that student learning is assessed based on clear statements of learning outcomes and expectations.**

Student learning outcomes have been reviewed by both the Learning Outcomes Oversight Committee and the Office of Student Learning, Outcomes Assessment, and Accreditation (see attached LOOC memo and SLOAA/LOOC feedback). Note that a student learning outcome assessment timeline and associated rubrics are not required at this time for certificate programs.

- c. **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 \(SLOAA\)](#) when preparing the [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 Program 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 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) at approximately 0.66 FTE to develop and deliver course content and a second Lecturer (or similar title) to provide ongoing support and integration with the MESM program at approximately 0.05 FTE. The NRS Department Chair will be responsible for program oversight (see section H for more details). Dr. Michelle Peach, a post-doctoral researcher in NRS, will be responsible for developing and delivering all course content. Once the Online Graduate Certificate in Natural Resources and the Environment is operational, she will transition to a Lecture position and be supported by tuition revenue from the program (0.66 FTE non-tenure track position). Dr. Brett Still will support program development and integration with the MESM program (0.05 FTE non-tenure track employee).

F2. List anticipated support staff, the percent of their time to be spent in the program, and whether these are reassignments or new positions. Indicate total full-time equivalent (FTE) positions required for the program.

Anticipated support staff is a Fiscal Clerk (or similar title) at approximately 0.05 FTE. This does not require a new position but will be a reassignment of existing staff's current duties.

F3. Summarize the annual costs for faculty and support staff by indicating salaries and fringe benefits (adjusted for the proportion of time devoted to the program). Distinguish between existing resources and new resources. Specify in the narrative if resources are to be provided by more than one department. Include the salary and benefits information on the Rhode Island Office of Postsecondary Commissioner [budget form](https://www.riopc.edu/page/academic_program/) (https://www.riopc.edu/page/academic_program/)

During Year 1 we estimate a total personnel cost of \$59,945.00. That includes \$39,890.00 for Michelle Peach at 0.66 FTE, \$2,868.00 for Brett Still at 0.05 FTE, \$2,500 for Art Gold, and \$2,430.00

for Support Staff at 0.05 FTE as well as \$12,256.00 for fringe benefits. These positions will be existing CELS faculty/staff who will shift responsibilities to this program. As a result, the source of funding that pays for the faculty/staff salaries and fringe benefits associated with this program will now come from the tuition/revenue generated by the Online Graduate Certificate in Natural Resources and the Environment.

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.

There are four primary types of students who would be attracted to the Online Graduate Certificate in Natural Resources and the Environment: professionals working in natural resource fields who want to update their skills, active duty and reserve service members, international students, and people who want to work in natural resource fields but need additional skills to be more competitive. International partners from countries where students regularly enroll in the MESM program have expressed interest in online programs, indicating an unmet need for a program like this. Preliminary conversations with military personnel have also indicated a desire for more flexible learning opportunities that can be met through online programs. The objective is to attract new students, particularly students who may not be able to enroll in on-campus programs due to cost or lack of schedule flexibility. We expect that employees from international agencies or governments (such as the Indonesia Ministry of Environment and Forestry) will be interested in the program. This program will also be useful for employees in State (Rhode Island Department of Environmental Management), Federal (NOAA, US FS, US EAP, USDA, NPA) or non-governmental (The Natural Conservancy, local land trusts) agencies. Undergraduates from programs such as Natural Resources Science, Biology, and Marine Affairs would be a potential source of students.

G2. Estimate the proposed program size and provide projected annual full-time, part-time, and FTE enrollments for one complete cycle of the program. Provide a specific rationale for the assumptions made in the projections. Depending on the nature of the program, use the FTE or part-time estimates of enrollment on the Rhode Island Office of Postsecondary Commissioner [budget form](https://www.riopc.edu/page/academic_program/) (https://www.riopc.edu/page/academic_program/)

We expect to attract about 5-10 students per year initially building up to 20-40 per year. The number of initial graduates will be 5-10 depending on initial enrollment. These numbers are based on the interest expressed from international partners, particularly in Indonesia, military service members, and current students.

G3. Indicate how the institution provides programs and services designed to assist students in achieving their academic goals.

Distance learning students are eligible for all of the support services that are available to on-campus students including disability services and academic enhancement.

G4. List the program admission and retention requirements for students. Provide descriptions of the specific criteria and methods used to assess students' ability to benefit from the program. Describe how satisfactory academic progress will be determined.

Students will be selected by the Program Coordinator (Dr. Art Gold, NRS Department Chair) with the aid of a committee composed of two other members of NRS faculty and staff. Selection will be based on the following criteria: 1) current enrollment or completion of Bachelors of Science or Bachelors of Arts in a biological, agricultural, or environmental field (based on college transcripts), 2) ability to complete graduate-level course work (based on two letters of recommendation from peers, mentors or colleagues) and 3) match or fit of career goals with program (based on a personal written statement explaining why the student is seeing a University of Rhode Island Online Graduate Certificate in Natural Resources and the Environment). GREs are not required. Students are responsible for meeting the prerequisites for individual courses, as applicable. Students accepted into the program will be advised on which course prerequisites should be fulfilled prior to or during the first semester in the program.

G5. Indicate available funds for assistantships, scholarships and fellowships. Include this information on the Rhode Island Office of Postsecondary Commissioner [budget form](https://www.riopc.edu/page/academic_program/budget_form) (https://www.riopc.edu/page/academic_program/budget_form)

No funds are currently available.

H. ADMINISTRATION: Administrative oversight for the program should be sufficient to ensure quality.

H1. Indicate how the program will be administered and the degree to which this work will affect the administrative structure in which it is located.

This program will be administered through the Department of Natural Resources Science under the oversight of the Department Chair, Dr. Art Gold. The program will not affect the administrative structure of the department

H2. Indicate the titles of the persons who will have administrative responsibility for the program and the percent of time each will spend on the program.

Dr. Art Gold, Department Chair of NRS will have administrative responsibility for the program. Since he already supervises all faculty and staff associated with the Online Certificate in Natural Resources and the Environment, it will not require a significant shift in his workload.

H3. Indicate additional annual administrative salaries and related costs to be associated with the program. Distinguish between existing resources and new resources. Include this information on the Rhode Island Office of Postsecondary Commissioner [budget form](https://www.riopc.edu/page/academic_program/budget_form) (https://www.riopc.edu/page/academic_program/budget_form)

No other administrative costs are expected for the program (see the attached Academic Program Budget).

I. INSTRUCTIONAL RESOURCES: The instructional resources should be sufficient in quantity, quality, and timeliness to support a successful program.

I1. Estimate the number and cost of relevant print, electronic, and other non-print library materials needed (and those available) for the program and compare with recommendations of national accrediting agencies.

The program does not require any additional expenditures for library materials. Existing subscriptions to electronic journals will be adequate.

I2. Identify and evaluate other instructional resources and instructional support equipment (such as computers, laboratory equipment, supplies, clinical space, internships, proctors) in terms of overall capability to satisfy the needs of the program. If these instructional resources are considered insufficient or if upgrading is necessary for the development of the program, the additional needs should be detailed and their cost estimated.

Since this is an online program, a high quality computer (\$1,500) and video capture hardware and software are required (\$1,200).

I3. Estimate annual expenditures for instructional resources. Distinguish between existing resources and new resources. The information should reflect the annual operation and maintenance of the instructional resources, recurrent costs and costs for necessary additions. Include this information on the Rhode Island Office of Postsecondary Commissioner [budget form](#) (https://www.riopc.edu/page/academic_program/)

GIS licenses will be required for EVS 509, 511 and 519. We have budgeted \$2,300-4,000/year to contribute to the University-wide fee for access to ESRI products. We have also budgeted \$6,000-9,808.00/year to cover the cost of website development and maintenance, office supplies, telephones, postage, and travel for faculty recruitment as well as professional development.

I4. Provide a [Library Impact Statement](#).

The Library Impact Statement is attached below.

J. FACILITIES AND CAPITAL EQUIPMENT: Facilities and capital equipment should be sufficient in quantity, quality, and timeliness to support a successful program.

J1. Describe the facilities and capital equipment (e.g., classrooms, office space, laboratories, and telecommunications equipment) and assess the adequacy of these resources relative to the program and to the requirements of the American with Disabilities Act and state disability statutes.

None required.

J2. If new or renovated facilities are necessary, explain in detail (e.g., requirements, costs, sources of revenue, and expected date of completion). Include this information on the Rhode Island Office of Postsecondary Commissioner [budget form](https://www.riopc.edu/page/academic_program/) (https://www.riopc.edu/page/academic_program/)

None required.

J3. Estimate the annual additional expenditures for new program facilities and capital equipment. Include this information on the Rhode Island Office of Postsecondary Commissioner [budget form](https://www.riopc.edu/page/academic_program/) (https://www.riopc.edu/page/academic_program/)

None required.

J4. Indicate whether the needed facilities are included in the institution's master plan.
None required.

K. FINANCIAL CONSIDERATIONS: Projected revenues should be sufficient to support a successful program and must cover the estimated costs of the program.

K1. Expenditures for program initiation and annual operation should be estimated and displayed in the proposed budget. The summary should enable the reader to understand expenditures for a period representative of one full program cycle.

Covered in the attached Academic Program Budget.

K2. Revenue estimates should be provided for a similar period of time. For a new program, the appropriateness and feasibility of instituting differential tuition and/or fees should be addressed.

NOTE: Excel budget forms (Rhode Island Office of Postsecondary Commissioner https://www.riopc.edu/page/academic_program/) are self-calculating.

Covered in the attached Academic Program Budget.

K3. Describe how current institutional resources will be redeployed or extra institutional resources will be obtained to support the program (e.g., describe program eliminations, staff reallocations and/or external sources of monies).

Ultimately, the goal is for the revenue share from this program to cover the cost of staff salaries and other program expenses. 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.

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

L1. 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.

L2. Describe and quantify the program's criteria for success.

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

L3. If the proposed program is eligible for specialized accreditation, indicate name and address of the accrediting agency and a list of accreditation requirements. If specialized accreditation is available but not sought, indicate reasons.

Not eligible.

L4. Describe the process that communicates the results of the program evaluation to appropriate institutional stakeholders and uses the outcomes for program improvement.

We expect to review all aspects of the program and all metrics with the Dean and Associate Deans of CELS on an annual basis. The regular workload planning process will provide an annual opportunity to review program criteria for success as well as staffing needs and make adjustments as necessary.

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: _Graduate Certificate in Natural Resources and the
Environment_____

Department, College: _NRS, CELS_____

Faculty Member: _Art Gold/Michelle Peach_____

Date Received: _2/27/19_____

Date returned to Faculty: _2/27/19_____

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 URI Libraries have substantial holdings in relevant subject areas. The allocation for monographs for the 2018-19 fiscal year for Biological and Molecular Science is \$1,000. The allocation for Environmental and Resource Management Economics is \$2,000. There are other relevant subject areas for this program and there are sufficient funds in all areas for the purchase of monographs. The cost of journal subscriptions is not broken out by department or college.

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

URI has access to all of the essential journals as noted in the Faculty Questionnaire:

Conservation Biology (1987 – present)

Biological Conservation (1968 – present)

Ecological Applications (1991 – 2016)

Journal of Applied Ecology 1964 – present)

Wildlife Monographs (freely available online)

Forest Ecology and Management (2000 – present)

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

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

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

Information mastery sessions are not required. Individual instructors may make appointments with the Instruction Unit of the Public Services Department of the library at the beginning of any semester to arrange for library instruction as needed.

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.

rev 3-2-17

Full Proposal Form
For All Programs including Certificates
Requiring New Funding or Resources

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 2020		Year 2 2021		Year 3 2022		Year 4 2023	
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	\$9,300		\$9,300		\$9,300		\$9,300	
# of New Students	8		12		16		20	
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	\$74,400.00		\$111,600.00		\$148,800.00		\$186,000.00	
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			\$0.00		\$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					\$0.00		\$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							\$74,400.00	
Total Tuition and Fees	\$74,400.00	\$0.00	\$111,600.00	\$0.00	\$148,800.00	\$0.00	\$260,400.00	\$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	\$74,400.00	\$0.00	\$111,600.00	\$0.00	\$148,800.00	\$0.00	\$260,400.00	\$0.00

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

Note: Enrollment projections are conservative. Tuition is based on one-rate for the program. The program is one-year and requires 12 credits. There are no mandatory fees. In future years, anticipate high international enrollment and may need to contract with international universities with instructors on-site at a reduced program fee.

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 2020		Year 2 2021		Year 3 2022		Year 4 2023	
	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	\$45,259.00		\$46,617.00		\$48,016.00		\$49,456.00	
Support Staff	\$2,430.00		\$2,503.00		\$2,578.00		\$2,655.00	
Others								
Fringe Benefits %	\$12,256.00		\$12,624.00		\$13,003.00		\$13,393.00	
Total Personnel	\$59,945.00	\$0.00	\$61,744.00	\$0.00	\$63,597.00	\$0.00	\$65,504.00	\$0.00
OPERATING EXPENSES								
Instructional Resources	\$5,000.00		\$5,200.00		\$5,206.00		\$7,212.00	
Other (specify)	\$6,000.00		\$9,040.00		\$9,420.00		\$9,808.00	
Total Operating Expenses	\$11,000.00	\$0.00	\$14,240.00	\$0.00	\$14,626.00	\$0.00	\$17,020.00	\$0.00
CAPITAL								
Facilities								
Equipment								
Other								
Total Capital	\$0.00	\$0.00	\$0.00	\$0.00	\$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	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL EXPENDITURES	\$70,945.00	\$0.00	\$75,984.00	\$0.00	\$78,223.00	\$0.00	\$82,524.00	\$0.00

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

Note: Instructional Resources: FY20 includes initial investment in video capture hardware/software and computer, as well as GIS software license fee.

Note: Other operating expenses include: website development and maintenance, office supplies, telephones, postage, and travel for faculty for recruitment as well as professional development. FY20 incurs cost for web development and subsequent years for website maintenance.

Note: Salary for FY20 based on Faculty 1 - \$39,890 (66% CY); Faculty 2 - \$2,868 (2 wks summer); Staff 1 - \$2,430. Subsequent years have 3% increases.

Note: Fringe rate is the average of all faculty (health waiver) and support staff (family health).

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 2020	Year 2 2021	Year 3 2022	Year 4 2023
BUDGET SUMMARY OF COMBINED EXISTING AND NEW PROGRAM				
Total Revenue	\$74,400.00	\$111,600.00	\$148,800.00	\$260,400.00
Total Expenses	\$70,945.00	\$75,984.00	\$78,223.00	\$82,524.00
Excess/Defecency	\$3,455.00	\$35,616.00	\$70,577.00	\$177,876.00
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/Defecency	\$0.00	\$0.00	\$0.00	\$0.00
BUDGET SUMMARY OF NEW PROGRAM ONLY				
Total of Newly Generated Revenue	\$74,400.00	\$111,600.00	\$148,800.00	\$260,400.00
Total of Additional Resources Required for Program	\$70,945.00	\$75,984.00	\$78,223.00	\$82,524.00
Excess/Deficiency	\$3,455.00	\$35,616.00	\$70,577.00	\$177,876.00

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

Student Learning Outcomes Assessment Plan For Accredited and Non-Accredited Graduate Programs, all New Programs and Certificates

Identified programs must have clearly articulated program goals (Section I) and student learning outcomes statements linked to curriculum and course experiences/requirements (Section II). This Assessment Plan will help programs determine the extent to which these outcomes are aligned with courses and other program requirements providing students with opportunities to develop and master the learning outcomes by graduation. As part of the Plan, each program will also create an assessment timeline (Section III) indicating when and how learning outcomes assessment will take place.²

Program Information:

Program:	Online Certificate in Natural Resources and the Environment
Academic year plan submitted:	2018-2019
Degree(s):	Certificate
Department Chair:	Art Gold
Program Director:	
Accredited Program:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes, next accreditation report due:
Published learning outcomes (provide 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.

#1	Graduates will demonstrate the ability to manage contemporary natural resource challenges.
#2	Graduates will translate data into effective communications about complex natural resource issues and solutions for various stakeholders.
#3	
#4	

² If you have questions or need assistance, please contact: Office of Student Learning, Outcome Assessment, and Accreditation at assess@uri.edu.

Student Learning Outcomes Assessment Plan For Accredited and Non-Accredited Graduate Programs, all New Programs and Certificates

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 sequence, and add a standard description of your program requirements. Down the side, list programmatic 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.

Program:		Course Numbers/Program Requirements:													
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Map Key I = Outcome Introduced R = Outcome Reinforced E = Outcome </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. ¹		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.													
		EVS 509	EVS 511	EVS 514	EVS 515	EVS 518	EVS 519								
Goal #1	1.1 Manage, summarize, and synthesize data relevant to natural resource management	I/R	E	I/R	E	R	E								
	1.2 Create solutions to natural resource management challenges using data driven approaches.	I	R	I	R	E	E								
Goal #2	2.1 Create appropriate data visualization and narratives around natural resource challenges for various stakeholders.	I	R	I/R			E								

¹It is recommended that students take the courses in the following order: EVS 509, EVS 511, EVS 514, EVS 515, EVS 518, EVS 519. In order to provide flexibility for non-traditional students, however, it is only required that students take EVS 509 prior to EVS 511, EVS 514 prior to EVS 515, and EVS 519 as the final course in the program.

Student Learning Outcomes Assessment Plan For Accredited and Non-Accredited Graduate Programs, all New Programs and Certificates

Section III. Assessment Timeline:

Indicates 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 you will plan to assess the program-level student learning outcomes. Note: 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 during the 6-year plan.

Academic Years	Outcome(s)	Course(s) and Other Program Requirements	Assessment Evidence (direct/indirect)	Assessment Method
	<u>WHICH</u> outcome(s) will you examine in each period (use number(s) from curriculum map, e.g. 1.1)	<u>WHERE</u> will you look for evidence of student learning (i.e., what course(s)/program requirements)? Designate for each outcome.	<u>WHAT</u> student work or other evidence will you examine in order to generate conclusions and recommendations? Designate for each requirement.	<u>HOW</u> will you look at the evidence; what means will you use to quantify the evidence? Designate for each source of evidence.
Assessment Reporting Period 1 Report Due May 2022 (year 2)				
Assessment Reporting Period 2 Report Due May 2024 (year 4)				
Assessment Reporting Period 3 Report Due May 2026 (year 6)				

NOTE: This section is not currently required for certificate programs.



BUDGET AND FINANCIAL PLANNING

Adams House, 85 Upper College Road, Kingston, RI 02881 USA p: 401.874.2509 web.uri.edu/budget



DATE: March 28, 2019

TO: Dr. Nasser Zawia
Dean, Graduate School

FROM: Linda Barrett
Director, Budget and Financial Planning

SUBJECT: Proposal for an online Graduate Certificate in Natural Resources and the Environment

As requested in an email from Meredith Silvia, Associate Director of Finance in the College of Environment and Life Sciences, dated March 14, 2019, the Budget and Financial Planning Office has reviewed the budget related to the proposal for an online Graduate Certificate in Natural Resources and the Environment.

The Budget and Financial Planning Office, including communication with Enrollment Services, concurs that the Graduate Certificate in Natural Resources and the Environment will have a small positive net revenue impact on the Fund 100 unrestricted budget as it has been presented.

Please let us know if you require any further information.

cc: Donald DeHayes
Dean Libutti
Matt Bodah
John Kirby
Michelle Peach
Margaret Benz
John Humphrey
Diane Goldsmith

Cheryl Hinkson
Colleen Robillard
Anne Veeger
Art Gold
Laura Beauvais
Joanne Lawrence
Kelly Slocum

Office/BudgetImpactStatements/GradCertinnaturalresourcesandtheenvironment/BudgetImpactStatementLetter.final



MEMORANDUM

March 18, 2019

To: Michelle Peach and Art Gold

From: Kris Bovy, LOOC Chair

KMB

Re: NRE Online Certificate Assessment Plan Review and Approval

This memo and the attached SLOAA-LOOC Plan Review Feedback Form constitute approval of your Program Assessment Plan for the proposed Online Certificate in Natural Resources and the Environment.

The new version of the plan (also attached) has the approval date on the first page, and should replace any previous versions of this document. Please include this letter and the two attachments in your program proposal, and **ensure that any language relating to learning outcomes, goals, etc. in your final proposal aligns with the final approved draft** of the Assessment Plan.

Good luck and speed with your full proposal!

Cc: E. Finan

Attachments

NEW CERTIFICATE ASSESSMENT PLAN REVIEW

Date SLOAA review:
3/15/19
Date LOOC* review
submitted to program:
3/18/19
***(LOOC Chair and review**
subcommittee)

Academic Program/Degree: Certificate in Natural Resources and the Environment (Online)

College: College of Environment and Life Science

Date New Program Assessment Plan Submitted: 3/15/19

Faculty Member(s) Submitting Plan Proposal: Michelle Peach, Art Gold

F E E D B A C K	Strengths:
	SLOAA: <ul style="list-style-type: none"> The Assessment Plan details 2 broad goals and 3 learning outcomes which define the specific skills, knowledge and abilities students will acquire as they earn the certificate through the required 6 2-credit curriculum, some of which are pre-requisites to others which indicates a carefully curated curriculum with opportunity for skill-building and immediate practice which culminates in a required final project (management plan). The certificate is positioned for working professionals which is further supported via the online modality and designed to improve skills that will be immediately applicable in students' current workplace. There is alignment with an existing Master's program (MESM) which further increases the academic opportunities for the graduates.
	LOOC: <ul style="list-style-type: none"> The six-course sequence is clearly aligned with the learning outcomes goals and provides students with multiple opportunities to achieve the expected competencies. The culminating course is designed for students to demonstrate overall attainment of all learning outcome goals.
	Suggestions for improvement:
	SLOAA: (The program responded to questions and suggestions for clarity during the process of developing the plan.) LOOC: <ul style="list-style-type: none"> Consider adding a note beneath the Curriculum Map, which lists the suggested order of the courses, which would help with interpretation of the I/R/E designations (e.g. GIS courses EVS 510, followed by EVS 511...).
	Issue(s) of note:

SLOAA:

- At this time, certificates are not required to submit biennial reports on the assessment of student learning outcomes and therefore the timeline is not included. The program faculty did create an initial timeline for assessment, however, which should have value internally to track learning and respond to curricular or learning issues which may arise.

LOOC:

- The full proposal (section E3b) should be updated to reflect that a timeline and rubrics are not required at this time. This will help avoid confusion during Curriculum Committee Review. Also, note that the wording of Outcome 2.1 is slightly different in the proposal (Create “appropriate” vs. Create “effective”...); choose one and make sure they match. Also, the courses listed under E1a (1st sentence) lists “EVS 110 and EVS 110” and “EVS 114 and EVS 115.” These should be EVS 510 and EVS 511 and EVS 514 and EVS 515, correct?

Assessment Plan Designation:

1 <input checked="" type="checkbox"/>	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		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Incomplete	<i>Suggestions:</i>		
Criteria		<i>Efficacy of Plan Description & Content</i>				<i>Suggestions for improvement</i>
		Less Developed	Developing	Well Developed	Not addressed	
PART I	1. Program goals					
	a. Broad statements of program learning goals	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	b. Limited in number (ideally 2-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
PART II	2. Learning outcomes/competencies					
	a. Linked to goals (numbered 1.1 etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	b. Each goal is represented by at least one outcome	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	c. Statements are observable/measurable	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	d. Directed at what students will know or be able to do	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	e. Reasonable number (ideally 1-3 per goal)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. Curriculum Map						

	a. Program requirements are listed, developmentally when possible	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	b. Outcomes are linked to appropriate requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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

Student Learning Outcomes Assessment Plan For Accredited and Non-Accredited Graduate Programs, all New Programs and Certificates

Date SLOAA review:
3/15/19
Date LOOC* review
submitted to program:
3/18/19
*(LOOC Chair and review
subcommittee)

Identified programs must have clearly articulated program goals (Section I) and student learning outcomes statements linked to curriculum and course experiences/requirements (Section II). This Assessment Plan will help programs determine the extent to which these outcomes are aligned with courses and other program requirements providing students with opportunities to develop and master the learning outcomes by graduation. As part of the Plan, each program will also create an assessment timeline (Section III) indicating when and how learning outcomes assessment will take place.¹

Program Information:

Program:	Online Certificate in Natural Resources and the Environment
Academic year plan submitted:	2018-2019
Degree(s):	Certificate
Department Chair:	Art Gold
Program Director:	
Accredited Program:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes, next accreditation report due:
Published learning outcomes (provide URL):	When the certificate is approved, the program will forward the URL of the published learning outcomes on the program website to the assessment office.

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.

#1	Graduates will demonstrate the ability to manage contemporary natural resource challenges.
#2	Graduates will translate data into effective communications about complex natural resource issues and solutions for various stakeholders.
#3	
#4	

¹ If you have questions or need assistance, please contact: Office of Student Learning, Outcome Assessment, and Accreditation at assess@uri.edu.

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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 sequence, and add a standard description of your program requirements. Down the side, list programmatic 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.

Program:		Course Numbers/Program Requirements:													
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Map Key I = Outcome Introduced R = Outcome Reinforced E = Outcome Emphasized </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.		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.													
		EVS 510	EVS 511	EVS 514	EVS 515	EVS 518	EVS 519								
Goal #1	1.1 Manage, summarize, and synthesize data relevant to natural resource management	I/R	E	I/R	E	R	E								
	1.2 Create solutions to natural resource management challenges using data driven approaches.	I	R	I	R	E	E								
Goal #2	2.1 Create appropriate data visualization and narratives around natural resource challenges for various stakeholders.	I	R	I/R			E								

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[Assessment reporting is not required of certificate programs at this time. This page is intentionally left blank.]

Section III. Assessment Timeline:

Indicates 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 you will plan to assess the program-level student learning outcomes.

Note: 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 during the 6-year plan.

Academic Years	Outcome(s)	Course(s) and Other Program Requirements	Assessment Evidence (direct/indirect)	Assessment Method
	<u>WHICH</u> outcome(s) will you examine in each period (use number(s) from curriculum map, e.g. 1.1)	<u>WHERE</u> will you look for evidence of student learning (i.e., what course(s)/program requirements)? Designate for each outcome.	<u>WHAT</u> student work or other evidence will you examine in order to generate conclusions and recommendations? Designate for each requirement.	<u>HOW</u> will you look at the evidence; what means will you use to quantify the evidence? Designate for each source of evidence.
Assessment Reporting Period 1 Report Due May 2022 (year 2)				
Assessment Reporting Period 2 Report Due May 2024 (year 4)				
Assessment Reporting Period 3 Report Due May 2026 (year 6)				