THE
UNIVERSITY
OF RHODE ISLAND

Appendix N

Revised 12/2016

Abbreviated Proposal form
For All Programs including Certificates
No New Funding

A Proposal for: **MARINE TECHNICAL CERTIFICATE PROGRAM (Undergraduate Certificate)**

Date: **10/31/19**

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 - MARINE TECHNICAL CERTIFICATE PROGRAM
Classification code (CIP) – 30.3201 (Marine Sciences)

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 May 2021

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

A6. Description of institutional review and approval process

	Approval Date
Department	
College	
CAC/Graduate Council	
Faculty Senate	
President of the University	

A7. Summary description of proposed program (not to exceed 2 pages)- see supporting documentation for Catalog Description.

The URI Marine Technical Certificate Program provides students with experiential learning opportunities to acquire technical skills and professional certifications needed for marine-related research careers. Skills include boat handling, scuba diving, underwater research, equipment maintenance, and troubleshooting in adverse conditions in field-based settings. These skills are critical for performance in disciplines such as marine biology, oceanography, aquaculture, fisheries, biological sciences, biomedical technology, natural resources science, ocean engineering, underwater archaeology, and maritime history. Participants will acquire field-based experiences and the necessary professional certifications per the American Academy of

Underwater Sciences (AAUS), the World Recreational Scuba Training Council (WRSTC), and any relevant equipment service technician certifications. Upon completion of this undergraduate certificate, students will have the learning to: 1) apply technical skills to tackle real world research questions around marine and environmental issues, 2) demonstrate practical and technical skills in scuba diving, boating operations, and specialized underwater research necessary for fieldwork, and 3) apply knowledge to troubleshoot equipment-related issues when conducting research. The Marine Technical Certificate Program will provide a formal certificate acknowledging this experiential learning as well as real-world, practical experience necessary for most field-based positions in marine-related research careers.

A8. Signature of the President

David M. Dooley

A9. Person to contact during the proposal review

Name: Marta Gomez-Chiarri
Title: Professor and Chair, FAVS
Phone: 401-874-2017
Email: gomezchi@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. Explain and quantify the needs addressed by this program, and present evidence that the program fulfills these needs.

The URI Marine Technical Certificate Program provides students with the educational practical training to acquire additional certifications and technical skills required for most positions in marine-related research careers. These skills include boating handling, scuba diving, underwater research, and equipment maintenance needed for professional employment. This need is widely seen in research positions in marine biology, oceanography, fisheries, biological sciences, biomedical technology, natural resources science, ocean engineering, underwater archaeology and maritime history. Relevant positions are found in aquaria, fisheries and aquaculture facilities, museums, federal agencies such as the EPA, NOAA, Smithsonian Institution, National Park Service, not-for-profit organizations focusing on marine resource conservation such as The Nature Conservancy or educational outreach programs like Save the Bay, and private corporations, primarily environmental consulting groups. These positions depend on candidates with well-rounded academic backgrounds in addition to numerous technical certifications and work-related experiences.

Upon completion of this undergraduate certificate, students will have the ability and practical skills to conduct marine-related research and other marine-related professional employment requirements for boating and diving operations. This includes acquiring the necessary certifications per the American Academy of Underwater

Sciences (AAUS), professional-level diving certifications according to the World Recreational Scuba Training Council (WRSTC), boat handling skills, and equipment troubleshooting in adverse conditions. Participating students will accelerate their resumes by acquiring the experience necessary for most employment opportunities, especially those in field-based research.

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

The American Academy of Underwater Sciences (AAUS) is composed of almost 200 participating institutions in the United States including not-for-profit organizations, aquaria, state and federal government agencies, educational institutions, and private corporations. All participating organizations, such as URI, require employees to have specific certifications for scientific diving and boating. In 2018, AAUS reported a total of 6227 divers completing 112,491 dives. These statistics include graduates of URI. Offering a formal Marine Technical Certificate Program would increase the practical skills and marketability of graduates entering the workforce.

At URI alone, the total reported grant awards involving scientific diving over the past 5 years totaled more than $5.3 million. Many of these grants are additionally supported by research support roles such as marine specialists to drive vessels and ensure the safety of participants in the field. All 200 participating AAUS institutions have similar support roles; with this certificate, URI undergraduates could formally qualify for those positions.

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

Projected growth for environmental scientists and specialists (marine biology not specified) is 8%, faster than the average, from 2018-2028 according to the Bureau of Labor Statistics. Available jobs for a graduate of the Marine Technical Certificate Program could include: research technicians, research associates, zoologists (aquarium husbandry) and wildlife biologists, educational instructors, tourist operators, and private consultants. Graduating students will greatly increase their marketability in a competitive job market with technical skills and certifications on their resumes. Salaries range widely from $50,000 to $125,000 per year. The median annual wage was $71,130 in May 2018.

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.

The ocean encompasses 72% of the earth's surface and 80% of the world's population lives within 60 miles of the coastline. Most livelihoods are directly dependent on our marine environment. As the flagship university in the Ocean State, URI is a global leader in marine education. The Diving Research & Safety Program provides professional-level training to many participating students from marine biology, oceanography, fisheries, biological sciences, biomedical technology, natural resources science, ocean engineering, underwater archaeology and maritime history. The Marine Technical Certificate Program would foster students on an individual basis to not only acquire the academic knowledge but also the practical skills through professional-level certifications to become productive scientists and researchers in marine-related careers.

The Marine Technical Certificate Program relates to URI's academic planning in numerous ways, especially in experiential learning through a customized approach. Learning would fulfill goals 1 and 2 of the URI Academic Strategic Plan to "expand pedagogical approaches focus on engaging students in learning across curriculum" and "significantly expand opportunities for experiential learning" by incorporating project-based learning with realistic practical applications relevant to marine-related careers. For example, participating students would implement and actively conduct an on-going study assessing the effects of climate change on local species (both distribution and abundance) in Narragansett Bay. This program would also fulfill Goal 2 of the Academic Strategic Plan to "expand research, scholarship and creative work." With individualized attention, students would receive professional advising, partner with university collaborators such as The Ocean Agency on conservation projects, and tailor student interest in a customized approach for future careers.

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.

To our knowledge, there are no similar programs in Rhode Island and the northeast region. There are programs in marine technology from institutions such as National University and programs in boating mechanics and technology from non-academic institutions. Some maritime academies provide similar courses, but these are typically focused on maritime industry positions versus research and science. URI has the only scuba diving program in the state of Rhode Island and serves as a national leader in Scientific Diving in the United States. Other state institutions may have courses in boating and diving similar to URI, but none have a certificate program like this one designed to provide students with an advantage in the job market.

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*).

Not applicable. Students would already be enrolled in undergraduate programs established at URI and the Marine Technical Certificate would be a supplemental certificate for participants only.

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.)

None

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

Other institutions may provide elective courses in boat handling or scuba diving, but none have a certificate program designed to provide students with the practical training and certifications to support future job placement, especially in marine research-related positions.

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

We expect this to be the case. This certificate would make graduates much more marketable for positions in the workforce as well as graduate school for continuing education purposes.

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

This certificate program is designed to supplement undergraduate degrees and attract prospective students with similar interests. Participating students would most likely conduct the majority of the certificate's required credits during the last two years of undergraduate coursework, allowing them to specialize further in their education as they consider future entry into the workforce.

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

None needed. This program takes advantage of the resources already available for undergraduate and graduate students in marine-related degree programs at URI.

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

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.

Catalog description: 12 credits from the following undergraduate course list: AFS 270, AFS 290, AFS 433 with the option of elective credits from AFS 395, AFS 396, or HIS 396. These courses will be chosen in consultation with an academic advisor, based on the student's career interests and current undergraduate degree. Students are responsible for meeting the prerequisite requirements for individual courses, as applicable. These courses may also be applied to a degree program at URI.

No new courses are proposed as part of this program but instead builds on existing course offerings. See attachment for a complete catalog program description.

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.

None.

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

12 credits from the following undergraduate course list: AFS 270, AFS 290, AFS 433 with the option of elective credits from AFS 395, AFS 396, or HIS 396. These courses will be chosen in consultation with an academic advisor (Anya Hanson, Diving Safety Officer), based on the student's career interests and current undergraduate degree. Including special topics programs will allow students to better customize their interests through experiential learning opportunities.

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

3 elective credits may be chosen from AFS 395, AFS 396, or HIS 396.

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.

A total of 12 credits of coursework that can be applied to a degree program as part of the 120 required credits).

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*).

None- the program requires in-person education for practical training purposes.

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

Certain courses listed follow specific standards, but the overall program does not follow an accreditation standard. AFS 270 and AFS 395 follow standards as set forth by the World Recreational Scuba Training Council (WRSTC), a global requirement for all recreational-level scuba diving certifications. These courses also adhere to a curriculum provided by Scuba Diving International (SDI). AFS 433 follows standards set forth per the American Academy of Underwater Sciences (AAUS). These courses are already in existence with this format. AFS290- Small boats is an introduction to basic seamanship used in inland waters.

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.

Individual courses, especially for diving-related courses, will include lifetime certifications upon successful completion of the course. For AFS 270 and AFS 395, certifications (based on curriculum and practical evaluation) must be completed within one year of the course start date.

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.

Learning Goal: On completion of the Marine Technical Certificate program, students will acquire the academic knowledge and technical skills necessary for employment in marine-related careers incorporating fieldwork. The Student Learning Outcomes related to this goal are:

1) Apply technical skills to tackle real world research questions around marine and environmental issues.
2) Demonstrate practical and technical skills in scuba diving, boating operations, and specialized underwater research necessary for fieldwork.
3) Apply knowledge to troubleshoot equipment-related issues when conducting research.

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

The student learning outcomes will be assessed by the Marine Technical Certificate Program Committee using a similar rubric to that of the AFS B.S. major degree (see supporting materials included at the end of the proposal form).

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.

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?

No new resources are needed. The program will be coordinated by the Director of the Diving Research & Safety Program, Anya Hanson. Faculty involved in delivering the program include Lecturer Alexandra Moen and the staff from the R.V. Capt. Bert, including Captain Barber. There are no new positions or reassignments. The faculty and staff are all specialized with the required certifications to deliver this education through existing coursework and are already involved in advising students as part of their current duties.

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.

As a supplemental undergraduate program, the Marine Technical Certificate Program would have to include students already existing in other undergraduate majors. We expect interested participants (and those that would be accepted) would already be in the following marine-related programs: Marine Biology, Aquaculture and Fisheries Science, Biological Science, Marine Affairs, Natural Resources Science, Ocean Engineering, and Underwater Archaeology. We do not foresee any issues of competition with existing programs, but rather an opportunity for students from diverse backgrounds to come together and further their education with real-world, experiential learning opportunities. Students already take these courses and this program would provide formal acknowledgement of their achievements for future career placement.

Students participating in URI marine-related undergraduate degrees such as those listed above would qualify for the program. Students will be selected by the Program Coordinator (Hanson) with the aid of a committee composed of two other members of the Aquaculture and Fisheries Faculty and staff (e.g. Moen and department chair, Gomez-Chiarri). Selection will be based on the following criteria: 1) current enrollment in a marine-related or environmental degree, 2) ability to contribute and complete coursework (based on two letters of recommendation from peers, mentors or colleagues), and 3) balance of career goals with the program (based on a personal written statement). Students are responsible for meeting the prerequisite requirements for individual courses when applicable. Students accepted into the program will be advised on course prerequisites prior or during their first semester in the program. Undergraduate students will receive their Certificate upon successful completion of the 12 required course credits.

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.

a. Performance measures to evaluate the program.

Metric	Successful Beyond Expectations	As Expected	Does Not Meet Expectation
Number of applicants per year. The larger this number, the more successful the program. If we get no applicants in the first three years, we will assume we misjudged the marketplace. Since all the classes used to meet the requirements for the certificate are already being taught, there will be no impact if the program is poorly subscribed.	Over 15	1-15	0
Number of matriculating students. We will monitor the number of students actively pursuing a certificate. Because we might be hosting part-time students who need extra time to complete the requirements for the certificate, the number of matriculating students will give us a good indication of program vitality.	Over 10	1-10	0
Number of certificates granted per year. A student should be able to complete the certificate in four semesters based on the sequential nature of courses. Part-time students should be able to complete the program in six semesters. 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
Student diversity. We will advertise the certificate to reach students representing a diversity of cultures, genders, ages, and stage of career.	Equitable distribution of students across all diversity categories	Some representation of diversity categories but not spread evenly	No students from underrepresented diversity categories

I. IS THE PROGRAM FINANCIALLY VIABLE?

I. IS THE PROGRAM FINANCIALLY VIABLE?

I1. 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.

No additional resources are needed since the program uses existing resources and courses from the Aquaculture and Fisheries department; no new expenditures will be incurred. Current funding, as it exists, is enough for carrying out to the proposed program. See attached budget sheets and supporting documentation.

Attachments:

1. Catalog Program Description
2. Program Student Learning Outcomes Assessment Plan and LOOC Approval
3. Library Impact
4. Budget sheets (sent as attachment) and no impact letter
5. Supporting documentation from associated department
6. Curriculum

Marine Technical Certificate Program- Catalog Program Description

The URI Marine Technical Certificate Program provides students with experiential learning opportunities to acquire technical skills and professional certifications needed for marine-related research careers. Skills include boat handling, scuba diving, underwater research, equipment maintenance, and troubleshooting in adverse conditions in field-based settings. These skills are critical for performance in disciplines such as marine biology, oceanography, aquaculture, fisheries, biological sciences, biomedical technology, natural resources science, ocean engineering, underwater archaeology, and maritime history. Participants will acquire field-based experiences and the necessary professional certifications per the American Academy of Underwater Sciences (AAUS), the World Recreational Scuba Training Council (WRSTC), and any relevant equipment service technician certifications. Upon completion of this undergraduate certificate, students will have the learning to: 1) apply technical skills to tackle real world research questions around marine and environmental issues, 2) demonstrate practical and technical skills in scuba diving, boating operations, and specialized underwater research necessary for fieldwork, and 3) apply knowledge to troubleshoot equipment-related issues when conducting research. The Marine Technical Certificate Program will provide a formal certificate acknowledging this experiential learning as well as real-world, practical experience necessary for most field-based positions in marine-related research careers.

Admission requirements: Applications should include: 1) college transcript certifying current enrollment in a URI undergraduate marine-related or environmental degree, 2) two letters of recommendation from peers, mentors, or colleagues supporting your ability to complete necessary coursework to technical skills, and 3) a personal written statement why you are seeking enrollment to this certificate program and your needs for future career goals. Students will be advised on course prerequisites prior or during their first semester in the program. Students should send all required application materials to the program coordinator, Anya Hanson. Applications for Fall semester admission should be completed by 10 August and applications for Spring semester admission should be completed by 1 December. Students accepted into the program must submit an Undergraduate Certificate Program form to the office of their academic dean at the time of acceptance.

Program requirements: 12 credits from the following undergraduate course list: AFS 270, AFS 290, AFS 433 with the option of elective credits from AFS 395, AFS 396, or HIS 396. Courses will be chosen in consultation with the program coordinator and based on the student's career interests and current undergraduate degree. Students are responsible for meeting the prerequisite requirements for individual courses, as applicable. These courses may also be applied to a degree program at URI. Students will receive their Certificate upon successful completion of the 12 required course credits and after submitting the Nomination for Graduation Certificate Program form.

Program Student Learning Outcomes Assessment Plan

THE UNIVERSITY OF RHODE ISLAND

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.

Date SLOAA review: **12/2019**
Date LOOC* review: **2/2020**

*(LOOC Chair and review

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:	Marine Technical Certificate Program
Academic year plan submitted:	Fall 2019
Degree(s):	AFS Undergraduate Certificate
Department Chair:	Marta Gomez-Chiarri
Program Director:	Anya Hanson
Accredited Program:	**X No** ☐ **Yes; specify year next accreditation report due: _____**
Published learning outcomes (URL):	Proposed new program

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	Students will gain technical expertise and practical knowledge to support research addressing critical marine and environmental issues.

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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 270 and AFS 290	AFS 433	Electives Chose 2 of 3 AFS 396	Electives Chose 2 of 3 AFS 395	Electives Chose 2 of 3 HIS 396									
1	**Students will demonstrate technical skills in support of marine sciences (e.g. scuba diving, boating operations).**	I	E	E	R	R									
2	**Students will apply technical skills to solve problems in marine and environmental issues.**	I	E	E	R	E									

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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) WHICH outcome(s) will you examine in each period (use number(s) from curriculum map, e.g. 1.1)?	Course(s) and Other Program Requirements WHERE will you look for evidence of student learning (i.e., what course(s)/program requirements)? Designate for each outcome.	Assessment Evidence of Student Learning WHAT 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 HOW 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 2021*	**#1. Students will demonstrate technical skills in support of marine sciences (e.g. scuba diving, boating operations).**	AFS270, AFS290, AFS 433, AFS 395	AFS 270, 433, and 395 will receive certifications upon completion of the courses. AFS 290 will test students for their ability to perform specific tasks (e.g. dock a boat, buoyancy diving control) successfully. All courses also have a final exam.	Final evaluations of AFS270, 433 (courses with a diving component) will be assessed based on the American Academy of Underwater Sciences (AAUS) and Scuba Diving International rubrics (as relevant). AFS 290 will use the Coast Guard Manual for the list of tasks to be completed.
Assessment Reporting Period 2 Report Due May 2023	**#1. Students will demonstrate technical skills in support of marine sciences (e.g. scuba diving, boating operations).**	AFS 396	Marine Technical practicum, AFS 396, will be tailored to student interest but will include final projects or field-based evaluations (e.g. buoyancy control, field experiment correction underwater) and meeting minimum standards according to scuba diving training agencies and technical equipment requirements.	Final evaluations will be assessed using the Scuba diving International rubrics. Final projects should result in at least 75% mastery of content.

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PROGRAM ASSESSMENT PLAN

Assessment Reporting Period 3 Report Due May 2025	**#2. Students will apply technical skills to solve problems in marine and environmental issues.**	AFS 433, HIS 396, AFS 396	Field journals in HIS 396 and field-based evaluations in AFS 396 courses. AFS 433 has a final exam.	Students must receive a minimum of 80% score on exams and projects. HIS 396 and AFS 396 has a final field journal and field-based report (e.g ability to perform work underwater).

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

LOOC FEEDBACK

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LEARNING OUTCOMES
OVERSIGHT COMMITTEE

THINK BIG WE DO

Kingston, RI 02881 www.uri.edu/assessment

MEMORANDUM

February 24, 2020

To: Marta Gomez-Chiarri, Chair
and Anya Hanson (Program Director)

From: Susan T. Brand, LOOC Interim Chair

This memo and the attached undergraduate Marine Technical Certificate Plan Review Feedback Form constitute approval of your Program Assessment Plan for the proposed program in Marine Biology. 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 approval draft of the Assessment Plan.

Good luck and speed with your full proposal!

Cc: E. Finan
J. Lawrence

Attachments

LOOC is committed to promoting, supporting, and ensuring effective assessment as an integral part of the student learning experience at the University of Rhode Island.
The University of Rhode Island is an equal opportunity employer committed to the principles of affirmative action.

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NEW CERTIFICATE ASSESSMENT PLAN REVIEW

Date SLOAA review: 12/2019
Date LOOC* review: 2/2020
*(LOOC Chair and review subcommittee)

Academic Program/Degree: Marine Technical Certificate (undergraduate)
College: College of Environmental and Life Sciences
Date New Program Assessment Plan Submitted: December 2019
Faculty Member(s) Submitting Plan Proposal: Marta Gomez-Chiarri, Anya Hanson

FEEDBACK

Strengths:

SLOAA:

- The Assessment Plan details the technical skills, knowledge and abilities students will acquire as they earn this undergraduate certificate which embeds an external certification for basic and research diving and provides an opportunity for an additional certification in boating.
- The curriculum ensures a critical base level of knowledge is acquired.
- The certificate seeks to codify what is already in place in terms of available student experiences, highlighting the importance of technical expertise to support active research in a marine environment, and also showcasing for employers that students have critical professional and technical skills to succeed in marine research.

LOOC:

- Outcomes are clearly written and appropriate for a certificate. Clear sequence of courses allowing students to practice skills. Scuba diving and boating are clearly measurable.
- Encompass students from six programs that each can apply toward their degree programs.
- Should attract many students in related majors.
- Experiential learning is a strength.

Suggestions for improvement:

SLOAA: Suggestions were responded to by the program during preliminary consultation.

LOOC: N/A

Issue(s) of note:

SLOAA: N/A

LOOC: N/A

Assessment Plan Designation:

Updated 7.2016

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: _____

Library Impact Statement

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: Undergraduate Marine Technical Certificate

Department, College: FAVS-CELS

Faculty Member: Marta Gomez-Chiarri

Date returned to Faculty: _11-13-19

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 categories. As this program does not include any new courses, there should be no problem supporting this certificate program with existing resources. The allocation for the purchase of monographs in FAVS for 2019-20 is approximately $3500. 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 subscribes to the essential journals and databases noted in 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 course.

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

   Library Instructions can be provided by the Instruction Department of the Library. Faculty can arrange to bring their classes to the library by contacting the Instruction Department at the beginning of any semester.

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

Budget Sheet

THE UNIVERSITY OF RHODE ISLAND
1892–2017

THINK BIG WE DO

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

DATE: December 12, 2019

TO: Margaret Benz
Coordinator, Faculty Senate

FROM: Linda Barrett
Director, Budget and Financial Planning

SUBJECT: Proposal for an Undergraduate Certificate in Marine Technical Certificate Program

As requested from Anya Hanson, URI Diving Safety Officer, dated December 3, 2019, the Budget and Financial Planning Office has reviewed the submitted documents related to the proposal for an Undergraduate Certificate in the Marine Technical Certificate Program.

The Budget and Financial Planning Office, including communications with Enrollment Services, concurs that the request for a proposal of an Undergraduate Certificate in the Marine Technical Certificate Program is not anticipated to have an 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, Colleen Robillard, Anya Hanson, Joanne Lawrence, Marta Gomez-Chiarri, Jeannette Riley, Matthew Bodah, Cheryl Hinkson, Anne Veeger, Bruce Corliss, John Humphrey, John Kirby, Raymond Wright

Office/BudgetImpactStatements/marinetechnicalcertificateprogram/BudgetImpactStatementLetter

ACADEMIC PROGRAM BUDGET FORM Most students from existing programs (completion in 4 years)

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.

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

REVENUE ESTIMATES

	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023
Tuition: In-State	$12,590	$12,590	$12,590	$12,590
Tuition: Out-State	$29,710	$29,710	$29,710	$29,710
Tuition: Regional	$22,032	$22,032	$22,032	$22,032
Mandatory fees per student	$1,976	$1,976	$1,976	$1,976
FTE # of New Students: In-State	1	1	1	1
FTE # of New Students: Out-State	1	1	1	1
# of In-State FTE students transferring in from the institution's existing programs	1	1	1	1
# of Out-State FTE students transferring in from the institution's existing programs	0	0	0	0
Tuition: One Rate	0	0	0	0
# of New Students				

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	$12,590.00	$12,590.00	$12,590.00	$12,590.00	$12,590.00	$12,590.00	$12,590.00	$12,590.00
Out-of-State tuition	$29,710.00	$0.00	$29,710.00	$0.00	$29,710.00	$0.00	$29,710.00	$0.00
Regional tuition								
Mandatory fees	$3,952.00	$1,976.00	$3,952.00	$1,976.00	$3,952.00	$1,976.00	$3,952.00	$1,976.00
One-Rate Tuition	$0.00		$0.00		$0.00		$0.00	
Second Year Students								
In-State tuition			$12,590.00	$12,590.00	$12,590.00	$12,590.00	$12,590.00	$12,590.00
Out-of-State tuition			$29,710.00	$0.00	$29,710.00	$0.00	$29,710.00	$0.00
Regional tuition								
Mandatory fees			$3,952.00	$1,976.00	$3,952.00	$1,976.00	$3,952.00	$1,976.00
One-Rate Tuition			$0.00		$0.00		$0.00	
Third Year Students								
In-State tuition					$12,590.00	$12,590.00	$12,590.00	$12,590.00
Out-of-State tuition					$29,710.00	$0.00	$29,710.00	$0.00
Regional tuition								
Mandatory fees					$3,952.00	$1,976.00	$3,952.00	$1,976.00
One-Rate Tuition					$0.00		$0.00	
Fourth Year Students								
In-State tuition							$12,590.00	$12,590.00
Out-of-State tuition							$29,710.00	$0.00
Regional tuition								
Mandatory fees							$3,952.00	$1,976.00
One-Rate Tuition							$0.00	
Total Tuition and Fees	**$46,252.00**	**$14,566.00**	**$92,504.00**	**$29,132.00**	**$138,756.00**	**$43,698.00**	**$185,008.00**	**$58,264.00**
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	**$46,252.00**	**$14,566.00**	**$92,504.00**	**$29,132.00**	**$138,756.00**	**$43,698.00**	**$185,008.00**	**$58,264.00**

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-tim attendance. **Page 2 of 3**

EXPENDITURE ESTIMATES

	Year 1 20__		Year 2 20__		Year 3 20__		Year 4 20__	
PERSONNEL SERVICES	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
Administrators	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Faculty	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Support Staff	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Others	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Fringe Benefits %	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total Personnel	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
OPERATING EXPENSES								
Instructional Resources	$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 Operating Expenses	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
CAPITAL								
Facilities	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Equipment	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Other	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total Capital	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
NET STUDENT ASSISTANCE								
Assistantships	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Fellowships	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Stipends/Scholarships	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total Student Assistance	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
TOTAL EXPENDITURES	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$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-tim attendance. **Page 3 of 3**

	Year 1 2019/20	Year 2 2020/21	Year 3 2021/22	Year 4 2022/23
BUDGET SUMMARY OF COMBINED EXISTING AND NEW PROGRAM				
Total Revenue	$60,818.00	$121,636.00	$182,454.00	$243,272.00
Total Expenses	$0.00	$0.00	$0.00	$0.00
Excess/Defeciency	**$60,818.00**	**$121,636.00**	**$182,454.00**	**$243,272.00**
BUDGET SUMMARY OF EXISTING PROGRAM ONLY				
Total Revenue	$14,566.00	$29,132.00	$43,698.00	$58,264.00
Total Expenses	$0.00	$0.00	$0.00	$0.00
Excess/Defeciency	**$14,566.00**	**$29,132.00**	**$43,698.00**	**$58,264.00**
BUDGET SUMMARY OF NEW PROGRAM ONLY				
Total of Newly Generated Revenue	$46,252.00	$92,504.00	$138,756.00	$185,008.00
Total of Additional Resources Required for Program	$0.00	$0.00	$0.00	$0.00
Excess/Deficiency	**$46,252.00**	**$92,504.00**	**$138,756.00**	**$185,008.00**

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

Supporting Documentation from History

THE
UNIVERSITY
OF RHODE ISLAND

Anya Hanson <anyahanson@uri.edu>

Marine Technical Certificate

Rod Mather <rodmather@uri.edu> Tue, Nov 12, 2019 at 8:39 AM
To: Anya Hanson <anyahanson@uri.edu>

Hi Anya

I am happy to support the Proposal for a Marine Technical Certificate, and am equally happy for HIS396 to be included as one of the supporting courses.

best
Rod

[Quoted text hidden]
--
Rod Mather
Chair of the Department of History
Professor of Maritime History and Underwater Archaeology
Department of History
University of Rhode Island
401-874-4093

Curriculum

AQUACULTURE AND FISHERIES SCIENCE — *EFFECTIVE FALL 2020*

Student: **ID No.:** **Advisor:**

I. GENERAL EDUCATION *(min 40 cr)*	Course No.	Grade
Knowledge		
A1. STEM	BIO 101/102*	
A2. Social and Behavioral Sciences	EEC 105*	
A3. Humanities		
A4. Arts and Design		
Competencies		
B1. Write effectively		
B2. Communicate effectively		
B3. Mathematical, statistical, computatio	MTH1	
B4. Information literacy		
Responsibilities		
C1. Civic knowledge & responsibilitiy		
(e.g. MAF100,220)		
C2. Global responsibilities		
C3. Diversity and inclusion (e.g. *MAF300*)		
Integrate & Apply		
D1. Ability to Synthesize (*e.g. AFS300, 440)*		
Grand Challenge		
G. Grand Challenge Course	AFS 105G	
Additional General Education		
Additional General Education		
Additional General Education		
Additional General Education		

II. PRE-PROFESSIONAL & BASIC SCIENCES	
A. Introductory Professional Courses (10 credits)	
Foods from the Sea (3,1; F)	AFS105G/106
Intro to Resource Econ (3; F,S)*	EEC105
Natural Resource Conserv (3; F,S)	NRS100
B. Basic Sciences (24 credits)	
Biology (8 cr)	
Principles of Biology I* (3; F,S)	BIO 101
Principles of Biology I Lab (1; F,S)	BIO 103
Principles of Biology II (3; F,S)	BIO 102
Principles of Biology II Lab (1; F,S)	BIO 104
Chemistry (4 cr)	
CHM 101 or 103 (3, F,S)	CHM
CHM 102 or 105 (1; F,S)	CHM
*Additional Basic Sciences** (min 12 cr)*	
Mathematics (MTH103/111/131/141)	MTH
Additional Basic Sci (Physical Sciences)	
Additional Basic Sci (Ecology/Ecosystem)	
Additional Basic Sci (Computational/Stats)	

Course Credits Required: 120
Course Credits Completed:

Approved for Graduation:

Advisor: _____ Date: _____

III. PROFESSIONAL COURSES *(min. 30 cr total)*	Course No.	Grade	Cr.	Off:
Foundational Courses *(10 cr that count as supporting electives)*				
Shellfish Aquaculture	AFS 201 (3,1)			*F*
Finfish Aquaculture	AFS 202 (2,1)			*S*
Fisheries Science	AFS 215 (2,1)			*S*
Concentration Courses *(min. 20 cr; 12 from AFS)*				
Suggested Courses for Aquaculture Focus (choose from):				
Crustacean Aquaculture	AFS 362 (3)			*Alt S(o)*
Marine Finfish Aquaculture	AFS 432 (3)			*Alt.S(o)*
Salmonid Aquaculture	AFS 483 (3)			*Alt.F(e)*
Topics in Molluscan Aquaculture	AFS 581 (3)			*Alt S(e)*
Advanced Aquaculture Systems	AFS 584 (3)			*Alt S(e)*
Suggested Courses for Fisheries Focus (choose from):				
World Fishing Methods and Lab (3,1)	AFS 321/322			*F*
Fisheries Ecology (3)	AFS 415			*Alt.F(o)*
Fisheries Stock Management (3)	AFS 531			*Alt.S(e)*
Ecosystem Based Fisheries Sci. & Mn	AFS 560 (3)			*Alt.S(o)*
Common courses (choose from):				
Diseases of Aquatic Organisms	AFS 300 (3,1)			*S*
Aquaculture and the Environment	AFS 425 (3)			*Alt.F(o)*
Aqua. Food Production, Philippines	AFS 440 (3)			*J-term*
Marine Plastics	AFS 488 (3)			*S*
Advanced Siseases Aquatic Org	AFS 500 (3)			*Alt F(o)*
General Oceanography and/or	OCG 301 (3)			*F*
Marine Biology	BIO 360 (3,1)			*F,S*
Fish Physiology	AFS 486 (3)			*Alt.F(o)*
Additional Concentration Course***				
Additional Concentration Course***				

IV. INTERNSHIPS/INDEPENDENT PROJECTS *(min 3, <12)*				
Special Project/Independent Study	AFS 391/2 (1-3)			*F,S,Sm*
Special Project/Independent Study	AFS 391/2 (1-3)			*F,S,Sm*
Special Project/Independent Study	AFS 491/2 (1-3)			*F,S,Sm*

V. SUPPORTING*** *(min 15)* AND OTHER ELECTIVES				
Skills and Tools *(up to 9 cr)*				
Small Boats: Equipment & Operation	AFS 290 (3)			*F*
Basic Scuba Diving	AFS 270 (3)			*F,S*
Research Diving Methods	AFS 433 (3)			*F,S*
Additional supporting and other electives				
Advanced Diving	AFS 395 (3)			
Underwater Archaeology Field School	HIS 396 (3)			
Marine Technical Practicum	AFS 396 (3)			
Planning for Academic Success	URI101 (1)			*F*

* Some courses may count for more than one category. If so, do not double count credits in the total count.

** **Suggested Basic Science (check General Education catalog)**
Math: Calculus (MTH131) is required for a fisheries focus; otherwise, either MTH103 or MTH111 fulfill the requirement; *Chem*: At least 2 sem. of Chem are needed if you plan to go to grad school (e.g. add CHM124/126). *Physical Sci*: any basic course in Geology (GEO), Oceanography (OCG), Physics (PHY); *Ecology/Ecosystem Science*: e.g. BIO262, NRS212, NRS223, or NRS234G; *Computer Sci and Statistics*: any course in CSC or STA (100, 200, 300 level; e.g. STA220 or STA308).

*** **Suggested Additional Concentration:** 300 or above courses in AFS, Marine Bio (BIO), Oceanography (OCG), Ecology/Ecosystem (NRS), Marine Affairs(MAF), Economics(EEC). **Suggested Supporting Electives**: courses 200 or above in Economics (EEC, ECN), Business (BUS), MAF, Anthropology(APG), Marine Bio(BIO), GEO, NRS, OCG, Animal and Veterinary Sciences (AVS), Sustainable Agriculture & Food Systems (SAF)

B.S. Aquaculture and Fisheries Science- Effective Fall 2019
Sample 4 Year Plan
College of the Environment and Life Sciences

Freshman Year *Fall* Semester — 2020

Course Code	Description	Cr	
*AFS 105G/106	Food from the Sea Lec/ Lab	4	
*BIO 101/103	Principles of Biology I/ Lab	4	
*EEC 105	Introduction to Resource Economics	3	
	*General Education	3	
	*General Education	3	
URI 101	Planning for Academic Success	1	
* Counting for General Education		15	0

Freshman Year *Spring* Semester

Course Code	Description	Cr	
AFS 202	Finfish Aquaculture	3	
*BIO 102/104	Principles of Biology II/ Lab	4	
*OCG/*GEO	*Basic Science (Physical Sci)	3	
*MTH _____	Precalculus or Applied Calculus I	3	
	*General Education	3	
* From General Education Course Offerings		16	0

Year 1 Milestones: Earn at least 30 credits and a GPA of 2.0 or higher. Meet with your Advisor for AFTC option discussion.

Sophomore Year *Fall* Semester — 2021

Course Code	Description	Cr	
AFS 201	Shellfish Aquaculture	3	
*NRS 100	Natural Resource Conservation	3	
*CHM 103/105	Introduction Chemistry Lecture/Lab	4	
AFS 290	Supporting Elective (Mar Tech Cert)	3	
	Concentration (*e.g. AFS321/322*)	3	
* From General Education Course Offerings		16	0

Sophomore Year *Spring* Semester

Course Code	Description	Cr	
e.g. AFS362/432	Concentration Course	3	
e.g. MAF300	Concentration Course	3	
e.g. BIO 262	Basic Science (Ecology/Ecosystem)	4	
AFS270	Supporting Elective (Mar Tech Cert)	3	
	*General Education	3	
* From General Education Course Offerings		16	0

Year 2 Milestones: Earn at least 64 credits and a GPA of 2.0 or higher. Meet with your Advisor to dicuss major, internships and research opprtunities.

Junior Year *Fall* Semester — 2022

Course Code	Description	Cr	
eg BIO360,OCG301	Concentration Course	3	
eg AFS486, 415	Concentration Course	3	
AFS433	Supporting Elective (Mar Tech Cert)	3	
	Basic Science (Computer Sci/Stats)	3	
	*General Education	3	
		15	0

Junior Year *Spring* Semester

Course Code	Description	Cr	
AFS300	Concentration Course	3	
	Concentration (e.g. AFS 581/584/531)	3	
AFS 396	Supporting Elective (Mar Tech Cert)	3	
	**Special Projects or Internship	3	
	*General Education or Elective	3	
** could be done in the Summer		15	0

Year 3 Milestones: Earn at least 85 credits and a GPA of 2.0 or higher. Meet with your Advisor to prepare intent to graduate application for fall submissi

Senior Year *Fall* Semester — 2023

Course Code	Description	Cr	
eg AFS483, 415	Concentration Course	3	
eg BIO, MAF, NRS	Concentration Course	3	
eg BIO, MAF, NRS	Concentration Course	3	
	Basic Science	3	
	*General Education or Elective	3	
		15	0

Senior Year *Spring* Semester

Course Code	Description	Cr	
eg AFS488	Concentration Course	3	
eg AFS432	Supporting Elective	3	
AFS 395	Supporting Elective (Mar Tech Cert)	3	
	*General Education	3	
	Elective	3	
		15	0

Year 4 Milestones: Earn 120 credits and a GPA of 2.0 or higher in CUM and CON. Complete all remaining required courses.

Total Credits to Graduate = 120

Effective Fall 2020

THE
UNIVERSITY
OF RHODE ISLAND

Appendix O

Revised 12/2016

Abbreviated Proposal form
For All Programs including Certificates
No New Funding

A Proposal for: Online Undergraduate Certificate in Cannabis Studies
7-week accelerated online

Date: March 2020

A. PROGRAM INFORMATION

A1. Name of institution University of Rhode Island

A2. Name of department, division, school or college
Department: Biomedical and Pharmaceutical Sciences
College: Pharmacy

A3. Title of proposed program and Classification of Instructional Programs (CIP) code
Program title: Undergraduate Certificate in Cannabis Studies
Classification code (CIP): 51.2010 Pharmaceutical Sciences

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

A5. Intended location of the program
URI Online, Kingston Campus

A6. Description of institutional review and approval process

	Approval Date
Department	03/04/2020
College	03/06/2020
Curriculum & Standards	4/3/2020
Faculty Senate	
President of the University	

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

The rapidly expanding cannabis industry requires a specialized knowledge base. At a rate of 22% annually, cannabis job growth is outpacing the healthcare and tech sectors and is anticipated to create over 500,000 jobs by 2022 (New Frontier Data). As regulations to protect consumer safety continue to grow, so does the demand for highly skilled professionals. Individuals within the cannabis space and clinicians whose patients seek advice on cannabis have reached out for a clearer understanding and the specialized skills necessary to safely and ethically perform their jobs. The online Certificate in Cannabis Studies was designed to meet the needs of these

students and the explosive job growth within the industry. Offering the certificate at the undergraduate level encourages the participation of those within the industry who may not have a science degree. The certificate will represent the first of its kind in the United States, and the online delivery model will allow for the flexibility necessary to accommodate students nationwide as well as working professionals. The overall goal of the program is to provide graduates with a depth of knowledge about the safe production and dissemination of cannabis-related information and products. Students completing the certificate will be able to 1) identify and evaluate sources of evidence-based information to make informed decisions related to therapeutics and cannabis production, 2) conceptually design reliable and safe cannabis products within the framework of an existing regulatory environment, and 3) apply knowledge of the bioactivity of cannabis to effectively assess treatment options to support and advise clients and healthcare providers.

The online Certificate in Cannabis Studies will consist of 4 three-credit courses. A foundational course will introduce the fundamentals needed to take the remaining courses in any order. It will also serve to acquaint the students with a limited science background to the key chemical and pharmacological principles necessary to successfully continue their studies. The remaining three courses will develop core competencies in natural product separation and analysis, safe product development and manufacturing, and the evaluation of the therapeutic potential of cannabis. Throughout the certificate program, the students will be working on a pinnacle assignment synthesizing the concepts in each course together and culminating with a real-world experience of researching and designing, in concept, a cannabis product.

The skills developed through the certificate program will prepare students for the evolving and expanding cannabis industry. Students who successfully complete the certificate will be highly competitive in several areas of the cannabis industry including sales, dispensary management, laboratory technicians, quality compliance, and product development/manufacturing. Clinicians and caregivers who counsel patients as well as investors, entrepreneurs, and policy makers who have a need to better understand the science and technology of cannabis will also benefit from the program.

The online Certificate in Cannabis Studies aligns with the academic vision of the University and aids in the achievement of several of the goals of the strategic plan. The program aspires to enhance student success through the use of an innovative online learning environment and engaging pedagogical approaches including problem-based learning, both strategies of Goal 1 in the Academic Strategic Plan. It will expand scholarship with an emphasis in health and sciences and develop the workforce to enhance public safety which supports Goal 2, Strategies 1 and 3.

A8. Signature of the President

_____

David M. Dooley

A9. Person to contact during the proposal review

Name: Stephanie Forschner-Dancause
Title: Lecturer
Phone: 401-874-5517
Email: sdancause@uri.edu

Name: Provost 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.

None

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.

Upon completion of the Certificate in Cannabis Studies, graduates will have a depth of knowledge about the safe production and dissemination of cannabis-related information and products. Students will be able to 1) identify and evaluate sources of evidence-based information to make informed decisions related to therapeutics and cannabis production, 2) conceptually design reliable and safe cannabis products within the framework of an existing regulatory environment, and 3) apply knowledge of the bioactivity of cannabis to effectively assess treatment options to support and advise clients and healthcare providers.

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

The cannabis industry is a multi-billion dollar industry. Global cannabis sales grew in 2018 to $10.9B from $3.4B in 2014. They are projected to reach $40.6B by 2024 according to research from Arcview Market Research and BDS Analytics (State of Legal Cannabis Markets, 2019) representing a compound annual growth rate of 28.2% over a decade. Currently, twelve states have legalized adult marijuana use and 33 allow for legalized medicinal use. According to the Pew Research Center, 67% of American's support marijuana legalization. Hemp production in the United States is also soaring from under 10,000 acres in 2017 to over 120,000 acres in 2019 as a result of the 2018 Farm Bill. As the markets continue to expand, so does the need for qualified professionals.

Cannabis jobs in the United States have nearly quadrupled since 2016 from about 200 postings per million to over 900 posting per million (Indeed.com). December 2018 saw 1,512 cannabis industry job openings in the United States, a 72% increase over December 2017 (Glassdoor Economic Research). New Frontier Data estimates that the cannabis industry will employ over 630,000 workers by 2025. Current employers are plagued by a shortage of qualified applicants and express difficulty in retaining trained employees who are consistently recruited by competing firms.

B3. Provide information on jobs available as a result of successfully completing the certificate or degree: job titles, job outlook/growth, and salaries.
Students who successfully complete the certificate will be able to apply their skills to a variety of jobs within the cannabis space. Jobs may include cannabis sales, brand

ambassador, cannabis laboratory technician, quality compliance/assurance technician, dispensary managers, and product development. The specialized skills gained through the certificate will enable our students to be highly competitive in the cannabis job market. In addition, we believe our students will include entrepreneurs, investors, and clinicians who will apply the knowledge gained through the certificate to further their own professional development. Within the cannabis industry, average salaries increased 16.1% between 2017 and 2018 (Vangst). The median salary is $58,511 annually, almost 11% higher than the US median (Glassdoor Economic Research).

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.

The Certificate in Cannabis Studies aligns with the academic vision of the University and aids in the achievement of several of the goals of the strategic plan.

Offering the program in the accelerated 7-week online format will allow for student with a passion for inquiry who have obstacles which prevent them from being on campus to succeed. The program's use of problem-based learning through the threading of a single project through all four courses, the promotion of interactions between students/faculty and student/student using highly interactive discussion forms, and the creation of information literacy by evaluating sources for credibility aim to fulfill Goal 1, Strategy 1. We believe many students outside of the sciences will be interested in the program. By offering the certificate, we aim to realize Goal 1, Strategy 3 to expand modes of course delivery and allow for the exploration of other areas of study. In whole, the program aspires to enhance student success through the use of an innovative learning environment and engaging pedagogical approaches.

Being one of the first programs and the first undergraduate certificate in cannabis studies, the University will be leading the way in the scholarship of the growing field to improve scientific rigor and address public health and safety concerns. Much of the current workforce in the cannabis industry is under skilled which represents a significant public health concern. The certificate program will expand scholarship with an emphasis in health and sciences and develop the workforce to enhance public safety which supports Goal 2, Strategies 1 and 3.

The cannabis industry is quickly becoming focused on social equity and justice as states such as Massachusetts and Illinois have built diversity, equity, and restorative justice into their regulations. We believe the certificate will embrace diversity and social justice, the aims of Goal 4, through recruitment efforts and open discourse.

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.

There are no other programs in cannabis studies in the other public higher education institutions in Rhode Island. 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*).

Transfer agreements are not applicable to this proposed certificate program.

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 arrangements exist.

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

This is the first certificate in cannabis studies to be offered at the undergraduate level in the country.

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

The program being proposed is an undergraduate certificate. Students taking the certificate could pursue a bachelor's degree program if they already don't have one. If they already have a bachelor's degree, the additional credential could strength their ability to be accepted into a graduate program.

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

This program would be ideal for a student with an associate's degree interested in a career in the cannabis industry, especially Rhode Island Promise Scholars graduating from CCRI. It would also be useful for students with bachelor's degrees in other fields of study to gain the specialized skills necessary to enter the cannabis space.

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).

This is not applicable under the accelerated online program.

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.

Courses will be offered through the Biomedical and Pharmaceutical Sciences Department in the College of Pharmacy. The foundational course, BPS 206 will be a prerequisite for the three other courses which can be taken in any order. The first cohort's offerings will be in the following order.

Fall semester, session 1
BPS 206 Foundations of Cannabis Studies (3 credits)
In this course, student will gain an understanding of the history of cannabis in the United States and the legislation and regulations that continue to shape its medical and recreational use. The ethical issues surrounding cannabis will be explored, and students will learn to evaluate the credibility of various sources of cannabis information. The endocannabinoid system will be introduced in addition to the pharmacology of the major phytocannabinoids, THC and CBD. This course will lay the foundation for the remaining requirements of the certificate in cannabis sciences.

Fall semester, session 2
BPS 316 Cannabis Product Development (3 credits)
Students will gain knowledge about the development of safe cannabis products for therapeutic use. The process begins with extraction and purification of plant material. Analytical testing methods for quantification of cannabinoids and identification of contaminants will be described. Formulation and drug delivery forms will be evaluated. The student will be introduced to good

manufacturing practices (GMPs) for the production of safe, reliable therapeutic products.

Spring semester, session 1
BPS 312 Cannabis Chemistry and Pharmacognosy (3 credits)
The cannabis plant will be explored through the lens of the natural products it produces. Various cannabinoids, flavonoids, terpenoids, and other classes of natural products will be described. Methods for the extraction and separation of the natural products will be evaluated. Students will be introduced to the biosynthetic pathways that produce the products and form the genetic basis for strain variability. Differences in compound ratios of diverse strains and the effect it has on therapeutic outcomes will be examined. Finally, the entourage effect between the cannabinoids and the other chemical constituents of cannabis will be investigated.

Spring semester, session 2
BPS 314 Cannabis Therapeutics (3 credits)
This course will investigate the therapeutic effects of cannabis on various medical conditions by exploring physiology, pathophysiology, and the cannabinoids' mechanism of action. Evidence-based research and case studies will be used to evaluate the effectiveness of treatment. Side effects, drug interactions, and other risks will be examined. Different routes of administration and the effect on bioavailability will be evaluated.

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.

The certificate program will not have any specializations or tracks, etc.

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

Students must take the foundational course BPS 206 prior to proceeding with the other courses in the certificate. The remaining three courses can be taken in any order.

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

Not applicable

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 are required to complete 12 credits to earn the Certificate in Cannabis Studies. If taken over 4 consecutive accelerated 7-week online sessions, the time to certificate will be two semesters or 8 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 offered in the proposed certificate program will be offered online, in an asynchronous format through URI Online.

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.

Graduates will have a depth of knowledge about the safe production and dissemination of cannabis-related information and products.

Specifically, students completing the Certificate in Cannabis Studies will be able to: 1) identify and evaluate sources of evidence-based information to make informed decisions related to therapeutics and cannabis production, 2) conceptually design reliable and safe cannabis products within the framework of an existing regulatory environment, and 3) apply knowledge of the bioactivity of cannabis to effectively assess treatment options to support and advise clients and healthcare providers.

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

See attached Student Learning Outcomes Assessment Plan. Note that a student learning outcome assessment timeline and associated rubrics are not required at this time for certificate programs.

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 provided New Program Assessment Plan Review.

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?

All faculty assigned to teach in the program are Ph.Ds in the Department of Biomedical and Pharmaceutical in the College of Pharmacy and are qualified to teach the course content. Stephanie Forschner-Dancause, a lecturer, will serve as the program coordinator and be responsible for developing and delivering course content. Navindra Seeram, Matthew Bertin, and Saleh Allababidi, full professor, assistant professor, and lecturer respectively, will be responsible for developing and delivering course content. All faculty involved in teaching will undergo online pedagogy training through ATL. We estimate 1.0 FTE will be shared by all involved. No new positions are required.

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.

Through our interactions with those in the cannabis industry in the region, we have found that employees are being pulled from a broad range of backgrounds including associate's and bachelor's degree holders in non-science fields, tradespeople, and individuals with little or no post-secondary education. We anticipate that our potential students will have similar wide-ranging backgrounds and have designed the foundational course to ensure their success in the program. The program will draw from those currently in the cannabis industry who lack the specialized skills necessary to comply with current and evolving regulations and those that are looking to competitively enter the industry. From the broader community, we anticipate the program will be of interest to clinicians and caregivers that counsel patients as well as investors, entrepreneurs, and policy makers that have a need to better understand the science and technology of cannabis. Over the past couple of years, people from all of these backgrounds have reached out to the department looking for information and advice proving the need and desire for such a program.

Since the certificate will be offered in the accelerated 7-week online delivery model, the program will be unavailable to students currently enrolled in degree granting programs on campus. Therefore, the program will not draw student away from existing programs at the University and will instead be targeting a new student population outside of the existing University students.

Students will be selected for admission by a committee comprised of the program director and two BPS faculty members involved with the certificate program. Students will be evaluated for admission based on 1) prior education and/or work experience in the field demonstrated by transcripts and/or a resume, 2) the ability to successfully complete course work based on recommendation letters, and 3) a match of career goals with the objectives of the program based on a personal written statement detailing the reasons for seeking the Certificate in Cannabis Studies. Broadly worded questions regarding pending charges, convictions, or pleas of guilt or no contest to a criminal offense will be included in the application process, although answering yes (with explanation) will not be automatic grounds for a denial of admission. Students without a chemistry and/or biology background will be required to complete optional modules within the first foundational course to ensure their continued success in the program. All courses will require a minimum grade of a C to be applied toward the certificate.

We anticipate attracting 5-10 students during the first cohort and expect enrollment will build to 15-30 students per cohort as the program matures and becomes more visible. The program is design for students (primarily adult learners) to take one course per 7-week online session thus completing the certificate in 4 consecutive sessions. With three cohorts entering per year, the annual enrollment is expected to be between 10-30 students for the first year and build to 45-90 students annually. Northern Michigan University started a bachelor's degree program in medicinal plant chemistry focusing on cannabis chemistry two years ago. In two years, their enrollment grew from 0 to 230 students.

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.

Three metrics will be used to evaluate the program: 1) number of applicants per cohort (entry 3 times per year during session 1 of each semester), 2) course enrollment per semester, and 3) certificate completion per year. Each metric will be evaluated annually by the program director in conjunction with the department chair and faculty involved with the program.

I. IS THE PROGRAM FINANCIALLY VIABLE?

I1. 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.

See provided Academic Program Budget Form.

From: Peter Harrington [mailto:pjhlaw@uri.edu]
Sent: Monday, April 6, 2020 5:00 PM
To: E Paul Larrat <larrat@uri.edu>
Cc: Louis Saccoccio <ljslaw@uri.edu>; nseeram@uri.edu
Subject: FW: HELP - Online Certificate in Cannabis Studies proposals

Hi Again Paul –

Thanks again for speaking just now about this.

As I mentioned, we did some further research, and spoke to a few legal colleagues at other institutions about it, and **while we were not able to find any definitive answer, one way or the other,** to our main question below (i.e. whether offering such a program would be deemed by ED or other federal regulators to violate the Drug Free Schools and Communities Act ("DFSCA"), the most central provision of which requires institutions of higher ed that receive federal funding to certify annually that they have "adopted and implemented a program to **prevent** the unlawful possession, use, or distribution of illicit drugs and alcohol"), we did learn that a number of other universities presently do offer degree- and non-degree- courses and programs in some aspect of cannabis/marijuana studies. The most prominent one appears to be the University of Maryland's 2-year graduate program entitled "Master of Science in Medical Cannabis Science and Therapeutics", information about which can be found here: https://www.pharmacy.umaryland.edu/academics/ms-medical-cannabis-science-and-therapeutics/. Other cannabis courses and programs at the undergraduate level are offered at a handful of other universities as well, as this article explains: https://www.leafly.com/news/industry/higher-education-university-cannabis-degree

While this does not mean our proposed certificate program is definitively "legal" per se, it is helpful to know that if we did go ahead with it, we would not be the only school offering such a program (giving us some degree of "comfort in numbers so to speak").

I think our best argument in support of the proposition that our proposed course does NOT violate the DFSCA is that our **course would not promote, or cause or enable in**

any way, the possession or use of illegal drugs by URI students, on or off the URI Campus. In fact, our anti-drug and anti-alcohol programs at URI strongly discourage and penalize the illegal use of drugs and alcohol by our students, and our course would only educate people about various aspects of the cannabis industry, with a main focus we understand on hemp and its derivatives (as opposed to marijuana, a controlled substance).

Since the course, as you say below, will not involve the possession or transportation of marijuana, it will not violate the Controlled Substances Act.

And although there is no guarantee that the U.S. Department of Education will not take the position that the offering of the certificate program violates the DFSCA, we at least have a pretty strong argument that it does not, or should not.

On that basis of the foregoing, we think that URI's senior leaders could reasonably decide to "**assume the relatively minor risk**" of the "unlikely but not inconceivable possibility of an adverse future enforcement action under the DFSCA by ED against URI", and decide to go ahead with the program.

I hope this is somewhat helpful, but please let me know if you have any questions, or would like to discuss this further.

Thank you again for checking in with our office on this.

Peter Harrington & Lou Saccoccio

Office of the General Counsel

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LEARNING OUTCOMES
OVERSIGHT COMMITTEE

Kingston, RI 02881 www.uri.edu/assessment

THINK BIG WE DO

March 9, 2020

Dear Ms. Forschner-Dancause,

As Chair of the Learning Outcomes Oversight Committee (LOOC), I am pleased to sed you an update regarding the statues of the Undergraduate certificate in Cannabis Studies. The LOOC Sub-Committee, comprised of three faculty members, has carefully reviewed the Plan and commends you on launching this innovative certificate program.

At this time, the Committee Members concur with the previous review of your program and approve your program. I am attaching the three documents you will need to include in your proposal after approval is granted at the next level. Each document is saved as a PDF. (Please inform me if you require a different format.)

Thank you for your program submission, and best of luck in the final stages of the approval.

Sincerely,

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

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ACADEMIC PROGRAM ASSESSMENT PLAN

Date SLOAA review: 03/20
Date LOOC* review:
*(LOOC Chair and review subcommittee)

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:	Cannabis Studies
Academic year plan submitted:	2019-2020
Degree(s):	Certificate
Department Chair:	Navindra Seeram
Program Director:	Stephanie Forschner-Dancause
Accredited Program:	☒ **No** ☐ **Yes; specify year next accreditation report due:** _____
Published learning outcomes (URL)**:**	Program learning outcomes will be published on the new program's website upon program approval.

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	Graduates will have a depth of knowledge about the safe production and dissemination of cannabis-related information and products.

*Add/delete lines as necessary

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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.

		BPS 206 (required)	BPS 312	BPS 314	BPS 316											
Goal 1	Identify and evaluate sources of evidence-based information to make informed decisions related to therapeutics and cannabis production	I	R	E												
Goal 2	Design reliable and safe cannabis products within the framework of an existing regulatory environment	I	R		R, E											
Goal 3	Apply knowledge of the bioactivity of cannabis to effectively assess treatment options to support and advise clients and healthcare providers	I		R, E												

*Add/delete lines as necessary

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PROGRAM ASSESSMENT PLAN

[A timeline for assessment is not needed: At this time, certificates are not included in the institutional timeline for program-level assessment.]

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) WHICH outcome(s) will you examine in each period (use number(s) from curriculum map, e.g. 1.1)?	Course(s) and Other Program Requirements WHERE will you look for evidence of student learning (i.e., what course(s)/program requirements)? Designate for each outcome.	Assessment Evidence of Student Learning WHAT 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 HOW 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*				
Assessment Reporting Period 2 Report Due May 20XX				
Assessment Reporting Period 3 Report Due May 20XX				

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

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NEW CERTIFICATE ASSESSMENT PLAN REVIEW

Date SLOAA review: 3/5/2020
Date LOOC* review: 3/9/2020

*(LOOC Chair and review

Academic Program/Degree: Cannabis Studies Certificate (undergraduate)
College: College of Pharmacy
Date New Program Assessment Plan Submitted: March 2020
Faculty Member(s) Submitting Plan Proposal: Navindra Seeram, Stephanie Forschner-Dancause

FEEDBACK

Strengths:

SLOAA:

- The Assessment Plan details the knowledge and skills students will acquire as they earn this undergraduate certificate which was designed in the online environment and supports flexible course-taking.
- The one required initial course lays the foundation for strong information literacy skills going forward to support continued learning as this industry grows.
- A research project threads across all courses allowing students to apply skills and knowledge while building an integrated framework for understanding best practice in cannabis therapeutics and production through real-world application.

LOOC:

- The program includes one clear goal and three measurable outcomes all of which are introduced in the foundations course.
- The map, goals, and outcomes are all clearly defined.
- The single projects woven into three courses leads well to the capstone experience and demonstrates real world skills.
- As the first of its kind program in the United States, this program is innovative and important; it may become a model for other programs.

Suggestions for improvement:

SLOAA: Program responded to recommendations for minor revisions during consultation.

LOOC: The committee recommends rewording the outcomes so that they do not suggest a level of competency that would be difficult to attain given only 12 credits.

- For example, in outcome two, "creating reliable and safe products…" might be reworded specifically to the task at hand, such as "creating an artifact cannabis product…"
- In outcome three, "develop treatment options to support and advise clients, healthcare providers…." This type of behavior seems too close to the role of medical doctors.

Issue(s) of note:

SLOAA: Consider an "overlay" requirement (bridge the learning knowledge and skills) at the completion of courses and the research project to promote (and capture) the students' ability to articulate their comprehensive knowledge, skills and understanding of cannabis production and therapeutics.

e

LOOC: Clarify whether or not Stephanie Forschner-Dancause will be teaching any of the program's courses. The wording seems contradictory, since earlier in the proposal, it is stated that only professors who hold PhD degrees will teach the Cannabis Studies courses; later, the proposal states that Ms. Forschner-Dancause will develop and deliver course content.

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.]**
PART 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	—	—	—	—	

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THINK BIG WE DO℠

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

DATE: March 18, 2020

TO: Margaret Benz
Coordinator, Faculty Senate

FROM: Linda Barrett
Director, Budget and Financial Planning

SUBJECT: Proposal for an online Undergraduate Certificate in Cannabis Studies

As requested in an email from Patricia Murray, Business Manager in the College of Pharmacy, dated March 9, 2020, the Budget and Financial Planning Office has reviewed the budget related to the proposal for an online Undergraduate Certificate in Cannabis Studies.

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

However, communication with Enrollment Services indicates that as we approach a significant number of students in online programs, additional support staff will be needed in that department.

Please let us know if you require any further information.

cc: Donald DeHayes
Dean Libutti
Matt Bodah
Paul Larrat
Navindra Seeram
Nasser Zawia
John Humphrey
Diane Goldsmith
Brenton DeBoef
Jill Firtell
Cheryl Hinkson
Colleen Robillard
Anne Veeger
Denise Gorenski
Stephanie Forschner-Dancause
Joanne Lawrence
Kelly Slocum
Deborah Messner
Patricia Murray

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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 attend

Choose one: □ Full-time x□ 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	$0		$0		$0		$0	
Tuition: Out-State								
Tuition: Regional								
Mandatory fees per student	$0		$0		$0		$0	
FTE # of New Students: In-State	0		0		0		0	
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	$6,456		$6,636		$6,636		$6,636	
# of New Students	50		73		88		90	
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	$322,800.00		$481,110.00		$580,650.00		$597,240.00	
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							$0.00	
Total Tuition and Fees	**$322,800.00**	**$0.00**	**$481,110.00**	**$0.00**	**$580,650.00**	**$0.00**	**$597,240.00**	**$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	**$322,800.00**	**$0.00**	**$481,110.00**	**$0.00**	**$580,650.00**	**$0.00**	**$597,240.00**	**$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.

EXPENDITURE ESTIMATES

	Year 1 2021_		Year 2 2022		Year 3 2023		Year 4 2024	
PERSONNEL SERVICES	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
Administrators	$6,000.00		$6,000.00		$6,000.00		$6,000.00	
Faculty	$39,499.00		$40,684.00		$41,904.00		$43,161.00	
Support Staff	$3,882.00		$3,999.00		$4,119.00		$4,242.00	
Others								
Fringe Benefits %	$2,679.00		$2,759.00		$2,842.00		$2,927.00	
Total Personnel	**$52,060.00**	**$0.00**	**$53,442.00**	**$0.00**	**$54,865.00**	**$0.00**	**$56,330.00**	**$0.00**
OPERATING EXPENSES								
Instructional Resources	$0.00							
Other (specify)	$0.00							
Total Operating Expenses	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$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	$30,153.00		$31,359.00		$32,614.00		$33,918.00	
Fellowships								
Stipends/Scholarships	$27,595.00		$28,342.00		$28,370.00		$28,370.00	
Total Student Assistance	**$57,748.00**	**$0.00**	**$59,701.00**	**$0.00**	**$60,984.00**	**$0.00**	**$62,288.00**	**$0.00**
TOTAL EXPENDITURES	**$109,808.00**	**$0.00**	**$113,143.00**	**$0.00**	**$115,849.00**	**$0.00**	**$118,618.00**	**$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-tim
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	$322,800.00	$481,110.00	$580,650.00	$597,240.00
Total Expenses	$109,808.00	$113,143.00	$115,849.00	$118,618.00
Excess/Defeciency	**$212,992.00**	**$367,967.00**	**$464,801.00**	**$478,622.00**
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	$322,800.00	$481,110.00	$580,650.00	$597,240.00
Total of Additional Resources Required for Program	$109,808.00	$113,143.00	$115,849.00	$118,618.00
Excess/Deficiency	**$212,992.00**	**$367,967.00**	**$464,801.00**	**$478,622.00**

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

	Budget Justification	0																
NOTE: NOTE: Instructional design, QM review,		Provide Details of program expenses as reported on your																
		Fiscal Year 2021				Fiscal Year 2022				Fiscal Year 2023				Fiscal Year 2024				
		Fall (1st)	Spring	Summer	Year 1 Total	Fall (2nd)	Spring	Summer	Year 2 Total	Fall (3rd)	Spring	Summer	Year 3 Total	Fall (4th)	Spring	Summer	Year 4 Total	
Personnel Expense Details																		Assume 3% increase fo
	Part-time Faculty	3,133		2,933	6,066	3,227	-	3,021	6,248	3,324	-	3,112	**6,435**	3,424	-	3,205	6,628	Saleh Allababidi (Lectu
	Part-time Faculty fringe				-	-	-	-	-	-	-	-	-	-	-	-	-	
	Part-time Faculty	1,567	1,567	3,133	6,267	1,613	1,614	3,227	6,454	1,662	1,662	3,324	**6,648**	1,712	1,712	3,424	6,848	Matt Bertin (Asst Prof)
	Part-time Faculty fringe				-	-	-	-	-	-	-	-	-	-	-	-	-	
	Part-time Faculty	1,567	3,133	2,000	6,700	1,614	3,227	2,060	6,901	1,662	3,324	2,122	**7,108**	1,712	3,424	2,185	7,321	Navindra (Full Prof) 3 c
	Part-time Faculty fringe				-	-	-	-	-	-	-	-	-	-	-	-	-	
	Part-time Faculty	6,767	7,833	5,867	20,467	6,970	8,067	6,043	21,080	7,179	8,309	6,224	**21,713**	7,394	8,559	6,411	22,364	Stephanie Dancause (L
	Part-time Faculty fringe				-	-	-	-	-	-	-	-	-	-	-	-	-	
	Faculty summer salary (# wks)			6,000	6,000	-	-	6,000	6,000	-	-	6,000	**6,000**	-	-	6,000	6,000	Stephanie Dancause 6,
	Part-time Faculty				-	-	-	-	-	-	-	-	-	-	-	-	-	
	Part-time Faculty fringe				-	-	-	-	-	-	-	-	-	-	-	-	-	
	Other (insert lines as needed)	11,488	11,488	7,177	30,153	11,948	11,948	7,464	31,359	12,425	12,425	7,763	**32,614**	12,922	12,922	8,073	33,918	TA Academic Yr 20,000
	Administrative Support salary (#%)	3,882			3,882	3,999	-	-	3,999	4,119	-	-	**4,119**	4,242	-	-	4,242	Bus Mgr., est 77,644*1
	Administrative Support fringe (#%)	2,679			2,679	2,759	-	-	2,759	2,842	-	-	**2,842**	2,927	-	-	2,927	
Subtotal Personnel Expenses		**31,082**	**24,021**	**27,110**	**82,213**	**32,129**	**24,856**	**27,815**	**84,801**	**33,213**	**25,721**	**28,544**	**87,478**	**34,333**	**26,617**	**29,298**	**90,249**	
Itemized Instructional Resources Expenses																		
1					-				-				-				-	
2					-				-	-			-	-			-	
3					-				-				-				-	
4					-				-				-				-	
5					-				-				-				-	
6					-				-				-				-	
Subtotal Instructional Resources Expenses		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	
Other Operating Expenses																		
1	Tuition TA Out of State	13,798	13,798		27,595	14,171	14,171		28,342	14185	14185		28,370	14,185	14,185		28,370	TA Out of State Tuition
2					-				-	-			-	-			-	
3					-				-	-			-	-			-	
4					-				-	-			-	-			-	
5					-	-			-	-			-	-			-	
6					-				-				-				-	
7					-				-				-				-	
8					-	-			-	-			-	-			-	
9					-				-				-				-	
10					-				-				-				-	
					-				-				-				-	
Subtotal Other Operating Expenses		**13,798**	**13,798**	**-**	**27,595**	**14,171**	**14,171**	**-**	**28,342**	**14,185**	**14,185**	**-**	**28,370**	**14,185**	**14,185**	**-**	**28,370**	
Total Annual Expenses		**44,880**	**37,818**	**27,110**	**109,808**	**46,300**	**39,027**	**27,815**	**113,143**	**47,398**	**39,906**	**28,544**	**115,848**	**48,518**	**40,802**	**29,298**	**118,619**	
	The courses will be taught as overload by existing College of Pharmacy professors and lecturers																	
	A level 1 Graduate Assistantship will be engaged to provide assistance with classes																	
	A fiscal person will be identified to help with the business functions of the Program																	
	Student Enrollment Projection																	
	Enrollment numbers are estimates based on conversations with industry stakeholders in New England, specifically Rhode Island, Connecticut, and Maine.																	
	In addition, a small regional state school in Michigan, Northern Michigan University, saw enrollment of 230 students in the first two years of their B.S. in Medicinal Plant Chemistry which has a primary focus on cannabis chemistry.																	