

1. General Information

1a. Submitted by the College of: ENGINEERING

Date Submitted: 12/8/2015

1b. Department/Division: Civil Engineering

1c. Contact Person

Name: Lindell Ormsbee

Email: lindell.ormsbee@uky.edu

Phone: 257-6329

Responsible Faculty ID (if different from Contact)

Name:

Email:

Phone:

1d. Requested Effective Date: Specific Term/Year¹ Spring 2016

1e. Should this course be a UK Core Course? No

2. Designation and Description of Proposed Course

2a. Will this course also be offered through Distance Learning?: No

2b. Prefix and Number: CE 664

2c. Full Title: Watershed Management

2d. Transcript Title: Watershed Management

2e. Cross-listing:

2f. Meeting Patterns

LECTURE: 3

2g. Grading System: Letter (A, B, C, etc.)

2h. Number of credit hours: 3

2i. Is this course repeatable for additional credit? No

If Yes: Maximum number of credit hours:

If Yes: Will this course allow multiple registrations during the same semester?

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SENATE COUNCIL

2j. Course Description for Bulletin: This course provides an overview of the scientific principles and management strategies used to effectively manage the physical, chemical, biological and social resources within a watershed so as to improve and sustain the integrity of the watershed system. The course will examine watershed management from both a scientific/engineering perspective as well as from a social science/policy perspective. Examples of effective watershed management will be drawn from cases studies in Kentucky and the United States. Students will be provided with an introduction to those spatial data sets, computer software, and methods currently used in watershed management practice.

2k. Prerequisites, if any: BAE437 or CE461G or an equivalent course in hydrology, or consent of instructor.

2l. Supplementary Teaching Component:

3. Will this course taught off campus? No

If YES, enter the off campus address:

4. Frequency of Course Offering: Spring,

Will the course be offered every year?: No

If No, explain: every other year, typically

5. Are facilities and personnel necessary for the proposed new course available?: Yes

If No, explain:

6. What enrollment (per section per semester) may reasonably be expected?: 12

7. Anticipated Student Demand

Will this course serve students primarily within the degree program?: Yes

Will it be of interest to a significant number of students outside the degree pgm?: Yes

If Yes, explain: BAE students, and maybe a few EES students

8. Check the category most applicable to this course: Relatively New – Now Being Widely Established,

If No, explain:

9. Course Relationship to Program(s).

a. Is this course part of a proposed new program?: No

If YES, name the proposed new program:

b. Will this course be a new requirement for ANY program?: No

If YES, list affected programs:

10. Information to be Placed on Syllabus.

a. Is the course 400G or 500?: No

b. The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from **10.a** above) are attached: No

Distance Learning Form

Instructor Name:

Instructor Email:

Internet/Web-based: No

Interactive Video: No

Hybrid: No

1. How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations?

2. How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc.

3. How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc.

4. Will offering this course via DL result in at least 25% or at least 50% (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above?

If yes, which percentage, and which program(s)?

5. How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?

6. How do course requirements ensure that students make appropriate use of learning resources?

7. Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.

8. How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Information Technology Customer Service Center (<http://www.uky.edu/UKIT/>)?

9. Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? NO

If no, explain how student enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.

10. Does the syllabus contain all the required components? NO

11. I, the instructor of record, have read and understood all of the university-level statements regarding DL.

Instructor Name:

SIGNATURE|RSO228|Reginald R Souleyrette |CE 664 NEW Dept Review|20151206

SIGNATURE|BJSTOK0|Barbara J Brandenburg|CE 664 NEW College Review|20160301

SIGNATURE|ZNNIKO0|Roshan N Nikou|CE 664 NEW Graduate Council Review|20160322

New Course Form

<https://myuk.uky.edu/sap/bc/soap/rfc?services=>

Open in full window to print or save

Generate R

Attachments:

Browse...

Upload File

	ID	Attachment
Delete	5955	Syllabus for CE664 Watershed Management.doc

First 1 Last

(*denotes required fields)

1. General Information

- a. * Submitted by the College of: Submission Date:
- b. * Department/Division:
- c.
- * Contact Person Name: Email: Phone:
- * Responsible Faculty ID (if different from Contact): Email: Phone:
- d. * Requested Effective Date: Semester following approval OR Specific Term/Year ¹:
- e. Should this course be a UK Core Course? Yes No
- If YES, check the areas that apply:
- Inquiry - Arts & Creativity Composition & Communications - II
- Inquiry - Humanities Quantitative Foundations
- Inquiry - Nat/Math/Phys Sci Statistical Inferential Reasoning
- Inquiry - Social Sciences U.S. Citizenship, Community, Diversity
- Composition & Communications - I Global Dynamics

2. Designation and Description of Proposed Course.

- a. * Will this course also be offered through Distance Learning? Yes ⁴ No
- b. * Prefix and Number:
- c. * Full Title:
- d. Transcript Title (if full title is more than 40 characters):
- e. To be Cross-Listed ² with (Prefix and Number):
- f. * Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours³ for each meeting pattern type.
- | | | | |
|---|--|---------------------------------|---------------------------------|
| <input checked="" type="text" value="3"/> Lecture | <input type="text"/> Laboratory ¹ | <input type="text"/> Recitation | <input type="text"/> Discussion |
| <input type="text"/> Indep. Study | <input type="text"/> Clinical | <input type="text"/> Colloquium | <input type="text"/> Practicum |
| <input type="text"/> Research | <input type="text"/> Residency | <input type="text"/> Seminar | <input type="text"/> Studio |
| <input type="text"/> Other | If Other, Please explain: | | |
- g. * Identify a grading system:
- Letter (A, B, C, etc.)
- Pass/Fail
- Medicine Numeric Grade (Non-medical students will receive a letter grade)
- Graduate School Grade Scale
- h. * Number of credits:
- i. * Is this course repeatable for additional credit? Yes No
- If YES: Maximum number of credit hours:
- If YES: Will this course allow multiple registrations during the same semester? Yes No

j. * Course Description for Bulletin:

This course provides an overview of the scientific principles and management strategies used to effectively manage the physical, chemical, biological and social resources within a watershed so as to improve and sustain the integrity of the watershed system. The course will examine watershed management from both a scientific/engineering perspective as well as from a social science/policy perspective. Examples of effective watershed management will be drawn from cases studies in Kentucky and the United States. Students will be provided with an introduction to those spatial data sets, computer software, and methods currently used in watershed management practice.

k. Prerequisites, if any:

BAB437 or CE461G or an equivalent course in hydrology, or consent of instructor.

l. Supplementary teaching component, if any: Community-Based Experience Service Learning Both3. * Will this course be taught off campus? Yes No

If YES, enter the off campus address:

4. Frequency of Course Offering.

a. * Course will be offered (check all that apply): Fall Spring Summer Winter

b. * Will the course be offered every year? Yes No

If No, explain: every other year, typically

5. * Are facilities and personnel necessary for the proposed new course available? Yes No

If No, explain:

6. * What enrollment (per section per semester) may reasonably be expected? 12

7. Anticipated Student Demand.

a. * Will this course serve students primarily within the degree program? Yes No

b. * Will it be of interest to a significant number of students outside the degree pgm? Yes No

If YES, explain:

BAE students, and maybe a few BES students

8. * Check the category most applicable to this course:

Traditional – Offered in Corresponding Departments at Universities Elsewhere

Relatively New – Now Being Widely Established

Not Yet Found in Many (or Any) Other Universities

9. Course Relationship to Program(s).

a. * Is this course part of a proposed new program? Yes No

If YES, name the proposed new program:

b. * Will this course be a new requirement⁵ for ANY program? Yes No

If YES⁵, list affected programs:

10. Information to be Placed on Syllabus.

a. * Is the course 400G or 500? Yes No

If YES, the *differentiation for undergraduate and graduate students must be included* in the information required in 10.b. You must include: (i) identify additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR

b. * The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable above) are attached.

⁵ Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

⁶ The chair of the cross-listing department must sign off on the Signature Routing Log.

- 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, requires two hours per week for a semester for one credit hour. (from SR 5.2.1)
- You must also submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.
- In order to change a program, a program change form must also be submitted.

Rev 8/09

CE 664
Watershed Management

Instructor: Lindell Ormsbee, P.E, Ph.D
Office Address: 233 Mining and Minerals Building
Email: lindell.ormsbee@ukyedu
Office Phone: 257-6329

Office hours: Tuesday and Thursday
11:00 - 12:30

Course Description:

This course provides an overview of the scientific principles and management strategies used to effectively manage the physical, chemical, biological and social resources within a watershed so as to improve and sustain the integrity of the watershed system. The course will examine watershed management from both a scientific/engineering perspective as well as from a social science/policy perspective. Examples of effective watershed management will be drawn from cases studies in Kentucky and the United States. Students will be provided with an introduction to those spatial data sets, computer software, and methods currently used in watershed management practice.

Prerequisites:

BAE437 or CE461G or an equivalent course in hydrology

Student Learning Outcomes:

After completing this course, the student will be able to:

1. Identify and summarize the various components of federal water quality policy.
2. Identify and summarize the various components of the federal watershed management program.
3. Identify and summarize the various watershed management programs within KY.
4. Identify and collect the data necessary for developing a watershed management plan.
5. Develop and implement a water quality plan.
6. Perform a watershed assessment for an assigned watershed.
7. Identify and apply relevant software for use in performing a pre and post hydrologic and water quality analysis.
8. Develop a watershed plan for an assigned watershed.
9. Identify the relevant watershed stakeholders for the assigned watershed and develop a stakeholder engagement plan.

Required Materials:

Textbook: Watersheds: Processes, Assessment and Management by Paul A. DeBarry. Copies of class presentations and supporting documents will be posted online for access by students.

Description of Course Activities and Assignments

Course Assignments

- 2 Exams at 100 points each
- 1 Watershed assessment 25 points
- 1 Water quality monitoring plan at 25 points
- 1 Hydrologic analysis 25 points
- 1 Water quality analysis 25 points
- 1 Watershed management plan at 50 points
- 1 Stakeholder engagement plan at 25 points
- 1 Final presentation 25 points

Summary Description of Course Assignments

Course assignments will include a mid-term and final exam. The exams will be used to test the students knowledge of watershed policy, monitoring, management, and engagement methods.

Each student will be assigned a watershed at the beginning of the class for use in developing a 1) watershed monitoring plan, 2) a hydrologic and water quality analysis, 3) a watershed management plan, and 4) a stakeholder engagement plan.

Each student will be required to present the results of their watershed plan in a formal presentation to the class.

Course Grading :

(i) Grading Scale

Grading scale for graduate students:

90-100% = A

81 - 89% = B

71- 79% = C

Final Exam Information

TBD

Course Policies:

Submission of Assignments:

All assignments are expect to be Describe expectations for assignment submissions. Paper vs online. Late penalties, other requirements.

Attendance Policy.

Clearly spell out attendance policies for the course, 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).

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:

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.

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.

Accommodations 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) for coordination of campus disability services available to students with disabilities.

Classroom Behavior Policies:

Students are expected to behavior in a professional manner in the classroom. Cell phones or other electronic devised should be turned prior to entering class and not displayed, however computers may be used for note-taking purposes.

Tentative Course Outline

1. Introduction to Watershed Management
2. Federal Water Quality Policy
3. The Federal TMDL Process
4. Federal and Kentucky Watershed Management Programs
5. The Watershed Management Process

Mid-term Exam

6. Watershed Characterization
 - a. Physical-spatial data/characterization
 - b. Habitat-biological data/characterization
 - c. Water quality data/characterization
 - d. Data analysis and representation

Watershed Assessment Report

7. Watershed Response
 - a. Hydrologic response
 - b. Water quality response

Water Quality Monitoring Plan

8. Watershed Models
 - a. Inductive models
 - b. Deductive models

Watershed Hydrologic Analysis

9. EPA and USGS Water Quality Software

Watershed Water Quality Analysis

10. Watershed Management Strategies and Best Management Practices

Watershed Management Plan

11. Community and Stakeholder Engagement

Stakeholder Engagement Plan

Final Project Presentation

Final Exam