New Course Request

Undergraduate credit [x] Graduate credit [ ] Professional credit [ ]

1. School/Division: School of Science
2. Academic Subject Code: GEOL-G
3. Course Number: 431 (must be cleared with University Enrollment Services)
4. Instructor: Dr. Lenore Tedesco
5. Course Title: Wetland Ecosystems
   Recommended Abbreviation (Optional): Wetlands
   (Limited to 32 characters including spaces)

6. First time this course is to be offered (Semester/Year): Fall, 2008
7. Credit Hours: Fixed at 3 or Variable from ________ to ________
8. Is this course to be graded S-F (only)? Yes [ ] No [x]
9. Is variable title approval being requested? Yes [ ] No [x]
10. Course description (not to exceed 50 words) for Bulletin publication: P: G334 or equivalent;
    approval of instructor
    Wetland Ecosystems will explore wetlands and their role in ecosystem function. Topics
    will encompass wetland definitions, geomorphic setting, functions and values, hydrology,
    vegetation, and soils, wetland biogeochemistry, and wetland mitigation and the
    regulatory framework within which wetlands are treated. The course evaluates the status
    and trends of Indiana wetlands and types of wetlands common in Indiana.

11. Lecture Contact Hours: Fixed at ________ or Variable from ________ to ________
12. Non-Lecture Contact Hours: Fixed at ________ or Variable from ________ to ________
13. Estimated enrollment: ________ of which ________ percent are expected to be graduate students.
14. Frequency of scheduling: biannual [ ] Will this course be required for majors? Yes [ ]
15. Justification for new course: major course for Bachelor of Science in Environmental Science
16. Are the necessary reading materials currently available in the appropriate library? Yes [ ]
17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other
    materials.
18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap
    is necessary, desirable, or unimportant.
19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be
    overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments
    directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus
    consulted.

Submitted by: ____________________________ Date: 1/23/07
Department Chairman/Division Director

Approved by: ____________________________ Date: 3/30/07
Dean

Dean of Graduate School (when required)

University Enrollment Services

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining
four copies and attachments to the Campus Chancellor or Vice-President.

B81 62000 UPS 724
University Enrollment Services Final—White; Chancellor/Vice-President—Blue; School/Division—Yellow;
Department/Division—Pink; University Enrollment Services Advance—White
Hurtuk, Janice Lee

From: Filippelli, Gabriel M.
Sent: Tuesday, March 27, 2007 12:56 PM
To: Hurtuk, Janice Lee
Cc: Tedesco, Lenore P
Subject: FW: Wetlands course

Here is the support letter from Greg Lindsey for the proposed Wetland course G431.

Gabe

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Gabriel Filippelli
Professor and Chair
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From: Lindsey, Greg H.
Sent: Wednesday, January 31, 2007 9:29 PM
To: Filippelli, Gabriel M.; Tedesco, Lenore P
Subject: Wetlands course

Dear Gabe and Lenore,

I have read the wetlands course proposal and have consulted with appropriate faculty from my school. We have no intention of offering this type of course in SPEA-Indianapolis and thus support this course proposal. Although SPEA IUB offers a course with some similar content, we have no plans to offer the course here. We think this course will provide good opportunities for IUPUI students.

Greg

Greg Lindsey
Associate Dean and Duey Murphy Professor
School of Public and Environmental Affairs
BS 3025, 801 W. Michigan
Indianapolis, Indiana 46202

Telephone: 317-274-2016
Fax: 317-274-5153
Mobile: 317-840-0995

I. Title: Wetland Ecosystems  
   Course #: GEOL G431  
   Instructor: Tedesco  
   Prerequisites: Geology G334 or equivalent; permission of instructor

II. Course Description:  
Wetland Ecosystems will explore wetlands and their role in ecosystem function. Topics will encompass wetland definitions, geomorphic setting, functions and values, hydrology, vegetation, and soils, wetland biogeochemistry, and wetland mitigation and the regulatory framework within which wetlands are treated. The course evaluates the status and trends of Indiana wetlands and types of wetlands common in Indiana.  
Prerequisites: Geology G344 or equivalent; permission of instructor

III. Educational Objectives:  
Wetland Ecosystems is a course designed to acquaint you with the tools used by earth and environmental scientists to describe and understand the ecologic, biologic, and hydrologic function of wetlands; and how the legal and regulatory framework of wetlands has developed, evolved, and affects their status and trends and the function they provide. The course will use a combination of lecture, directed discussion, hands-on laboratory work, field tours, field data collection, data analysis, and an independent field project to help you:

- Apply basic hydrologic and biologic principles to interpret environments of wetland formation and function  
- Explain physical, biological, and chemical processes in wetlands to understand interactions between the hydrosphere, biosphere, and lithosphere  
- Explain chemical processes associated with anoxia and their effect on vegetation and soils  
- Associate the dynamics of wetland biogeochemical process with the hydrologic cycle.

Achieving these objectives will increase your understanding of earth and environmental science as an interdisciplinary. In the process, you will improve your ability to think in quantitative as well as qualitative terms, and to critically analyze data and models relevant to understanding complex and as yet incompletely understood processes.

Your laboratory work and class project in this course will also acquaint you with the analytical and computational tools used in wetland research, restoration, and delineation. I will continually encourage you to think about the balance between the scientific vs. legal basis of wetlands and challenging you to consider how the interface between science and policy can be improved.

IV. Course Content:
Week 1. Introduction to Wetlands
Week 2. Wetland Function and Wetland Identification
Week 3: Wetland Hydrology
Week 4. Wetland Hydrologic Field Methods and Tools
Week 5. Wetland Vegetation
Week 6. Vegetation Identification and Vegetation Sampling Methods
Week 7. Wetland Soils
Week 8. Identification of Hydric Soils in the Field and Laboratory
Week 9. Wetland Biogeochemistry
Week 10. Wetland Mitigation
Week 11. Wetland Restoration and Wetland Function
Week 12. Wetland Delineation and the Legal Status of Wetlands
Week 13. Wetlands and Global Climate Change
Week 14. Student Presentations – Wetland Compensation and Mitigation
Week 15. Student Presentations – Wetland Function and Value
Week 16. Student Presentations – Wetland Biogeochemistry

V. Recommended Texts and Supplementary Reading:


VI. Evaluation and Grading:
Your grade in this course is based on the following activities:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Position Paper</td>
<td>25%</td>
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<tr>
<td>Position Presentation</td>
<td>15%</td>
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<tr>
<td>Laboratories</td>
<td>30%</td>
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<tr>
<td>Class Project</td>
<td>25%</td>
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<tr>
<td>Participation</td>
<td>5%</td>
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</tbody>
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You will receive comments and suggestions on all your work, but credit only for work submitted on time.

VII. Cheating and Plagiarism:
As a student in this course, you must not use or attempt to use unauthorized assistance, materials, or information in any class activity. Cheating specifically
includes allowing others to conduct research or to prepare work for you without advance authorization from the instructor. You must not make any unauthorized use of materials obtained from commercial companies or from files of papers prepared by other persons. It is cheating to collaborate with others on a class activity or project and submit a copy of an exercise, computer program, computations, or a written report which is represented explicitly or implicitly as your individual work. It is plagiarism to adopt or reproduce ideas, words, or statements of another person without appropriate acknowledgment. You must give credit and acknowledge another person's actual words or ideas, either oral or written in text or electronic form, and you must credit facts or data borrowed from another person, including all facts or data acquired from print or electronic resources.