State of Rhode Island and Providence Plantations
Council on Postsecondary Education
OFFICE OF THE POSTSECONDARY COMMISSIONER
560 Jefferson Boulevard Suite 100
Warwick, Rhode Island 02886-1304

CORRECTED
Enclosure 5b1
February 24, 2016

TO: Members of the Council on Postsecondary Education

FROM: Jim Purcell, Ed.D, Commissioner for Postsecon

DATE: April 20, 2016

RE: Proposal for the addition of a minor in Global Water Resources at University of Rhode Island

Background

The University of Rhode Island (URI) is proposing to offer a minor in Global Water Resources (GWR) led by faculty in the College of Environment and Life Sciences (CELS). Students choosing this minor will take courses from multiple departments to gain necessary interdisciplinary skills that are directly relevant to understanding global water issues.

Rationale

The proposal states that water is a critical issue for societies and the environment around the world and will continue to be one of the highest priorities for governments in the future due to the pressures exerted by climate, environmental change and population growth. The minor in Global Water Resources is designed to provide students with an understanding of hydrological processes that affect the quantity and movement of surface and groundwater, and the impacts of human activities on water supply and characteristics at a global scale.

The URI catalogue states that the minor in Global Water Resources will provide students with the opportunity to develop expertise relevant to the human dimensions of water quality and quantity at the global scale. This expertise will give them the background and practical skills required to address the emerging water problems in a world faced with changing climates and population growth. Opportunities will exist for students to explore ecosystem interactions of water, remediation strategies for polluted water, policy and economics of water, and better understand the linkages between water, landscape and climate.

The proposal states that on completion of this minor, students will have the knowledge and skills to:

1. Understand water resource issues in the region, the nation, and the world in the context of the complex interplay between climate, land, water, people and economic development;
2. Integrate information across a range of disciplines into a comprehensive analysis of water issues;
3. Appreciate the relationships between raw data and their interpretation(s), and how the lack of knowledge or uncertain knowledge influences decision-making relevant to water.

Institutional Role

The university states that formalizing a minor in Global Water Resources will help fulfill the vision of the URI Academic Plan which states as a goal "Internationalizing and globalizing the University of Rhode Island." All the required courses will include aspects of global water issues through case studies and an understanding of the global, physical and cultural differences regarding water. URI also asserts that this minor encourages independent thinking about water issues through the lens of multiple disciplines and perspectives.

Interinstitutional Considerations

URI maintains that there is no projected impact to other public institutions of higher education in Rhode Island.

Program

The interdisciplinary minor in Global Water Resources is designed as a flexible program for undergraduate students to study and integrate principles of physical hydrology, geochemistry, aquatic and terrestrial ecology, natural resources management, and environmental economics and policy. This minor may include courses from four degree-granting colleges at URI: College of Environment and Life sciences (CELS) courses in the Departments of Geosciences (GEO), Natural Resources Management (NRS), Environmental Resources Economics (ENRE) and Biology (BIO), as well as courses in the College of Engineering (Civil and Environmental- CVE), the College of Arts and Sciences (Landscape and Architecture-LAR) and the Graduate School of Oceanography (OCG).

The Global Water Resources minor includes a minimum of 18 credit hours from the following courses:

Required courses:

- GEO/NRS/EEC 234 Introduction to Water Resources (3 credits)
- EEC430 Water Resource Economics (3 credits)
- One course from the following:
  - NRS 461 Watershed Hydrology and Management (4 credits)
  - GEO 482/582 Innovative Subsurface Remediation Technologies (4 credits)
  - GEO484/584 Environmental Hydrogeology (4 credits)

Remaining credits are chosen from approved elective courses:

- GEG 101 World Geography (3 credits)
- GCH 103 Grand Challenges in the Natural Sciences (4 credits)
- NRS 100 Natural Resource Conservation (3 credits
- NRS 300 Introduction to Global Issues in Sustainable Development (3 credits)
- NRS 461 Watershed Hydrology and Management (4 credits)
- NRS 496 Seminar in International Development (3 credits)
- BIO/NRS 563 Biology and Ecology for Fish (4 credits)
- GEO/OCG 110 The Ocean Planet (3 credits)

- GEO 491 J-Term Indonesia (3 credits)
- GEO 562 Aqueous Geochemistry (4 credits)
- GEO/NRS/CVE 535 Geospatial Watershed Modeling (3 credits)
- GEO482/582 Innovative Subsurface Remediation Technologies (4 credits)
- GEO 483 Hydrogeology (4 credits)
- GEO484/584 Environmental Hydrogeology (4 credits)
- GEO 586 Hydro Reading Seminar (1-3 credits)
- CVE 471 Water and Water Treatment Systems (3 credits)
- CVE 475 Water and the Environment (3 credits)
- OCG 200 Extreme Weather (3 credits)
- OCG 480 Introduction to Marine Pollution (3 credits)
- CPL/LAR 434 Introduction to Environmental Law (3 credits)
- CPL 485 Environmental Planning (3 credits)
- EEC 310 Economics for Natural Resource Management and Policy (3 credits)
- EEC 440 Benefit-Cost Analysis (3 credits)
- PSC 422 International Political Economy (4 credits)

Faculty
The program will be supported by existing faculty in the College of the Environment and Life Sciences, College of Engineering, College of Arts and Sciences, and the Graduate School of Oceanography. No additional faculty is required to facilitate the minor, which is completely contained within existing classes and positions.

Staff and Administration
The proposal does not detail the need for any additional staff.

Students
The proposal states that most students are expected to be drawn from departments in the College of the Environment and Life Sciences, and particularly students in Geosciences, Natural Resource Sciences, Marine Affairs, and Environmental and Natural Resource Economics. When Introduction to Water Resources was first taught in fall 2015, the course was over-enrolled suggesting that there is a significant interest in this interdisciplinary minor.

Admission to this minor requires a 2.70 GPA after one semester in any URI program or as a transfer student.

Evaluation
The measures of performance will be based on the number of students that complete the minor from inception to finish and a brief questionnaire that evaluates the program from the student's perspective.

RIOPC Review
RIOPC staff reviewed the information on the proposed addition of a minor in Global Water Resources. The academic changes presented are within the mission, role and scope of the University of Rhode Island and do not require Council approval.