



State of Rhode Island and Providence Plantations
RHODE ISLAND BOARD OF EDUCATION
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Chair

July 10, 2015

Council on Elementary and
Secondary Education

To: Council on Postsecondary Education

Daniel P. McConaghy
Chair

From: Commissioner Jim Purcell, Ed.D.

Amy Beretta, Esq.

Subject: Notice from the University of Rhode Island: offering of the Bachelor of Science in Sustainable Agriculture and Food Systems in the College of the Environment and Life Sciences

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The University of Rhode Island is announcing its intent to offer a Bachelor of Science in Sustainable Agriculture and Food Systems (SAFS) in the fall of 2015. As an integrated interdisciplinary major, students in this program will receive a broad education complemented by strong, focused skills derived from their concentration. Three areas of concentration are offered: Food Production, Nutrition and Food, and Food and Society. The Food Production track will prepare students to become specialists in the harvesting and production of plants and animals as human food resources. Students in the Nutrition and Food track will learn the basic principles of nutrition and how to create healthy foods, ecosystems, and humans. The Food and Society option will prepare students in the political, economic, social, and marketing aspects of food production. Each track is interdisciplinary drawing upon knowledge from the sciences, engineering, nutrition, social sciences, and liberal arts. All of the concentrations include a robust capstone project which requires students to work in interdisciplinary teams to tackle complex challenges in the area of sustainable agriculture through experiential learning. Given the cross-disciplinary approach to the SAFS program, no new courses will be required and all other resources that will be utilized already exist at the college.

Rationale

In creating the Sustainable Agriculture and Food Systems degree, URI will be able to further utilize existing expertise in many disciplines including agriculture, coastal food production, environmental management and policy, nutrition and food science, resource economics and business.

Graduates of this program will have skills and knowledge necessary to contribute to sustainable development, production, harvesting, management and the global use of terrestrial and aquatic microorganisms, plants and animals. Students in this major will explore the food chain from farm to plate to waste and back with emphases on sustainability, impact on human health, and resilience examined from economic, societal and economic perspectives. Questions to be considered include food supply, harvesting, production, and distribution, environmental justice, economics, public policy, community design and societal impact. Graduates of the program will

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be able to engage in a wide area of agriculturally-related issues such as population growth, climate change, food security, globalization and the development of resilient plant and animal harvesting and production systems. The proposal notes two unique aspects of the program: offering students the skills to understand agriculture and food harvesting as a complex system, and to integrate multiple dimensions affecting food production, harvesting and use from global to national to local views. The proposal states that the program is also unique in the integration of terrestrial (animals and plants), freshwater and marine systems.

Curriculum

The curriculum for the 120-credit Bachelor of Science in Sustainable Agriculture and Food Systems includes:

Core Courses: 19 credits

URI 101	Planning for Academic Success
COM 108	Spaceship Earth
AVS 132	Animal Agriculture, Food Policy, and Society
HSS 130	The Problem of Hunger in the U.S.
NFS 210	Applied General Nutrition
EEC 105	Introduction to Resource Economics
APG 301	The Anthropology of Nutrition

Basic Science Requirements: 12 credits in biology and chemistry

Option in Sustainable Agriculture, Nutrition and Food, or Food and Society: 19 credits in courses from chosen option, plus 6 credits from each of the other options

Capstone Experience: 6 credits in NRS 300 Introduction to Global Issues in Sustainable Development and AVS/NFS 504 Food Systems, Sustainability and Health, plus 7 credits in internships and experiential learning courses

Institutional Role

A key component of URI's Academic Plan is to prepare students for a changing world; creating team-based, interdisciplinary majors while maintaining disciplinary strength addresses this goal. The BS in Sustainable Agriculture and Food Systems has a centered focus in advancing a green economy and is in keeping with URI's Land and Sea Grant heritage. This program is consistent with the college's sustainability initiative and would contribute to the environmental research and teaching emphasis identified in the Academic Plan.

OPC staff noted a similarity between the Sustainable Agriculture option with the Sustainable Crop Production track in the recently approved Plant Sciences program. In response, the Chair of the Department of Fisheries, Animal and Veterinary Sciences and the Chair of the Department of Plant Science and Entomology noted that the programs have different goals and serve different student populations. The Plant Sciences Sustainable Crop Production option focuses on the biology, management, agronomic improvement, pest control and varietal differences among crop plants. This track is intended for students who wish to work on farms and in greenhouses where the focus is on plant production. The SAFS is an interdisciplinary major utilizing courses in the social and natural sciences to train students in an integrated systems approach to food security from the local to the global dimensions. In addition to principles of plant agriculture, the SAFS includes topics on animal management, fisheries, food systems, nutrition, equity and hunger, societal impacts of agriculture, agricultural anthropology and policy issues. The core requirements of the two tracks differ and SAFS has an interdisciplinary capstone experience that is not part of the Sustainable Crop Production track. The Sustainable Agriculture option is designed to give students a broad and interdisciplinary background

which is applicable to a variety of career options. Since the use of sustainable practices is not a major goal, the Plant Sciences Department is amenable to removing the word sustainable from the Sustainable Crop Production track to eliminate confusion.

Interinstitutional Considerations:

The University of Rhode Island would be the only institution in Rhode Island to have a bachelor's degree program in Sustainable Agriculture and Food Systems. URI noted that there are two other programs in New England (at the University of Maine and the University of New Hampshire) and programs at Indiana University and University of California Davis. Further research has found other bachelor degree programs with the same name at Unity College (ME), UMass Amherst (MA), Sterling College (VT), and the College of the Atlantic (ME).

Students

URI describes the program as one of the few interdisciplinary programs in food systems, food science or sustainable agriculture and food system to address current and future challenges in food security. The program is unique in having an explicit focus on coastal systems. The University expects to attract students who are interested in and concerned about sustainability and local and global food security. Given the interdisciplinary uniqueness of the curriculum, students from across the country may choose to matriculate at URI for this major.

Employment

Data from the Bureau of Labor Statistics indicates that the employment of agricultural and food scientists is projected to grow 9% (about average growth rate in the U.S.) in the next decade. Graduates of the SAFS program will be prepared for an array of occupations that require understanding a systems approach to food and sustainability and the ability to work within the interdisciplinary nature of food. The SAFS degree will prepare students to obtain jobs in small and large scale food production and harvesting on animal, vegetable, and fruit terrestrial farms, aquaculture facilities, and fisheries (e.g. Southside Community Land Trust). They could also be employed in food marketing, distribution, and sales from local farmers markets such as Farm Fresh RI or Sea Fresh USA to national and international firms. Other opportunities would be employment at non-profit organizations (food banks), local and national government and policy agencies (RI Food Policy Council, USDA, USAID) and educational opportunities in agriculture, nutrition and policy at universities (Yale Sustainable Food Project).

Evaluation

A SAFS Curriculum Committee will oversee program evaluation and will utilize the following measures to determine the success of the program:

- 1) Student Enrollment – program growth from an initial 20 students to 60 by year 4.
- 2) IDEA Course Evaluations – analysis of student evaluations of the capstone and other core courses.
- 3) Program Evaluations – Survey ratings higher than a 3 (scale 1-5) from students, graduates, and internship supervisors, who will rank the preparation of the students in the major.

Staff Review

RIOPC staff reviewed the proposal for the Bachelor of Science degree in Sustainable Agriculture and Food Systems. This program is within the mission, role and scope of the University and does not require Council approval.