

RECEIVED

OCT 10

OFFICE OF THE
SENATE COUNCIL**1. General Information**

1a. Submitted by the College of: ARTS & SCIENCES

Date Submitted: 9/20/2013

1b. Department/Division: Earth and Environmental Sciences

1c. Contact Person

Name: Dr. Kevin M. Yeager

Email: kevin.yeager@uky.edu

Phone: 859-257-5431

Responsible Faculty ID (if different from Contact)

Name:

Email:

Phone:

1d. Requested Effective Date: Semester following approval

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: EES 675

2c. Full Title: Earthquake Seismology

2d. Transcript Title:

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?

2j. Course Description for Bulletin: A study of the principles and methods of earthquake and engineering seismology. Specifically, the course will focus on the concepts of the seismic source, path, and site effects phenomena, as well as the practical aspects of seismic hazard assessment.

2k. Prerequisites, if any: EES 550 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: Fall,

Will the course be offered every year?: No

If No, explain: To be offered once every two years.

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?: 10

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: [var7InterestExplain]

8. Check the category most applicable to this course: Traditional – Offered in Corresponding Departments at Universities Elsewhere,

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: Yes

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|ZNNIKO0|Roshan N Nikou|EES 675 NEW Graduate Council Review|20131010

SIGNATURE|RHANSON|Roxanna D Hanson|EES 675 NEW College Review|20130509

SIGNATURE|MOKER|David P Moecher|EES 675 NEW Dept Review|20130306

Courses	Request Tracking
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New Course Form

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

[Open in full window to print or save](#)

Generate R

Attachments:

Upload File

	ID	Attachment
Delete	2228	GLY675_Syll.pdf
Delete	2266	GLY675_Syll.pdf

[First | 1 | Last]

Select saved project to retrieve...

Get New

(*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 ¹ 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 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: <input type="text"/>		
- g. * Identify a grading system: Letter (A, B, C, etc.) Pass/Fail 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:

A study of the principles and methods of earthquake and engineering seismology. Specifically, the course will focus on the concepts of the seismic source, path, and site effects phenomena, as well as the practical aspects of seismic hazard assessment.

k. Prerequisites, if any:

EES 550 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: To be offered once every two years.

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? 10

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:

This course has been taught for the past several years as a special topics course with significant enrollment of graduate students from the College of Engineering, particularly civil engineering.

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 requirement [§] for ANY program? Yes No

If YES [§], 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) ident additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR

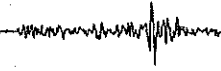
b. * The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if appl 10.a above) are attached.

- ^[1] Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.
- ^[2] The chair of the cross-listing department must sign off on the Signatum Routing Log.
- ^[3] 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, re two hours per week for a semester for one credit hour. (from SR 5.2.1)
- ^[4] You must also submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.
- ^[5] In order to change a program, a program change form must also be submitted.

Rev 8/09

Submit as New Proposal Save Current Changes

Syllabus



Instructor Information

Dr. Edward W. Woolery
Rm 309 Slone Research Building
Phone: 257-3016
Email: woolery@uky.edu

Office Hours: 0800 – 0900 hrs TRF
(and by appointment)

Course Description

A study of the principles and methods of earthquake and engineering seismology. Specifically, the course will focus on the concepts of the seismic source, path, and site effects phenomena, as well as the practical aspects of seismic hazard assessment. In addition to traditional problem-solving exercises, learning will be reinforced by including reviews of pertinent journal articles and a final project.

Outcomes

- Understand seismological wave theory.
- Be familiar with seismological and plate tectonic kinematic relationships.
- Know the physics associated with earthquake source, path, and site parameters.
- Plan and conduct a seismic hazard analysis for a site specific location.
- Determine earthquake ground motions for engineering design.

Class meetings.

The class will meet on Monday, Wednesday, and Friday from 0900 to 0950 hrs in Room 201 SRB.

Textbook.

The following textbooks will supplement the course notes:

Stein, S., and Wysession, M., 2003, "An Introduction to Seismology, Earthquakes, and Earth Structure", Blackwell Publishing: Maryland, U.S.A., 498 p.

Kramer, S.L., 1996, "Geotechnical Earthquake Engineering," Prentice Hall, NJ, 653 p.

Reading assignments will be given on a regular basis from the textbook. In addition, significant reading assignments from other sources are required.

Grading.

The course grade will be computed from the following components and their respective weights:

Homeworks/Projects	35 %
Midterm	30 %
Final Exam	35 %

Letter grades will be assigned based on the final computed grade as follows:

≥ 90%	A
≥ 80% and < 90%	B
≥ 70% and < 80%	C
< 70%	E

Tentative Course Schedule.

Week No.	Topic	Chapters
08/27	Introduction	Notes, 1
09/01	<i>Academic Holiday</i> /Source Effect – Faults	Notes, 5
09/08	Source Effect – Faults/Focal Mechanism	Notes, 5,4
09/15	Source Effect – Magnitude/Source Parameters	Notes, 4
09/22	Source Effect – Source Parameters/Directivity	Notes, 4
09/29	Source Effect – Recurrence/Aftershocks	Notes, 4
10/06	Earthquake Physics – Wave Motion/ <i>Fall Break</i>	Notes, 2
10/13	Path Effects – Attenuation	Notes, 3
10/20	<i>Midterm Exam</i> /Anisotropy	
10/27	Site Effects – Strong Ground Motion	Notes
11/03	Site Effects – Amplification	Notes
11/10	Seismic Hazard Assessment – DSHA	Notes
11/17	Seismic Hazard Assessment – DSHA/PSHA	Notes
11/24	Seismic Hazard Assessment – PSHA	Notes
12/01	Seismic Networks/ <i>Final Projects</i>	Notes
12/08	Seismic Networks	*
12/15	<i>Final Exam (1030 hrs)</i>	*

Homework.

Unless otherwise stated, homework assignments are due at the beginning of the class period ONE WEEK following the class period that the homework is assigned (*Graduate students will not receive detailed instructor comments on “graded” assignments, i.e., correct reports are expected. Graduate students submitting incorrect will be asked to “revise” work for credit.*) Homeworks will consist of analytical problem solving; however, literature reviews and reporting (oral and written) can be expected. Appropriate reporting (e.g., numerical units, significant figures, citation format, titles on tables and graphs, etc., etc., etc.) is required on all assignments. The first sheet of each assignment should include a header similar to the following example:

I.M. Dunne

EES 675
Earthquake Seismology

Page 1 of 2

Assignment No. 7

Feb. 25, 2012

Be sure to number and include your name on all pages of your submitted assignment. Points will be deducted for work that is not sufficiently documented for the grader to understand calculations or problem solving logic, or is illegible/poorly written. The purpose of the homework format is to

prepare the student for reporting/ communicating relevant information in a style used by industry employers.

Cheating and Plagiarism.

In the unlikely event that an occurrence of cheating or plagiarism occurs, it will be dealt with according to University Rules http://www.uky.edu/USC/New/rules_regulations/index.htm.

Late Submissions.

Homework assignments submitted after the class period in which they are due will be allowed only if the student provides acceptable reasons as defined in the University rules, policies, and codes described in the paragraph below.

Unexcused Absences.

Note that the following are acceptable reasons for excused absences under University of Kentucky Senate Rules (S.R.): 1) serious illness; 2) illness or death of family member; 3) University-related trips (S.R. 5.2.4.2.C); 4) major religious holidays; 5) other circumstances that the instructor finds to be "reasonable cause for nonattendance." Detailed rule explanations are at <http://www.uky.edu/Ombud/policies.php> and <http://www.uky.edu/StudentAffairs/Code/part2.html>. The burden of proof for verification of an excused absence is on the student, and the instructor retains the right to ask for sufficient documentation. It is preferable to notify the instructor in advance of any planned absences. If you do not notify the instructor prior to your absence, you must do so within one week (S.R. 5.2.4.2.D). When there is an excused absence, the student will be given the opportunity to make up missed work and/or exams. No opportunity will be given the opportunity to make up missed work and/or exams in the event of an unexcused absence.

Academic 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@eamil.uky.edu) for coordination of campus disability services available to students with disabilities.

Course Policy on Classroom Civility and Decorum.

The university, college and department have a commitment to respect the dignity of all and to value differences among members of our academic community. There exists the role of discussion and debate in academic discovery and the right of all to respectfully disagree from time-to-time. Students clearly have the right to take reasoned exception and to voice opinions contrary to those offered by the instructor and/or other students (S.R. 6.1.2). Equally, a faculty member has the right -- and the responsibility -- to ensure that all academic discourse occurs in a context characterized by respect and civility. Obviously, the accepted level of civility would not include attacks of a personal nature or statements denigrating another on the basis of race, sex, religion, sexual orientation, age, national/regional origin or other such irrelevant factors.