

April 4, 2007

Dr. Howard Grimes,
Dean, Graduate College
Washington State University

Dr. Grimes,

Attached is a proposed Graduate Certificate program in Sustainable Agriculture. This program will fill a need cited by many incoming degree-seeking graduate students as well as many potential non-degree students.

Since the introduction of WSU's undergraduate major in Organic Agriculture, several of the agriculture-related departments have noted an upswing in interest and applicants for graduate studies in organic and/or sustainable agriculture. At this time WSU does not offer this option, but could satisfy this need by combining a graduate certificate in Sustainable Agriculture with existing disciplinary degree programs.

The Department of Crop and Soil Sciences has offered to administer the certificate program, although it is meant to remain an interdisciplinary program.

Respectfully,



Dr. Lynne Carpenter-Boggs
BIOAg Coordinator

Graduate Certificate in Sustainable Agriculture

Certificate Description

The term “sustainable agriculture” is used to describe an integrated system of plant and animal production practices having a site-specific application that will over the long-term satisfy human food and fiber needs; enhance environmental quality and the natural resource base upon which the agriculture economy depends; make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls; sustain the economic viability of farm operations; and enhance the quality of life for farmers and society as a whole. (U.S. Code Title 7, Section 3101)

The Graduate Certificate in Sustainable Agriculture is designed to provide students with an understanding of the successful practices, models, and mechanisms at work in sustainable agriculture. This certificate equips students with the concepts and tools needed in the management and research of organic, sustainable, or eco-labeled agricultural inputs and products. Students who earn the Graduate Certificate in Sustainable Agriculture may take these skills into all industries and agencies involved in the food chain; from production, processing, and delivery to policy, regulation, and education. Students in any WSU graduate degree program are eligible for the certificate if they meet the prerequisites of the courses needed for the certificate. Students not in degree programs are also eligible to earn the certificate by enrolling as non-degree students, again providing that they meet the prerequisites of the courses needed for the certificate. The Certificate program is designed to provide a common background in the current practices, science, and issues in sustainable agriculture as well as an interdisciplinary component.

Description of Curriculum

The Graduate Certificate in Sustainable Agriculture requires a minimum of 9 graded credits. Two core courses provide 6 credits, and 3 credits must be earned from courses in relevant disciplines outside the student's primary degree program. No more than 3 of the graded credits toward the certificate may be undergraduate credits.

Certificate Core (6 credits)

AFS 501: Current Research in Organic and Sustainable Agriculture (3 credits)

SoilS 545: Field Analysis of Sustainable Food Systems (3 credits)

Scientific Breadth Component (3 credits)

Because sustainable agriculture is inherently interdisciplinary, the Breadth Component ensures that students gain knowledge of a relevant discipline outside their primary degree department. The student is required to complete at least 3 graded credits in disciplines **other than** the home department. For instance a student seeking a Ph.D. in Crop Science may complete 3 credits in Entomology or 3 credits in Animal Science, or 1 credit in Entomology plus 2 credits in Plant Pathology. The course(s) must be clearly and directly relevant to the practice or understanding of sustainable agriculture.

Students may choose from:

AgTM 453: Agricultural Waste Management (2 credits)

A S 472: Dairy Cattle Production (3 credits)

A S 473/573: Advanced Dairy Management (3 credits)

A S 474: Beef Cattle Production (3 credits)

A S 476: Sheep Science (3 credits)

CRS 336: Agriculture, Environment, and Community (3 credits)

CropS 413/513: Biology of Weeds (3 credits)

CropS/ PI P 403/503: Advanced Cropping Systems (3 credits)

English 597/Hort 503: Rhetorics of Sustainability (3 credits)
Entom 340: Agricultural Entomology (3 credits)
Entom 361: Honey Bee Biology (1 credit)
Entom 362: Fundamentals of Beekeeping (1 credit)
Entom 375: Fundamentals of Orchard Ecology (3 credits)
Entom 377: Biological and Bio-Rational Tactics (2 credits)
Entom 439/530: Taxonomic Entomology (2 credits or 4 credits)
Entom 441: Insect Ecology (3 credits)
Entom 447/547: Introduction to Biological Control (3 credits)
ES/RP 402/502: Human Health and the Environment (3 credits)
ES/RP 504: Ecosystem Management (3 credits)
FSHN 331: Nutrition in the Human Life Cycle (3 credits)
Hist 325: Food in the United States (3 credits)
Hort 310: Pomology (3-4 credits)
Hort 313: Viticulture and Small Fruits (3 credits)
Hort 320: Olericulture (3-4 credits)
Hort 340: Nursery Management (3-4 credits)
Hort 421/521 Fruit Crops Management (3 credits)
IPM 462/562: Systems of Integrated Pest Management (3 credits)
NATRS 452: Range Development and Improvements (3 credits)
NATRS 556: Foraging Ecology of Herbivores (2 credits)
PI P 300: Diseases of Fruit Crops (2 credits)
PI P 429/529: General Plant Pathology (3 credits)
PI P 513: Nematodes and Nematode Diseases of Plants (2 credits)
PI P 551: Epidemiology and Management of Plant Diseases (3 credits)
Soc 531: Human Ecology (3 credits)
Soc 532: Environmental Sociology (3 credits)
SoilS 431/531: Soil Microbiology and Biochemistry (3 credits)
SoilS 441: Soil Fertility (3 credits)
SoilS 345: Sustainable Agriculture (3 credits)
SoilS 404: Small Acreage Farming and Ranching (3 credits)
SoilS 480/502: Practicum in Organic Agriculture (1-6 credits)
SoilS 498: Professional Internship (1-6 credits)
SoilS 490: Composting (2 credits)

Admission

Students admitted to other graduate degree programs at Washington State University are eligible for the Graduate Certificate in Sustainable Agriculture providing they meet the prerequisites for the courses in the certificate program. Students must maintain minimum GPA requirements (at least 3.0) while enrolled as a certificate student.

To qualify for the Graduate Certificate, a prospective student must:

- Have a bachelor's degree from an accredited post-secondary institution,
- Meet all prerequisite course requirements or be able to demonstrate equivalent knowledge and understanding for courses prior to enrollment.