

Abbreviated Proposal form
For All Programs including Certificates
No New Funding

A Proposal for: an undergraduate certificate in Energy Economics and Policy

Date: August 20, 2016

A. PROGRAM INFORMATION

A1. Name of institution University of Rhode Island

A2. Name of department, division, school or college
Department: Environmental & Natural Resource Economics
College: College of the Environment and Life Sciences

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

Program title: Certificate in Energy Economics and Policy
Classification code (CIP) 03.0204

A4. Intended initiation date of program change. Include anticipated date for granting first degrees or certificates, if appropriate.

Initiation date: January 2017
First degree date: May 2017

A5. Intended location of the program: URI Kingston Campus

A6. Description of institutional review and approval process

	<u>Approval Date</u>
Department	9/8/2016
College	9/27/2016
CAC/Graduate Council	
Faculty Senate	
President of the University	

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

Undergraduate Certificate in Energy Economics and Policy

This proposed program is designed to certify to potential employers that recipients have acquired broad knowledge and a set of practical skills in applying analytical tools to critical energy-related challenges faced by modern society. The program comprises intensive training in energy economics, management and policy, and is designed to address energy management issues at scales ranging from the individual building, to the microgrid, to the national and international levels.

As outlined below, these skills are in great demand by local, state and federal government agencies, non-governmental organizations and the private sector. Recipients of our energy certificate will have acquired a skillset that is ideally suited to meet these needs, and will help them compete for jobs in the marketplace.

Learning Goals

Through the energy certificate, students will acquire knowledge, training, experience and professional skills to:

- (1) Benchmark energy use in buildings, including private residences, industrial, commercial and municipal facilities;
- (2) Analyze investments in energy conservation, energy efficiency and sustainable energy production
- (3) Evaluate the economic and environmental consequences of policy options for managing energy at the local, regional, national and global levels;
- (4) Communicate effectively in written and oral presentations in order to effect change by becoming active participants in the public debate regarding solutions to energy challenges.

Program requirements: The program is open to full time and part time students. It requires a total of 15 credits of coursework that can also be applied to a degree program at URI. Required courses consist of EEC 350 Sustainable Energy Economics and Policy, EEC 352 Economics of Small Scale Renewable Energy Systems, and an approved three credit energy-related internship EEC 497 Internship in Environmental Economics or an equivalent energy-related professional experience, plus 6 additional credits from an approved list of supporting courses (see below for details). Students are responsible for meeting the prerequisite requirements for individual courses, as applicable. Students must receive a minimum grade of C in each class that applies to the certificate, and an overall average of B (3.0) or better in classes applied to the certificate.

This program is designed to use existing resources, and all courses that qualify for the energy certificate are currently taught at the University of Rhode Island. Potential employers include those in the private sector, public sector and nongovernmental organizations. A list of example positions that have recently been posted to USAJobs.Gov is contained below.

A8. Signature of the President

David M. Dooley

A9. Person to contact during the proposal review

Name: Dr. James J. Opaluch

Title: Professor and Dept Chair, Environmental and Natural Resource Economics

Phone: (401)874-4590

Email: JimOpaluch@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.

Not Applicable

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.

There is a clear need for an Energy Economics and Policy Certificate at the University of Rhode Island. Employment in the green energy sector is growing rapidly, as detailed below. This creates a need for educational programs to help meet the needs for a well-prepared workforce with practical skills and broad knowledge regarding the green energy sector. As outlined below, the Rhode Island State Senate has encouraged institutions of higher education to develop certificate and degree programs to meet the needs of green sector businesses (e.g., Rhode Island Senate Policy Office, 2016).

Our State and local governments are actively working with energy programs at URI. The Governor and Legislature are looking toward energy efficiency and other programs to create affordable, clean and reliable energy. Government agencies and the citizens of Rhode Island receive direct benefits from internships and capstone projects associated with the certificate program. A recent survey of over 250 students at URI found that 95% are interested in current energy issues, and 97% support creation of the proposed certificate.

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

Local, State and Federal government agencies are actively developing programs to support energy conservation, energy efficiency and renewable energy production. Environmental groups and other nongovernment organizations are working to promote a great transition to an economy fueled by clean and sustainable energy supplies. Citizens and companies are endeavoring to reduce energy costs and contribute to a more sustainable future through improved energy management practices.

Our energy challenges create great opportunities for professionals who have demonstrated expertise in energy economics, policy and management. Nationwide, firms in the energy sector anticipate roughly 7% employment growth overall for 2016, including 260,000 new jobs in energy efficiency—a 14% employment increase in just one year (US Department of Energy, 2016). Employment grew even faster in Rhode Island's clean energy sector. According to the Rhode Island Clean Energy Industry report, employment in the RI clean energy sector grew by 40% between 2015 and 2016 (State of Rhode Island, 2016). This same report indicates that many energy companies have had difficulty finding qualified applicants for open positions. In the words of President of the Rhode Island State Senate M. Teresa Paiva Weed "Jobs are being created in the clean energy sector of our economy at six times the overall rate of job growth." Senate President Weed went on to indicate the need to "... better equip Rhode Islanders with the skills they need to succeed in the green sectors of our economy." (RI General Assembly, 2016)

URI can help fill this niche by offering prospective students a unique and specialized academic training experience in energy economics and policy. Recipients of our Energy Certificate will have acquired a skillset that is ideally suited to help them compete for jobs in the marketplace.

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

The table below provides a list of jobs titles and salaries for recent job listings in USAJobs.Gov. Many of these positions may require the certificate be combined with an appropriate academic major (e.g., Environmental and Natural Resource Economics). See above for a discussion of job outlook/growth.

External Energy and Minerals Policy and Regulatory Specialist, U.S. Department of Interior, Lakewood, CO.	Salary: \$76,341 - \$118,018	This position is located in the Energy and Minerals Branch of the US Department of the Interior. It is intended to support agency decision making related to energy and minerals and park geologic resource management. Energy and Minerals Branch functions include leadership and analysis of proposed project.
Economist, US Department of Energy <i>Washington, DC</i>	\$90,823 - \$139,523	Serve as a computer model developer, expert analyst and technical authority to develop, maintain, modify and integrate computer models to analyze long-term international energy markets.
Economist, Bureau of Ocean Energy Management <i>Sterling, VA</i>	\$63,722 - \$139,523	Identify problems and recommend policy options to BOEM and Department of Interior management, and other Executive Branch and Legislative Branch organizations. Assess the economic and production effects of OCS policy options.
Policy and Evaluation Analyst, National Grid <i>Providence, RI</i>	N/A	Assist in the planning of efficiency programs through cost-effectiveness analyses, analysis of energy efficiency program costs and results.
Equity Research—Energy Associate, FBR & Co. <i>New York City, NY</i>	N/A	Collect data, perform statistical studies, and research for individual companies and their securities, within their specified industry, and carry out general research duties.
Energy Industry Analyst, Federal Energy Regulatory Commission <i>Hagerstown, MD</i>	\$107,325 - \$139,523	Participate in teams or serve as a team lead applying appropriate techniques to analyze the fundamentals of the bulk electric system and provide appropriate discussion and recommendations on regulatory policy issues.
Residential Energy Specialist, Mountain Association for Community Economic Development <i>Berea, KY</i>	N/A	Performing whole-house energy assessments, modeling energy savings with computer software, developing biddable work-scopes, performing quality-assurance inspections, and training/technical assistance to utility staff in all afore-mentioned duties.
Program Support Specialist, Bureau of Ocean Energy Management, Anchorage, AK	Salary: \$43,817 - \$56,963	This position will support financial and environmental analyses of oil and gas leases on federal lands. The Bureau of Ocean Energy Management (BOEM) manages the exploration and production of energy resources to appropriately balance economic development, energy independence, and environmental protection through oil and gas leases, renewable energy development and environmental reviews.
Economist, Environmental Protection Agency <i>Narragansett, RI</i>	\$91,248 - \$118,620	Collaborate with interdisciplinary teams to develop and conduct analyses that support sustainable environmental protection and management; develop innovative methods and tools designed to inform management of environmental stressors.

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.

As outlined above, this certificate program is designed in partnership between the Department of Environmental and Natural Resource Economics (ENRE) and the URI Extension Outreach Center (Extension), embracing the goals of the University's Academic Plan to "... integrate civic engagement and experiential learning projects" and "to ensure programs actively engage students in integration, synthesis, and application of knowledge" (Academic Plan, page 11). The partnership between ENRE and Extension provides the framework to apply classroom learning to real world energy projects, focusing on problem-oriented instruction, peer learning, team projects, and/or service learning (Academic Plan, page 11). As detailed above, the energy certificate requires an approved energy-related internship or an equivalent professional experience. For example, Extension's Energy Fellows Program can be used to provide students with the opportunity to apply knowledge and analytical skills obtained in the classroom to help communities develop and implement energy management plans, and to work with government agencies like Rhode Island Office of Energy Resources or the Rhode Island Public Utilities Commission; non-governmental organizations like the Acadia Center for energy and climate, the Conservation Law Foundation, or The Nature Conservancy; and a host of private sector energy companies in the region.

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.

This is a certificate program, not an academic major, and the program is not duplicative of, nor compete with programs at other public higher education institutions in Rhode Island. As a consequence, we anticipate that the program will have no adverse impacts on enrollments at other Rhode Island institutions.

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](#)).

This is a certificate program that augments an academic major. We do not anticipate that students will transfer into the program from other academic institutions, nor transfer out of the program to other institutions. The certificate is purposefully designed with courses having few prerequisites, so that the program would be accessible to students from a variety of academic majors.

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.)

Not applicable.

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

The certificate program does not compete with, nor duplicate programs at other Rhode Island institutions.

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

This is a certificate program, not a degree program. There is no “next degree level”.

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

This is a certificate program, that could be a stand-alone certificate, or could augment another academic degree program. Courses taken for this certificate can be counted towards another degree at University of Rhode Island. As indicate above, the certificate is intentionally designed to include courses with few prerequisites, so it is accessible to students from many different degree programs.

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

No external 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).

We do not anticipate making the program available for the Regional Student 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.

All courses that qualify for the proposed certificate program are existing courses, already offered at the University of Rhode Island. (see below course list). We are not proposing any new courses.

As indicate above, the proposed certificate program could be combined with many academic majors. Below we present an example curriculum map for the energy certificate when combined with an academic major in Environmental and Natural Resource Economics.

Required Courses:

EEC 350 Sustainable Energy Economics and Policy. Energy production, consumption, and environmental impacts. Energy markets, policy, and the transition from a fossil fuel-based energy economy to an economy based on sustainable energy and renewable energy sources.

EEC 352 Economics of Small Scale Renewable Energy Systems. This course provides tools to evaluate opportunities and challenges in the transformation from fossil fuels to renewable energy at the scale of individual buildings and other small scale energy systems.

EEC 497 Internship in Environmental Economics (or an equivalent professional experience). Supervised work experience in environmental and natural resource economics or related areas with a governmental agency, nongovernmental organization, or in the private sector.

Supporting Courses (Select two of the following courses):

EEC 345 Sustainable Development, Trade, and the Environment. To understand the relationship between economic development, international trade and the environment. Topics include sustainable development, trade policies and the environment, climate change and development, and institutions for managing the commons.

EEC 355 Economics of Climate Change. Assessment of the economic and policy issues associated with climate change, including the causes of climate change, the economic and social effects, and alternative policy options to reduce carbon emissions.

EEC 440 Benefit Cost Analysis. Basic concepts in benefit-cost analysis. Measurement, comparison of benefits and costs over time, and criteria for evaluation of projects and public policies. Problems and case studies in evaluation of current natural resources issues. (Lec. 3) Pre: EEC 105 or permission of instructor.

EGR 213G Energy and the Environment. Technical, social and environmental aspects of energy, including energy and society, energy policy, global challenges of energy, energy systems (fossil fuels, renewables, storage) and environmental pollution of energy systems.

MAF 445 Environmental Thought and Behavior. Introduction to environmental behavior, including factors such as values, knowledge, risk perceptions, and social pressure. Attention is given to the role of attitudes and values in coastal and marine management.

CPL/LAR 434 Introduction to Environmental Law. Surveys issues arising out of laws designed to protect the environment and manage resources: right to a decent environment, government regulation versus private property rights, citizen participation in planning environmental controls.

CPL 485 Environmental Planning. Theories, methodologies, and substantive concerns of environmental resource analysis with attention given to coastal environmental issues. Focus on land, soils, watersheds, water quality, vegetation, air quality, wildlife, noise pollution.

SUS/COM 315 Environmental Dimensions of Communication. Investigation of individual and mediated environmental messages, analysis and experimentation with the ways communication can affect environmental knowledge, attitudes and behavior, design of communication campaigns to affect resource use and ecological responsibility.

**Curricular Map for Energy Certificate
Combined with an Academic Major
in Environmental and Natural Resource Economics
Option 1: Green Markets and Sustainability**

The following is an example of the typical course schedule for the four years for a student receiving the Certificate in Energy Economics and Policy, while majoring in Environmental and Natural Resource Economics, Option 1: Green Markets and Sustainability. Courses applied to the energy certificate are shown in red.

Year 1

Fall Semester		Spring Semester	
Course	Credits	Course	Credits
COM 100	3	EEC 205	3
EEC 105	3	GEO 100	3
NRS 100	3	ECN 201	3
BIO 105	3	WRT 104, 105 or 106	3
URI 101	1	EGR 213 Energy & the Environment	3
Gen Ed Elective	3		
	16		15

Year 2

Fall Semester		Spring Semester	
Course	Credits	Course	Credits
EEC 310	3	Concentration Elective	3
Supporting Science	3	MTH 111 or 131	3
ECN 328	3	Supporting Science	3
Supporting Science	3	Gen Ed Elective	3
EEC 350 Sustainable Energy: Econ & Policy	3	EEC 352 Econ of Small Scale Energy Systems	3
	15		15

Year 3

Fall Semester		Spring Semester	
Course	Credits	Course	Credits
Gen Ed Elective	3	EEC 355 Climate Change Economics	3
WRT XXX	3	Gen Ed Elective	3
Supporting Elective	3	Supporting Elective	3
Supporting Elective	3	Supporting Elective	3
Supporting Science Elective	3	Gen Ed Elective	3
	15		15

Year 4

Fall Semester		Spring Semester	
Course	Credits	Course	Credits
Free Elective	3	EEC 432	3
EEC 497 Internship	3	Gen Ed Elective	3
Supporting Science Elective	3	Supporting Elective	3
Supporting Elective	3	Supporting Elective	3
Supporting Elective	3	Supporting Elective	3
	15		15

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

No.

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

None.

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

Not applicable. This is a certificate program, not an academic major. The number of free electives is determined by the student's major.

- 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.**

This proposed certificate requires a total of 15 credits. There are no accrediting agencies for this program.

- 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. All courses are existing courses at the University of Rhode Island that meet face-to-face.

- 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.

Learning Goals

Goal 1. Apply economic tools to improve energy management

Goal 2. Develop knowledge, and skills necessary to become an informed participant in the energy policy debate

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

Through the energy certificate, students will acquire knowledge, training, experience and professional skills to:

- (1) Benchmark energy use in buildings, including private residences, industrial, commercial and municipal facilities;
- (2) Analyze investments in energy conservation, energy efficiency and sustainable energy production
- (3) Evaluate the economic and environmental consequences of policy options for managing energy at the local, regional, national and global scales;
- (4) Communicate effectively in writing and in oral presentations in order to effect change by becoming active participants in the public debate regarding solutions to energy challenges.

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.

See attached plan and supplemental materials

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

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

This certificate program is based on existing courses, already offered at the University of Rhode Island (see course list above). There is no need for new positions, nor for reassignment of existing positions.

- 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.

This certificate program will augment existing programs at the University of Rhode Island by adding practical skills and academic knowledge of energy issues. We anticipate that most students in the program will be students concurrently enrolled in an academic major at URI. We expect that the majority of the students in the certificate program will be majors in the Department of Environmental and Natural Resource Economics.

- 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.

Performance Metrics:

1. Number of students who enroll in the certificate program
2. Quality of performance of students in internship or other professional experience
3. Number of students who complete certificate
4. Nature of employment of certificate recipients

Each of these performance measures will be assessed annually by the Director of the Certificate Program and the Chair of the Department of Environmental and Natural Resource Economics. We do not currently anticipate a formal external evaluation of this Certificate Program per se. However, we will seek input on a continuing basis from Internship hosts.

I. IS THE PROGRAM FINANCIALLY VIABLE?

I1. As no new funding is required and the new program can be administered entirely with existing funds, include a five-year plan demonstrating that existing funds are sufficient for carrying out the program. Proposers shall request a "Statement of No Financial Impact" from the URI Budget and Financial Planning Office.

This certificate program is comprised of existing courses, already offered at the University of Rhode Island. No new funding is required to administer the program. The Statement of No Financial Impact is in progress.

References

Rhode Island General Assembly, 2016. "Senate's Grow Green Jobs RI bills enacted" Press release, July 7, 2016. Available online at:
http://www.rilin.state.ri.us/pressrelease/_layouts/RIL.PressRelease.ListStructure/Forms/DisplayForm.aspx?List=c8baae31-3c10-431c-8dcd-9dbbe21ce3e9&ID=12091) Retrieved August 1, 2016.

Rhode Island State Senate Policy Office, 2016. *Grow Green Jobs RI: A Legislative Action Plan*, (January). Available online at:
<http://www.rilin.state.ri.us/Reports/Grow%20Green%20Jobs%20RI%202016%20Online.pdf>. Retrieved August 12, 2016.

State of Rhode Island, 2016. CommerceRI and the RI Office of Energy Resources. RI Clean Energy 2016 Industry Report by BW Research Partnership.
[www.energy.ri.gov/documents/News/RI Industry Report 2016.pdf](http://www.energy.ri.gov/documents/News/RI%20Industry%20Report%202016.pdf)

State of Rhode. Senate Policy Office. *Grow Green Jobs RI: A Legislative Action Plan*, Jan.2016.
<http://www.rilin.state.ri.us/Reports/Grow%20Green%20Jobs%20RI%202016%20Online.pdf>

US Department of Energy, 2016. *U.S. Energy and Employment Outlook Report*. Available online
<http://energy.gov/sites/prod/files/2016/03/f30/U.S.%20Energy%20and%20Employment%20Report.pdf>. Retrieved August 1, 2016.

New Program Proposal Student Learning Outcomes
Assessment Plan
(Accredited, Non-Accredited and Certificate Programs)

Each new program that is being proposed must have clearly articulated program learning goals (Section B1 of the new program proposal) and student learning outcome statements linked to curriculum and course experiences/requirements (Section E3/E4a of the new program proposal). The Plan also requires each program to create an assessment timeline (Section E4b of the new program proposal) indicating a commitment to assess outcomes during the two-year assessment cycle (noting when and how learning outcomes assessment is planned).

Program Information:

Program:	Energy Economics and Policy Certificate
Academic year proposal submitted:	2016-2017
Degree(s):	Certificate
Department Chair:	James Opaluch
Program Director:	Simona Trandafir
Accredited Program:	No

Program Goals:

(Section B1 of
the proposal)

Goals should relate to the mission of the department, college, and university in which the program resides. These broad, general statements encompass what it means to be an effective program. Goals are evaluated by measuring specific student learning outcome statements related to the individual goal: what the program expects students to know and be able to do upon completion of the program.

#1	Apply economic tools to improve energy management
#2	Develop knowledge, and skills necessary to become an informed participant in the energy policy debate

(Add lines as necessary.)

New Program Proposal Student Learning Outcomes Assessment Plan

(Accredited, Non-Accredited and Certificate Programs)

[Timeline not requested for certificate programs at this time]

Assessment Timeline: Indicates when and how student learning will be assessed based on learning outcome statements and expectations. Refer to the curriculum map to propose an assessment timeline in which you will plan to assess the program-level student learning outcomes. Note: Specify a 6-year plan for assessment to represent 3 two-year reporting periods:
(Section E4b of the proposal)

Assessment Reporting Period 1: the first academic year in which the program would plan to assess at least one outcome.

Assessment Reporting Period 2: follows two years later, with plans defined for assessing another outcome(s).

Assessment Reporting Period 3: follows two years later, with plans defined for assessing additional outcome(s).

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

Academic Reporting Year(s)	Outcome(s)	Course(s) and Other Program Requirements	Assessment Evidence (direct/indirect)	Assessment Method
	<u>WHICH</u> outcome(s) will you examine in each period? (Use number(s) from curriculum map, e.g. 1.1)	<u>WHERE</u> will you look for evidence of student learning (i.e., what course(s)/program requirements)? (Designate for each outcome noted.)	<u>WHAT</u> student work or other evidence will you examine in order to generate conclusions and recommendations? (Designate for each requirement noted.)	<u>HOW</u> will you look at the evidence; what means will you use to quantify the evidence? (Designate for each source of evidence noted.)
Assessment Reporting Period 1 ¹ : Report due May 20__				
Assessment Reporting Period 2: Report due May 20__				
Assessment Reporting Period 3: Report due May 20__				

¹ Initial reporting year will depend on timeframe for program implementation and student cohort size.

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

Subject selectors will complete this form as requested, assessing library materials and collections as detailed below. Send one copy of the assessment to the faculty member who requested it. Send one copy of the assessment to the Collection Management Officer.

Program: Certificate in Energy Economics and Policy

Department, College: Environmental & Natural Resource Economics, CELS

Faculty Member: Dr. James J. Opaluch

Date returned to Faculty: August 29, 2016

Librarian Completing Assessment: Andrée Rathemacher

Collection Management Officer: Joanna 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?
2. Does URI have the essential journals as noted in the Faculty Questionnaire?
3. What new resources are required to support the program (including media, electronic, or other non-print materials)?
4. What information mastery sessions will be required for the students?
5. What is the approximate cost to acquire the materials necessary? Which of these will be continuing costs?

This is an undergraduate certificate program that is based entirely on existing classes that are already taught at URI and which have themselves been approved, with Library Impact Statements, through the course-approval process.

The department has implied on the Library Questionnaire for Faculty that because the program is based entirely on existing courses, there are no critical journals, monographs, and electronic resources in the field required to support the program that the library does not already have.

The Library Questionnaire for Faculty also states that students will not be conducting library research in the courses of which the program is comprised, so the need for information mastery sessions will be minimal to non-existent.

Based on my review of the Library Questionnaire for Faculty and the “Abbreviated Proposal Form for all Programs Including Certificates – No New Funding,” I conclude that the University Libraries can meet the needs of the Certificate in Energy Economics and Policy with no additional resources.

Thus, in my role as Subject Selector for the Department of Environmental and Natural Resource Economics, I support the addition of this certificate program without reservation.

Andrée J. Rathemacher
Professor
Head of Acquisitions, University Libraries
Subject Selector for the Department of Environmental and Natural Resource Economics

Rev 6/16/15 jmb

BUDGET AND FINANCIAL PLANNING

Adams House, 85 Upper College Road, Kingston, RI 02881 USA p: 401.874.2509 f: 401.874.5824 uri.edu/budget



DATE: November 1, 2016

TO: Nancy F. Neff
Coordinator, Faculty Senate

Joanne D. Lawrence
Specialist, Faculty Senate

FROM: Linda Barrett
Director, Budget and Financial Planning

SUBJECT: Proposal for an Undergraduate Certificate in Energy Economics and Policy

As requested in an email from Dr. James J. Opaluch, Professor and Department Chair of Environmental and Resource Economics, dated October 11, 2016, the Budget and Financial Planning Office has reviewed the submitted documents related to the proposal for an Undergraduate Certificate in Energy Economics and Policy.

According to the proposal, the Undergraduate Certificate in Energy Economics will be offered through the College of Environmental Life Sciences, and will provide URI students with the skills and knowledge of working in the rapidly growing green energy sector field. Dr. Opaluch referenced in the submission that the Rhode Island State Senate has recently encouraged institutions of higher learning to develop more degree and certificate programs in these green energy sector fields. Also, an email from you stated that the rules did not require JCAP (Joint Committee on Academic Planning) review for the certificate at this time.

The Budget and Financial Planning Office concurs that the Undergraduate Certificate in Energy Economics and Policy will have no 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
Cliff Katz
Dr. James J. Opaluch
Cheryl Hinkson
Colleen Robillard
L. Beauvais

Office/BudgetImpactStatements/Undergraduate certificate in Energy Economics and policy /BudgetImpactStatementLetter.draft

Energy Economics

Kevin McClure <krmcclure@uri.edu>

Sat, Oct 8, 2016 at 10:25 AM

To: James Opaluch <jimopaluch@uri.edu>

Cc: Kevin McClure <kmcclure@uri.edu>, Norbert Mundorf <nmundorf@uri.edu>

Hi Jim: I can confirm that Com Studies does indeed support using COM/SUS 315 as a supporting elective. Sorry for the delayed response. Best wishes on the Energy Economics and Policy Certificate it seems a great idea.

Best,
Kevin

On Fri, Oct 7, 2016 at 6:40 PM, James Opaluch <jimopaluch@uri.edu> wrote:

[Quoted text hidden]

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Kevin R. McClure, Ph. D.
Professor & Chair
Dept. of Communication Studies
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202 Davis Hall
10 Lippitt Road
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Kingston, RI 02881

Fall 2016 Office Hours: 10:00-12:00 MWF
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Fwd: Re: Energy Economics

1 message

James Opaluch <jimopaluch@uri.edu>
To: Joanne Lawrence <jlawrence@uri.edu>

Fri, Oct 7, 2016 at 6:12 PM

Joanne,

Here is the email from EGR on their energy class.

Note the email is from the instructor, but if you read the thread, the Assistant Dean indicates that he supports inclusion of the course if it is ok with the instructors.

Jim

++++++
Sent from my smart phone
My apologies for brevity
and any typos
++++++

----- Forwarded message -----

From: "M Reza Hashemi" <reza_hashemi@uri.edu>
Date: Oct 7, 2016 4:57 PM
Subject: Re: Energy Economics
To: "Jared Abdirkin" <jabdirkin@uri.edu>
Cc: "James Opaluch" <jimopaluch@uri.edu>, "Christopher Baxter" <cbaxter@uri.edu>

Hello Jared,

I talked to the other instructors, and we are happy for the course to be counted toward this program. I just should mention that the course is being offered ever year in the Spring semesters.

Best wishes
Reza

On Tue, Oct 4, 2016 at 2:56 PM, Jared Abdirkin <jabdirkin@uri.edu> wrote:

Hi Jim,

Confirm with the faculty senate office, but as long as Reza confirms and you copy me this is OK by the Dean's Office, you shouldn't need anything else.

Thank you,

Jared B. Abdirkin

Assistant Dean

College of Engineering

The University of Rhode Island

www.uri.edu/coe

On Tue, Oct 4, 2016 at 2:40 PM, M Reza Hashemi <reza_hashemi@uri.edu> wrote:

Jim,

I understand. I will talk to other instructors, and if they are OK with this, I will send an email to Jared for the dean's letter before the deadline.

In general, I think, the course is grand challenge and not restricted to engineering students, but we have to double check the capacity issue.

Cheers

Reza

On Tue, Oct 4, 2016 at 2:27 PM, James Opaluch <jimopaluch@uri.edu> wrote:

Thanks for forwarding my email to the instructors.

Definitely confer with the instructors. But to satisfy the FacSen Curricular Affairs Committee, we need a supporting email from the Department Chair or equivalent, not the instructors. Since the course is EGR, it needs to be from the Dean's office.

Our deadline is Oct 11th. Unfortunately, we will need to drop the course from list of supporting electives if we don't get an email of support by then. It merely needs to say that students in the certificate program are welcome to take the course, assuming prerequisites are met.

If you don't feel that you can accommodate students outside Engineering, let me know and we will drop it from the list of supporting electives.

Jim

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Dr. James J. Opaluch, Professor &
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Environmental & Resource Econ
207 Kingston Coastal Institute Bldg
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Kingston, RI 02881

[HTTP://WWW.URI.Edu/cels/enre/](http://WWW.URI.Edu/cels/enre/)

=====

Phone: (401)874-4590
Fax: (401)782-4766
e-mail: JimOpaluch@URI.Edu

On Tue, Oct 4, 2016 at 2:07 PM, Jared Abdirkin <jabdirkin@uri.edu> wrote:

Good Afternoon Jim,

I am copying Reza Hashemi, a faculty member in Ocean Engineering, who is the lead instructor on this new course for the COE. He should better be able to answer your questions.

Sincerely,

Jared

Jared B. Abdirkin

Assistant Dean

College of Engineering

The University of Rhode Island

www.uri.edu/coe

On Tue, Oct 4, 2016 at 9:35 AM, James Opaluch <jimopaluch@uri.edu> wrote:

We are proposing an undergraduate certificate in Energy Economics and Policy, and we have proposed that your new class EGR213G Energy and the Environment qualify as a supporting elective for the certificate.

The Curricular Affairs Committee wants to see acknowledgments from affected Departments that indicate the Department is not concerned about having their courses count towards the program (e.g., the courses are not chronically over-enrolled, and there is no capacity for any additional students).

Can you please send me an email acknowledging that your department supports this class as qualifying as an elective for the certificate? Or let me know if you have a concern and we can discuss it, or if you prefer we can drop the course from our list of supporting electives.

Thanks,
Jim

--

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Webpage: <http://egr.uri.edu/oce/meet/hashemi/>

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Energy Economics

Angelo Simeoni Jr <aes@uri.edu>

Tue, Oct 4, 2016 at 3:11 PM

To: James Opaluch <jimopaluch@uri.edu>

Cc: William R Gordon Jr <williamrgordon@mail.uri.edu>, "William Gordon, Jr" <williamrgordon@uri.edu>

Jim,

We would be happy to participate in the Energy Economics and Policy certificate. You are welcome to include LAR434 and CPL485 as supporting electives. In addition, LAR472 a new course in alternative energy for small site applications is coming online this spring pending final approval thru Faculty Senate. You are welcome to include this class if it is applicable. Just let us know how we can help.

Angelo

From: James Opaluch [mailto:jimopaluch@uri.edu]

Sent: Tuesday, October 04, 2016 8:52 AM

To: Angelo Simeoni

Subject: Energy Economics

[Quoted text hidden]

Energy Economics Certificate

Tracey Dalton <dalton@uri.edu>

Tue, Oct 4, 2016 at 8:20 PM

To: James Opaluch <jimopaluch@uri.edu>

Jim,

The Marine Affairs department supports including MAF 445 Environmental Thought and Behavior as an elective in the undergraduate certificate program in Energy Economics and Policy,

Please let us know if you need anything else.

Kindly,
Tracey

--

Tracey Dalton
Professor & Chair
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[401.874.2434](tel:401.874.2434) or dalton@uri.edu

<http://web.uri.edu/dalton/>