



Environmental Sciences Program
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Memorandum

To: University Program Committee

From: Dale Gawlik, Director, Environmental Sciences Program

Subject: New graduate certificate in Environmental Restoration

Date: 26 January 2011

This memo requests approval for a new graduate certificate in Environmental Restoration that will be administered through the Environmental Sciences Program. This interdisciplinary certificate is intended for professionals looking to increase their knowledge base, advance professionally, or change careers, and for graduate students who wish to pursue an environmental restoration position upon graduation.

Catalog description:

The Environmental Sciences Program offers an Environmental Restoration Certificate for graduate students who wish to pursue an environmental restoration position upon graduation or for professionals looking to increase their knowledge base, advance professionally, or change careers. The certificate is interdisciplinary, drawing on courses from Environmental Sciences, Geosciences, Biology, Urban and Regional Planning, and Civil Engineering. The certificate also includes considerable opportunity for experiential learning in the form of course field trips to actual restoration projects; internship opportunities with local, state, and federal agencies conducting restoration; and primary research experiences with future, ongoing, and recent environmental restoration projects in South Florida. These opportunities also provide the prospect of meeting, networking, and interacting with professionals from public and private environmental restoration organizations.

The certificate consists of a minimum of 21 credits, including four core courses, one internship or DIS, the completion of a restoration related project with a publishable paper and presentation, and one elective each chosen from two of the three elective foci (total of two elective courses). All courses must be completed with a grade of "C" or better to be counted toward the certificate.

Core Courses

- EVR 6334 Environmental Restoration (3 Credits)

- PCB 6045 Conservation Biology (3 Credits)
- EVR 6351 Restoration Implementation and Management (3 Credits)
- ENV 6668 Environmental Systems and Processes (3 Credits)

Other Requirements

- One internship with public or private restoration organization or DIS focused on environmental restoration research. Internship (preferred) or DIS should be taken under Directed Independent Study (EVS 6905 or GEO 6908) for 3 credits
- **Present the Internship/DIS based paper in a 15 minute presentation during Environmental Science (EVS 6920) or Geoscience (GEO 6920) Colloquium Courses**

Elective Foci

Ecology Electives

- BOT 6606(L) Coastal Plant Ecology (& Lab) (4 Credits)
- PCB 6046 Advanced Ecology (3 Credits)
- PCB 6317(L) Marine Ecology (& Lab) (5 Credits)
- PCB 6307(L) Freshwater Ecology (& Lab) (5 Credits)
- PCB 6406 Ecological Theory (3 Credits)
- PCB 6749C Environmental Physiology (4 Credits)
- GLY 6737 Coastal Environments (3 Credits)
- GEO 5305 Biogeography (3 Credits)
- BOT 5155(L) Flora of South Florida (& Lab) (4 Credits)

Policy and Planning Electives

- PUP 6208 Urban Environmental Politics (3 Credits)
- URP 6421 Environmental Planning and Society (3 Credits)
- URP 6425 Environmental Analysis in Planning (3 Credits)
- URP 6429 Environmental Policy and Programs (3 Credits)

Engineering Electives

- CEG 6124 Soil Stabilization and Geosynthetics (3 Credits)
- CWR 6235 Open-Channel Hydraulics (3 Credits)
- CWR 6236 River Mechanics and Sediment Transport (3 Credits)
- EES 6357 Stream, Lake and Estuarine Pollution (3 Credits)
- ENV 6441 Contamination of Aquatic Sediment (3 Credits)
- GLY 5575C Shore Erosion And Protection (3 Credits)

The Environmental Sciences Program Committee approved the proposed certificate above and in December 2010 submitted it for approval to the C.E.S. College of Science and the University.

Director, Environmental Sciences Program _____ Date _____

Chair, C.E.S. College of Science Curriculum Committee _____ Date _____

Dean, C.E.S. College of Science _____ Date _____

Dean, Graduate College _____ Date _____

Chair, University Programs Committee _____ Date _____