

# APPLICATION FOR NEW COURSE

|   |  |  |  |   |
|---|--|--|--|---|
| <b>1. General Information.</b>                            |  |  |  |   |
| a.  | Submitted by the College of: Engineering   | Today's Date: 01/28/11   |  |   |
| b.  | Department/Division: Civil Engineering   |  |  |   |
| c.  | Contact person name: James Fox   | Email: jffox@engr.uky.edu  | Phone: 7-8668  |   |
| d.  | Requested Effective Date: <input checked="" type="checkbox"/> Semester following approval  | OR   | <input type="checkbox"/> Specific Term/Year <sup>1</sup> : _____ |   |
| <b>2. Designation and Description of Proposed Course.</b> |  |  |  |   |
| a.  | Prefix and Number: CE 547/ BAE 547   |  |  |   |
| b.  | Full Title: Watershed Sedimentation  |  |  |   |
| c.  | Transcript Title (if full title is more than 40 characters): _____   |  |  |   |
| d.  | To be Cross-Listed <sup>2</sup> with (Prefix and Number): BAE 547  |  |  |   |
| e.  | Courses must be described by <u>at least one</u> of the meeting patterns below. Include number of actual contact hours <sup>3</sup> for each meeting pattern type. |  |  |   |
|   | 2 Lecture  | 2 Laboratory <sup>1</sup>  | _____ Recitation   | _____ Discussion  |
|   | _____ Clinical   | _____ Colloquium   | _____ Practicum  | _____ Research  |
|   | _____ Seminar  | _____ Studio   | _____ Other – Please explain: _____                              |   |
| f.  | Identify a grading system: <input checked="" type="checkbox"/> Letter (A, B, C, etc.)  | <input type="checkbox"/> Pass/Fail   |  |   |
| g.  | Number of credits: 3   |  |  |   |
| h.  | Is this course repeatable for additional credit?   |  |  | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> |
|   | If YES:  | Maximum number of credit hours: _____  |  |   |
|   | If YES:  | Will this course allow multiple registrations during the same semester?  | YES <input type="checkbox"/>                                     | NO <input type="checkbox"/>   |
| i.  | Course Description for Bulletin:   | <p>The course objective is to gain an understanding of watershed sedimentation including: (1) erosion and sediment transport processes in a watershed and the mechanisms by which the processes are initiated, developed, and worked towards equilibrium; (2) measurement of the sediment budget for a watershed using sediment fingerprinting and sediment loading data; and (3) prediction of sediment loading in watersheds with different human disturbances using hydrologic-based modeling tools. Specific emphasis will be placed on the use of natural carbon and nitrogen isotopic tracer measurements within sediment fingerprinting as a data-driven approach to measure sediment loading from different sources in a watershed. In order to fulfill the course objective, the instructor will use traditional classroom learning as well as field and laboratory components of the course in order that students can participate in hands-on learning.</p> |  |   |

<sup>1</sup> Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

<sup>2</sup> The chair of the cross-listing department must sign off on the Signature Routing Log.

<sup>3</sup> In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. Laboratory meeting, generally, represents at least two hours per week for a semester for one credit hour. (from SR 5.2.1)

## APPLICATION FOR NEW COURSE

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|------------|--|---|
| <b>j.</b>  | Prerequisites, if any: CE 461G (Pre- or Co-requisite or equivalent)  |   |
| <b>k.</b>  | Will this course also be offered through Distance Learning?  | YES <sup>4</sup> <input type="checkbox"/> NO <input checked="" type="checkbox"/>  |
| <b>l.</b>  | Supplementary teaching component, if any:  | <input type="checkbox"/> Community-Based Experience <input type="checkbox"/> Service Learning <input type="checkbox"/> Both   |
| <b>3.</b>  | <b>Will this course be taught off campus?</b>  | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>   |
| <b>4.</b>  | <b>Frequency of Course Offering.</b>   |   |
| <b>a.</b>  | Course will be offered (check all that apply):   | <input checked="" type="checkbox"/> Fall <input type="checkbox"/> Spring <input type="checkbox"/> Summer  |
| <b>b.</b>  | Will the course be offered every year?   | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>   |
|            | If NO, explain:  | _____   |
| <b>5.</b>  | <b>Are facilities and personnel necessary for the proposed new course available?</b>   | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>   |
|            | If NO, explain:  | _____   |
| <b>6.</b>  | <b>What enrollment (per section per semester) may reasonably be expected?</b>  | 20  |
| <b>7.</b>  | <b>Anticipated Student Demand.</b>   |   |
| <b>a.</b>  | Will this course serve students primarily within the degree program?   | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>   |
| <b>b.</b>  | Will it be of interest to a significant number of students outside the degree pgm?   | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>   |
|            | If YES, explain:   | The course will support a recent multi-disciplinary focus upon "Stream and Watershed Science" curricula supported by Biosystems and Agricultural Engineering, Forestry, Geography and Civil Engineering departments. See attached support letters from these departments. |
| <b>8.</b>  | <b>Check the category most applicable to this course:</b>  |   |
|            | <input checked="" type="checkbox"/> Traditional – Offered in Corresponding Departments at Universities Elsewhere   |   |
|            | <input type="checkbox"/> Relatively New – Now Being Widely Established   |   |
|            | <input type="checkbox"/> Not Yet Found in Many (or Any) Other Universities   |   |
| <b>9.</b>  | <b>Course Relationship to Program(s).</b>  |   |
| <b>a.</b>  | Is this course part of a proposed new program?   | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>   |
|            | If YES, name the proposed new program:   | _____   |
| <b>b.</b>  | Will this course be a new requirement <sup>5</sup> for ANY program?  | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>   |
|            | If YES <sup>5</sup> , list affected programs:  | _____   |
| <b>10.</b> | <b>Information to be Placed on Syllabus.</b>   |   |
| <b>a.</b>  | Is the course 400G or 500?   | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>   |
|            | If YES, the <i>differentiation for undergraduate and graduate students must be included</i> in the information required in <b>10.b</b> . You must include: (i) identification of additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR 3.1.4.) |   |

<sup>4</sup> You must *also* submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.

<sup>5</sup> In order to change a program, a program change form must also be submitted.

## APPLICATION FOR NEW COURSE

|           |                                     |   |
|-----------|-------------------------------------|---|
| <b>b.</b> | <input checked="" type="checkbox"/> | The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from <b>10.a</b> above) are attached. |
|-----------|-------------------------------------|---|

# APPLICATION FOR NEW COURSE

## Signature Routing Log

**General Information:**


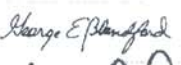
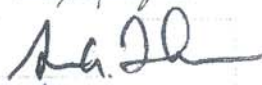

Course Prefix and Number: CE 547

Proposal Contact Person Name: James Fox Phone: 7-8668 Email: jffox@enr.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   |
|----------------------------|---------------|---|---|
| CE Education Group         | 2/9/11        | N Stamatiadis / 7-8012 /<br>nstamat@enr.uky.edu   |    |
| Civil Engineering          | 2/25/11       | G Blandford / 7-1855 / gebland@enr.uky.edu  |    |
| <i>engineering faculty</i> | <i>5/2/11</i> | <i>S.A. Sheerer / 7-3000 / Score: A. Sheerer@uky.edu</i><br><i>Richard Sweigard / 78827 / rsweigard@enr.uky.edu</i> | <br> |

**External-to-College Approvals:**

| Council                      | Date Approved | Signature                  | Approval of Revision <sup>6</sup> |
|------------------------------|---------------|----------------------------|-----------------------------------|
| Undergraduate Council        | 3/9/12        | Undergraduate Council      |                                   |
| Graduate Council             | 5/3/12        | Brian Jackson              |                                   |
| Health Care Colleges Council |               |                            |                                   |
| Senate Council Approval      |               | University Senate Approval |                                   |

Comments:

<sup>6</sup> Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

## SYLLABUS – CE 547/ BAE 547 (Section 001) (page 1/7)

Watershed Sedimentation Department  
of Civil Engineering at UK Credits: 3.0  
FALL 2012

**Classroom:** Tues/Thurs 8:00 – 9:15 a.m. in Ralph G. Andersen Building – Room 202

**Instructor:** Dr. J.F. (Jimmy) Fox

**Office:** O. H. Raymond Building – Room 354G

**Phone:** (859)257-8668

**Email:** [jffox@engr.uky.edu](mailto:jffox@engr.uky.edu)

**Office hours:** Tues/Thurs 9:15 – 11 a.m. or by appointment

**Pre- or Co-requisite:** Undergraduate hydrology course (e.g., CE 461G) as Pre- or Co-requisite.

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**COURSE OBJECTIVE AND DESCRIPTION:** The course objective is to gain an understanding of watershed sedimentation including: (1) erosion and sediment transport processes in a watershed and the mechanisms by which the processes are initiated, developed, and worked towards equilibrium; (2) measurement of the sediment budget for a watershed using sediment fingerprinting and sediment loading data; and (3) prediction of sediment loading in watersheds with different human disturbances using hydrologic-based modeling tools. Specific emphasis will be placed on the use of natural carbon and nitrogen isotopic tracer measurements within sediment fingerprinting as a data-driven approach to measure sediment loading from different sources in a watershed. In order to fulfill the course objective, the instructor will use traditional classroom learning as well as field and laboratory components of the course in order that students can participate in hands-on learning.

### **STUDENT LEARNING OUTCOMES:**

**1 Watershed sedimentation, society and the environment:** Upon completion of this course students will know:

- The economic, social and environmental significance of erosion and watershed sedimentation.
- The environmental processes impacted by fine sediment transport and deposition.
- How to design and implement total maximum daily load analysis of sediment.

**2 Erosion and sediment transport processes in a watershed:** Upon completion of this course students will know:

- How to model the environmental factors influencing sedimentation using relevant equations.
- How to measure and calculate the properties of soils and sediments and their influence upon sedimentation process rates.
- Erosion initiation and development and equilibrium erosion processes including surface erosion, gully erosion, mass movement, macropore erosion processes, fluvial erosion, mass wasting of streambanks, and the effects of freeze- thaw cycling on soil erosion.
- How to design and implement physically-based modeling of erosion processes.

## SYLLABUS – CE 547/ BAE 547 (page 2/7)

- Calculation methods for fine sediment processes in the channel of a watershed including sediment yield, sediment deposition, storage and resuspension, and the particle size distribution of fluvial sediment and sediment aggregation/disaggregation processes.

**3 Measure the sediment budget for a watershed:** Upon completion of this course students will know:

- How to design and perform a sediment budget for a watershed as well as collect the data and materials to perform a sediment budget.
- Methods for measuring sediment loading.
- How and why sediment sources are distributed and learn the tools for classifying sediment sources in a watershed.
- Analytical methods to identify unique tracers for use within sediment fingerprinting.
- Field methods for representing sediment sources and loading in a watershed and the limitations of these methods.
- Conservative and non-conservative tracer techniques within sediment fingerprinting.
- Sediment un-mixing model methods to estimate sources of erosion in a watershed.

**4 Carbon and nitrogen isotopes as sediment tracers:** Upon completion of this course students will know:

- Stable carbon and nitrogen isotope cycles including how the isotopes change during soil-plant-atmospheric processes.
- Analytical techniques to model the spatial distribution of carbon and nitrogen isotopes in soils and sediments due to natural and human disturbances.
- How to model carbon and nitrogen isotope tracer changes in the aquatic system.
- How to apply carbon and nitrogen isotopes within sediment fingerprinting for study of watershed sedimentation.

**5 Predict watershed sedimentation using hydrologically-based models:** Upon completion of this course students will know:

- Physically-based, empirical and conceptual model methods for predicting watershed sedimentation including their limitations.
- How to design and implement event-based and long-term temporal modeling.
- Models methods appropriate for plot, hillslope, catchment, watershed and basin scales.
- How to apply hydrologic models for prediction of watershed sedimentation loading under different land management and climate scenarios.

**6 Control, conserve and manage sediment within the watershed system:** Upon completion of this course students will know:

- How to design erosion and sediment transport control measures.
- Land conservation, management, and watershed optimization approaches to mitigate sedimentation processes.

## SYLLABUS – CE 547/ BAE 547 (page 3/7)

**NOTE on GIS and Geospatial Data:** Geospatial data and its use within a geographic information system (GIS) is a pivotal part of watershed sedimentation studies both in research and application. Geospatial data and analysis can be used to assist scientists and engineers with a number of sediment related analyses such as analysis of soil and sediment properties, watershed delineation, erosion susceptibility modeling, and land use change assessment. This course does not intend to teach the foundation of GIS but rather incorporates the use of geospatial data and GIS where applicable, and teach how the application of GIS can assist with watershed sedimentation studies. The student will learn applications of GIS, however, prior familiarity with GIS is not a requirement for this course.

### **REQUIRED TEXT AND NOTES:**

1. Soil Erosion: Processes, Prediction, Measurement, and Control by Terrence J. Toy, George R. Foster, Kenneth G. Renard, Published by John Wiley and Sons, 2002, ISBN 0471383694, 9780471383697.
2. Class Notes provided by the instructor are pivotal to the understanding of the material.
3. Journal articles will be part of required reading assignments. Articles will be provided by Dr. Fox or will need to be downloaded from UK Library website or photocopied from the library.
4. In addition to lectures, movies and laboratory demonstrations will be used to visualize and explain watershed sedimentation phenomena.

### **REFERENCES:**

1. Hydrology and the Management of Watersheds By Kenneth N. Brooks, Peter F. Ffolliott, Hans M. Gregersen, Leonard F. DeBano, Published by Blackwell Publishing, 2003, ISBN 0813829852, 9780813829852.
2. Landforming: An Environmental Approach to Hillside Development, Mine Reclamation and Watershed Restoration By Horst J. Schor, Donald H. Gray, Published by John Wiley and Sons, 2007, ISBN 0471721794, 9780471721796.
3. Landscape Erosion and Evolution Modeling By Russell S. Harmon, William W. Doe, Published by Springer, 2001, ISBN 0306467186, 9780306467189.
4. Fluvial Processes in River Engineering by Howard H. Chang, San Diego State University. The book was published by John Wiley & Sons, New York, NY in 1988. It may be purchased from Krieger Publishing Company.
5. Soil Genesis and Classification: Fourth Edition or more recent addition is fine. Iowa State University Press, By Buol, S. W., Hole, F. D., McCracken, R. J., and Southard, R. J. (1997).
6. White, Frank M. Fluid Mechanics 6<sup>th</sup> Edition. McGraw Hill, 2006. OR other undergraduate fluids textbook.
7. Simons and Senturk. Sediment Transport Technology. Water Resources Publications, LLC, 1992.
8. Raudkivi, A.J. Loose Boundary Hydraulics. Pergamon Press, 1990.

### **LIBRARY TOOLS:**

The use of library databases will be needed including Compendex, Elsevier (ScienceDirect), and Wiley databases.

## SYLLABUS – CE 547/ BAE 547 (page 4/7)

### **HOMEWORK ASSIGNMENTS AND LITERATURE REVIEWS:**

Homework assignments, reading assignments, and literature write-ups will be required. Homework Assignments will typically be due one week after being assigned and may include handwritten and computational exercises. Reading assignments and write-ups that critique a journal article will typically be due the next class period. Some homework assignments will be given *via* email. Please send the Instructor your email in order to be included on the email mailing list.

### **COURSE PROJECT:**

A course project will be required to complete the course. The course project will require students to perform a sediment budget for an experimental watershed. To facilitate the course project, the class will visit experimental watersheds where sedimentation is a problem. Using samples from the field, a laboratory component will be performed where students have a hands-on experience with sediment measurements and analysis of sediment results. The project will be divided into a number of sub-components and students will learn to construct a sedigraph, measure characteristics of erosion sources within a watershed, measure characteristics of transported sediments, analyze the particle size characteristics of sediments using traditional methods as well as of sediment aggregates using microscopy, and estimate the sediment budget for a watershed. Components leading to the completion of the course project will be due periodically throughout the semester and will be further detailed by the instructor. The final course project will need to be presented by the student to the class in a professional powerpoint presentation at the completion of the course. Graduate students will be required to provide an extensive literature review as an additional section of the project.

### **TESTS:**

Two tests will be required for this course.

### **WORKLOAD:**

At least 5 hours outside of class for every lecture. Please be forewarned: The course project will take considerable time. Do not allow yourself to fall behind.

**ATTENDANCE POLICY:** Attendance is expected. Students should come prepared to class. Participation during lecture is encouraged. Dr. Fox appreciates being notified of absences in advance. Further, the attendance policy is in accordance with Senate Policy on excused absences.

### **Excused Absences:**

Students need to notify the professor of absences prior to class when possible. S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit “reasonable cause for nonattendance” by the professor.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).



## SYLLABUS – CE 547/ BAE 547 (page 5/7)

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused or unexcused) per university policy.

### **Verification of Absences:**

Students may be asked to verify their absences in order for them to be considered excused. Senate Rule 5.2.4.2 states that faculty have the right to request “appropriate verification” when students claim an excused absence because of illness or death in the family. Appropriate notification of absences due to university-related trips is required prior to the absence.

### **ACADEMIC INTEGRITY:**

The Code of Student Conduct applies to all work in this class. Discussion of homework is encouraged; however, homework submitted for a grade must reflect the work of the individual student. Discussion with classmates or any outside source is prohibited for take-home exams, if applicable. Cheating and plagiarism are in violation of University and Departmental policy and will not be tolerated in this class. Copying homework assignments from students in this class, previous classes, or the textbook solution manual will be treated as cheating. Further, this course follows the University Policy on Academic Integrity and Cheating.

Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: <http://www.uky.edu/Ombud>. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Part II of Student Rights and Responsibilities (available online <http://www.uky.edu/StudentAffairs/Code/part2.html>) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else’s work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be.

## SYLLABUS – CE 547/ BAE 547 (page 6/7)

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).

**Please note:** Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

**GRADING POLICY:** The grading policy follows below. Undergraduate students will be provided with a Midterm Evaluation (by the midterm date) of course performance based on the grades earned and the criteria in the syllabus.

Homework assignments/literature reviews=25%

Course Project=25%

Test 1=25%

Test 2=25%

Undergraduate Student: 100---A---88---B---76---C---64---D---52---E---0

Graduate Student: 100---A---90---B---80---C---70---E---0

### IMPORTANT DATES

October 4 – Thursday – First Test

October 15 – Monday – Midterm of the 2010 Fall semester

November 8 – Thursday – Second Test

November 21-24 – Wednesday through Saturday – Thanksgiving – Academic Holidays

December 4 and 6 – Course Project Presentations

December 13 – Thursday – Last Class

### POLICY ON ACADEMIC ACCOMODATIONS DUE TO DISABILITY:

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address [jkarnes@email.uky.edu](mailto:jkarnes@email.uky.edu)) for coordination of campus disability services available to students with disabilities.

## SYLLABUS – CE 547/ BAE 547 (page 7/7)

### SPECIAL NOTES:

1. Late and sloppy homework will not be accepted nor will any make-up exams be given unless an excused absence is verified following university policy.
2. Homework assignments must be neat, organized, and written on only one side of a paper. Typed assignments must be written in 12-pnt font, Times New Roman style.
3. Please do not hesitate to contact me if you have any problems or questions throughout the class with class technical content or instruction. Open, respectful communication is welcomed and promoted in this class.
4. For any problems that cannot be handled between the instructor and student, please contact George Blandford, Chair of the Department of Civil Engineering.

### COURSE SCHEDULE:

Watershed sedimentation, society and the environment: Weeks 1 & 2

Erosion and sediment transport processes in a watershed: Weeks 3 through 7

Measure the sediment budget for a watershed: Weeks 8, 9 & 10

Carbon and nitrogen isotopes as sediment tracers: Weeks 11 & 12

Predict watershed sedimentation using hydrologically-based models: Weeks 13 & 14

Control, conserve and manage sediment within the watershed system: Week 15

Student Presentations: Week 16

Final Exam: Week 17

## **Tobacco Road Research Team**

Department of Geography  
University of Kentucky  
Lexington, KY 40506-0027

[jdp@uky.edu](mailto:jdp@uky.edu)

859-257-6950

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24 January 2011

James Fox  
Department of Civil Engineering  
University of Kentucky

Dear Jimmy:

I am glad to hear that you are seeking a permanent course designation for your watershed sedimentation course. I (and the geography program) support this. I expect the course will be useful for my future fluvial geomorphology and hydrology students, as it has been for several in the past.

Sincerely,

Jonathan Phillips  
Professor of Earth Surface Systems



UNIVERSITY OF KENTUCKY  
*Dream . Challenge . Succeed*

**COLLEGE OF AGRICULTURE**

January 22, 2011

Re: New Course Proposal: Watershed Sedimentation

Jim:

I whole-heartedly support your Watershed Sedimentation course and having it cross-listed with Biosystems and Agricultural Engineering (BAE). This course has been and will continue to be of great interest to BAE students in the Bioenvironmental area. A number of our students do research in the field of watershed management and restoration, and with sedimentation serving as a leading pollutant to our nation's streams, this course is quite relevant. Graduate students in BAE work on projects located in agricultural, urban and mined watersheds and so having an understanding of sedimentation processes in these systems is important. Based on my research focus of environmental restoration, I request that my graduate students take the course. Other professors in BAE, such as Dr. Richard Warner, have also commented on the usefulness of such a course to their students.

Please let me know if I can be of further assistance.

Sincerely,

Carmen T. Agouridis, Ph.D., P.E.  
Assistant Professor



UNIVERSITY OF KENTUCKY  
*Dream . Challenge . Succeed*

**COLLEGE OF AGRICULTURE**

January 22, 2011

James F. Fox  
Associate Professor  
Civil Engineering  
University of Kentucky  
161 O. H. Raymond Bldg.

Jimmy:

I am writing in support of your proposal to develop an interdisciplinary graduate level course entitled Watershed Sedimentation. This course will be of great benefit for many of my students who are performing research in the areas of stream restoration, water quality best management practices and ecohydrology. Considering that UK does not have a specific graduate level program in environmental sciences, it is important that we offer classes such as this to provide course options to those who are interested in this field. Your classes have been a great help to some of my former students and I hope you will be able to provide further assistance in the future.

Please let me know if additional information is needed.

Best regards,

Christopher Barton  
Associate Professor

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**Department of Forestry**  
203 T.P Cooper Building . Lexington, KY 40546-0073  
(859) 257-2099 . Fax (859) 323-1031

*barton@uky.edu*