

Brothers, Sheila C

From: Hippisley, Andrew R
Sent: Wednesday, April 11, 2012 11:35 AM
To: Brothers, Sheila C
Subject: new programs for forthcoming SC

Hi Sheila,

Here goes.

3 This is a recommendation that the University Senate approve the establishment of a new graduate certificate: Stream and Watershed Science, in the Department of Biosystems and Agricultural Engineering within the College of Agriculture.

Best,

Andrew

Dr Andrew Hippisley
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SIGNATURE ROUTING LOG

General Information:

Proposal Type: Course Program Other


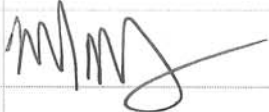
Proposal Name¹ (course prefix & number, pgm major & degree, etc.): Stream and Watershed Science Graduate Certificate

Proposal Contact Person Name: Carmen T. Agouridis Phone: 7-3000 x207 Email: cagourid@bae.uky.edu

INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
Biosystems and Agricultural Engineering Faculty	4/26/11	Scott A. Shearer / 7-3000 x127 / scott.a.shearer@uky.edu	
Research and Graduate Studies Committee	4/2/2011	Michael Montross / 7-3000 x106 / michael.montross@uky.edu	
		/ /	
		/ /	
		/ /	

External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision ²
Undergraduate Council			
Graduate Council	Approved by GC 12/16/11		
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

¹ Proposal name used here must match name entered on corresponding course or program form.

² Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

Stream and Watershed Science Graduate Certificate

Director:

Dr. Carmen T. Agouridis, P.E.
Biosystems and Agricultural Engineering Department
128 C.E. Barnhart Building
University of Kentucky
Lexington, KY 40546-0276
(859) 257-3000 x 207
carmen.agouridis@uky.edu

Description:

The Stream and Watershed Science (SWS) Graduate Certificate Program provides students with an understanding of the complex physical, biological and social systems involved in stream and watershed related issues. **The certificate program has an interdisciplinary focus. It is administered by tenure-eligible faculty in the Biosystems and Agricultural Engineering department, who are Full Members of the Graduate Faculty, and is advised by a steering committee.** Students may earn the certificate while making normal progress towards attainment of an M.S., M.A., or Ph.D. degree or while enrolled in post-baccalaureate status.

Purpose:

The purpose of the SWS Graduate Certificate Program is to offer degree-seeking graduate students and **post-baccalaureate** students an interdisciplinary, graduate-level curriculum that integrates many of the disciplines and professional areas of engineering, science, policy and management in the study of stream and watershed systems and the successful management of these complex systems. The SWS Graduate Certificate Program improves communication among stream and watershed professionals across academic disciplines and professional areas. It facilitates the understanding of research findings from diverse specialties and the field application of these findings in the management of stream and watershed systems. The University of Kentucky Stream and Watershed Science Graduate Certificate Program curriculum is the only opportunity in the Commonwealth and one of the very few in the nation to obtain a graduate-level interdisciplinary Certificate in Stream and Watershed Science.

The Stream and Watershed Science Curriculum:

The certificate program requires the completion of 12 credit hours and consists of a foundation course (BAE 532/CE 542) and three primary focus areas: Stream and Floodplain Engineering and Science, Water Quality, and Policy and Management. The foundation course provides an overview of stream restoration focusing on the main issues related to coupling the fields of biosystems and agricultural engineering, civil engineering, geography, ecology, and social science. It includes background classes on the basic tools used in stream and watershed assessment and restoration. Students must take the foundation course and at least three credit hours from each of the three main focus areas. At least six of the twelve credit hours must be from outside the student's major area of study. Courses numbered 400G-499G count towards the certificate only for non-majors.

Foundation Course

- BAE 532/CE 542 Introduction to Stream Restoration

Stream and Floodplain Engineering and Science

- BAE 536/CE 546 Fluvial Hydraulics
- CE 642/BAE 642 Open Channel Flow
- CE 643/BAE 643 Mechanics of Sediment Transport
- GEO 451G Fluvial Forms and Processes
- GEO 721 Topical Seminar in Physical Geography: Biogeomorphology
- GEO 731 Earth Surface Systems
- GLY 585 Hydrogeology

Water Quality

- CE 555 Microbial Aspects of Environmental Engineering
- CE 653/BAE 653 Water Quality of Surface Waters
- CHE 565 Environmental Chemistry
- GLY 530 Low Temperature Geochemistry
- PLS 450G/NRE 450G Biogeochemistry
- PLS 455G/NRE 455G Wetland Delineation
- PLS 566 Soil Microbiology

Policy and Management

- AEC 645 Natural Resource Economics
- BAE 538 GIS for Water Resources
- CE 699 Environmental Management
- ECO 721/PA 727 Environmental Economics, Regulation and Policy

Requirements for Admission to the Certificate Program:

To be admitted to the SWS Certificate Program, a degree-seeking student must be accepted by the Graduate School and the graduate academic program in which the student is or will be enrolled. A **post-baccalaureate student** must have a Bachelor of Science or Arts degree (or equivalent), a minimum of 2.75 undergraduate GPA, and be accepted by the Graduate School as a Post-Baccalaureate student. The GRE (or equivalent) examination is required for degree-seeking applicants. The GRE is not required for Certificate-seeking professionals. The current Application for Admission to the Stream and Watershed Science Graduate Certificate program is contained herein as Attachment 1.

Requirements for Completion and Award of Certificate:

To be eligible to be awarded the SWS Certificate, a degree-seeking student's graduate program must contain the following elements: (1) completion of the foundation course and (2) completion of three credit hours in each of the primary focus areas. A minimum of six completed credit hours must be outside the student's academic discipline. The **post-baccalaureate student** must complete: (1) the foundation course and (2) three credit hours in each of the primary focus areas with a minimum of six completed credit hours outside the **student's** undergraduate degree discipline. Award of the Certificate occurs at the time of the completion of the SWS Certificate program requirements for both degree-seeking students and **post-baccalaureate students**. Completion of the SWS Certificate Program requirements is verified by the Director (Dr. Carmen Agouridis) on the Graduate Certificate Completion Form, which is contained in Attachment 2. The Completion Form is submitted to the Graduate School, whereupon the Certificate is awarded and the title of the Certificate appears on the student's official transcript.

Participating Faculty and Professionals

Agricultural Economics

Angelos Pagoulatos

Jack Schieffer

Biosystems and Agricultural Engineering

Carmen T. Agouridis

Theresa A. Dowdy

Dwayne R. Edwards

Richard C. Warner

Center for Applied Energy Research

Kevin R. Henke

Chemistry

Marcelo I. Guzman

Mark A. Lovell

Bert C. Lynn

Civil Engineering

Gail M. Brion

James F. Fox

Lindell E. Ormsbee

Yi-Tin Wang

Scott A. Yost

Earth and Environmental Sciences

Alan E. Fryar

Christopher S. Romanek

Economics

Glenn C. Blomquist

Forestry

Christopher D. Barton

Geography

Jonathan D. Phillips

Plant and Soil Sciences

Mark S. Coyne

Elisa M. D'Angelo

Tasios Karathanasis

Steering Committee

Glenn C. Blomquist (Economics)

Mark S. Coyne (Plant and Soil Sciences)

Dwayne R. Edwards (Biosystems and Agricultural Engineering)

Kamyar C. Mahboub (Civil Engineering)

Alan E. Fryar (Earth and Environmental Sciences)

Jonathan D. Phillips (Geography)

Michael R. Reed (Agricultural Economics)

David B. Wagner (Forestry)

Application for Admission/Certification

Stream and Watershed Science Certificate Program

Graduate School
University of Kentucky

Print this application form and send to address at bottom, or fill in and fax or email as appropriate

1. Name: _____
2. Student No: _____
3. B.S. Degree/Institution: _____
4. M.S. Degree/Institution: _____
5. Mailing Address: _____
6. Local Phone No: _____
7. Permanent Phone No: _____
8. Masters or Doctorate Dept*: _____
9. Date Applied: _____
10. Date Accepted: _____
11. Anticipated Date of Completion: _____
12. Major Professor (degree seeking): _____
13. Str. Water. Sci. Advisor (non-degree seeking): _____
14. Phone: _____

*If program and hiring department are separate, please specify.

14. Proposed Courses for Stream and Watershed Science Certificate Program (No. and Title):

15. Other Graduate Courses in Program at University of Kentucky or other institutions:

16. ATTACH COPY OF TRANSCRIPTS OF WORK COMPLETED AT ALL OTHER NON-UK INSTITUTIONS IF APPLICABLE.

Mail To:

Dr. Carmen T. Agouridis, 128 C.E. Barnhart Bldg., Biosystems and Agricultural Engineering Dept.,
Lexington, KY 40546-0276

Or Email to:

carmen.agouridis@uky.edu

Or Fax to:

1-859-257-5671

Attn: Dr. Carmen T. Agouridis

Stream and Watershed Science Certificate Program

Graduate School

University of Kentucky

1. Name: _____
2. Student No: _____
3. B.S. Degree/Institution: _____
4. M.S. Degree/Institution: _____
5. PhD. Degree/Institution: _____
6. Permanent Mailing Address: (This is where your certificate is to be sent)

7. M.S. or Ph.D. degree granting Dept.: _____
8. Anticipated Date of Completion: _____
9. Major Professor/ Str. Water. Sci Advisor: _____

10. Proposed Courses for Stream and Watershed Science Certificate Program:

Course	Year	Semester	Grade

Fill in the above table with the courses you have taken.

You may fax, email, or snail-mail the above form to the following addresses.

Mail To:

Dr. Carmen T. Agouridis
Director of the Stream and Watershed Science Certificate Program
University of Kentucky
Biosystems and Agricultural Engineering Department
128 C.E. Barnhart Bldg
Lexington, KY 40546-0276

Email submission to: carmen.agouridis@uky.edu

Fax submission to: 1-859- 257-5671, Attn: Dr. Carmen T. Agouridis