2013-2014 LONG SIGNATURE SHEET

RECEIVED 11/01/13

UNC CHARLOTTE

Proposal Number: GES 10-31-2013

Proposal Title: New graduate seminar course for the M.S. Earth Sciences program

Originating Department: Geography and Earth Sciences

TYPE OF PROPOSAL: UNDERGRADUATE_____GRADUATE__X__ UNDERGRADUATE & GRADUATE____
(Separate proposals sent to UCCC and Grad. Council)

DATE RECEIVED	DATE CONSIDERED	DATE FORWARDED	ACTION	SIGNATURES
10/31/13	10/31/13	10/31/13	*Approved*	**DEPARTMENT CHAIR** Craig Allan [print name here:]
11/01/13	11/22/13	12/03/13	*Approved*	**COLLEGE CURRICULUM COMMITTEE CHAIR** [print name here:]
		12/06/13	*Approved*	**COLLEGE FACULTY CHAIR (if applicable)** [print name here:] STEVEN SABOL
		12/6/13	*Approved*	**COLLEGE DEAN** [print name here:]
			Approved	**GENERAL EDUCATION** (if applicable; for General Education courses) [print name here:]
			Approved	**UNDERGRADUATE COURSE & CURRICULUM COMMITTEE CHAIR** (for undergraduate courses only)
12-9-13	1-14-14	14 JAN 2014	*Approved*	**GRADUATE COUNCIL CHAIR** (for graduate courses only) ALAN R. FREITAG
				FACULTY GOVERNANCE ASSISTANT (Faculty Council approval on Consent Calendar)
				FACULTY EXECUTIVE COMMITTEE (if decision is appealed)

UNC CHARLOTTE

LONG FORM
COURSE AND CURRICULUM PROPOSAL

To: Graduate Council

From: Matthew D. Eastin
Department of Geography and Earth Sciences

Date: 31 October 2013

Re: (1) Establishment of a new required graduate seminar course and (2) removal of the written comprehensive examination requirement for the M.S. Earth Sciences program.

The Department of Geography and Earth Sciences proposes to add a new required seminar course to the graduate curriculum: ESCI 6600 Earth Sciences Graduate Seminar (1). The M.S. Earth Sciences program comprises students from the disciplines of atmospheric science, ecology, environmental science, geology and hydrology. There is a need for a common course where students with differing academic backgrounds come together to discuss the common themes, as well as the discipline-specific issues, within the earth sciences. The proposed new course is designed to broaden the experience of the students in the program by investigating the interconnectedness of earth systems.

Additionally, we propose the removal of the written comprehensive examination requirement since it effectively duplicates the current practice regarding the written project proposal and its oral defense/examination.

New Graduate Course Proposal

Course/Curriculum Proposal from: Department of Geography and Earth Science

TITLE: *Establishment of an Earth Sciences Graduate Seminar course and removal of the written comprehensive examination requirement from M.S. Earth Sciences program*

II. CONTENT OF PROPOSALS

A. PROPOSAL SUMMARY

1. SUMMARY: The Department of Geography and Earth Sciences proposes to (a) add a new required course to the graduate curriculum – ESCI 6600 Earth Sciences Graduate Seminar – and (b) remove the written examination requirement from the program.

   Participation in the seminar course will count for 2 total credits (1 credit for each semester). All full-time first- and second-year students enrolled in the M.S. Earth Sciences program will be required to actively participate in the seminar, where presentations are made by student researchers, faculty, and invited speakers. Part-time students will be expected to participate in a fall semester *before* completing 6 credits and a fall semester *after* completing 18 credits. Each student makes one presentation per semester and critiques one presentation in their second semester.

   Removal of the written comprehensive examination requirement eliminates duplication in our assessment of student knowledge and progress at a mid-point in the program. The student's oral presentation/defense of their written project *proposal* to their research committee (also required of all students) serves the same purpose.

B. JUSTIFICATION

1. NEEDS: The M.S. Earth Sciences program comprises of students from the disciplines of atmospheric science, ecology, environmental science, geology and hydrology. There is a need for a common core course where students with differing academic backgrounds come together to discuss the common themes, as well as the discipline-specific issues, within the Earth sciences. The proposed new course is designed to serve this need and to broaden the experience of the students in the program by investigating the interconnectedness of the Earth systems.

   The original purpose of the written comprehensive examination – to evaluate a student's knowledge regarding general aspects of the Earth sciences after a year of coursework and then make recommendations of how to address any remaining deficiencies – has effectively become obsolete

through a combination of more selective admission standards and more focused curricular/research advising at the onset of a student's enrollment in the program. The same purpose can be (and is being) achieved at a similar time when students prepare and orally present their written research proposal to their research committee (another formal requirement of the program) at the beginning of their third semester. Similar to the written examination, students who fail to provide satisfactory oral responses to questions addressing general aspects of the Earth system will be (and have been) asked to complete additional coursework and/or scientific literature reviews to achieve the expected level of knowledge and understanding as part of their formal plan of study (completed upon approval of the proposed research project).

2. PRE-REQUISITES: The seminar course pre-requisite will be admission into the M.S. in Earth Sciences program. The course can be taken by all ESCI masters students with backgrounds in atmospheric sciences, ecology, environmental science, geology and hydrology.

3. CONSISTENCY OF COURSE NUMBERING: The proposed course is at the 6000-level for ESCI masters students only, and consistent with the university course numbering system, the second digit is a "6" to signify a seminar course.

4. PROGRAM IMPROVEMENT: The seminar provides a common core class for all ESCI masters students to explore trans-disciplinary themes and issues of importance to the Earth Sciences.

   The removal of the written comprehensive exam eliminates a 1-2 week loss in research productivity during a critical period in a typical student's programmatic timeline (their first summer) when time sensitive field work is conducted and data sets are compiled. Given its effective duplication, the exam's removal should marginally increase the quality and depth of student research projects.

5. PREVIOUS OFFERINGS OF THE COURSE: None

C. IMPACT

1. STUDENTS SERVED: This course proposal will provide a graduate level course for students admitted to the M.S. Earth Sciences program.

2. EFFECT ON EXISTING COURSE AND CURRICULA:

   a. The seminar course will be taught yearly in the Fall semester.
   b. The content of the seminar course is unique within the M.S. in Earth Sciences program in that the seminar is designed to examine the entirety of the field. It is a new 1-credit course and will have a negligible impact on the frequency of other course offerings. Removal of the written comp examination will not impact courses.

c. It is expected there will be approximately 15-20 Earth Sciences master's students in each class offering.
d. This course, if approved, will be the only required course within the M.S. in Earth Sciences curriculum. This course is offered for only 1-credit hour per year (for a programmatic total of 2 credits) and should not adversely impact enrollments in other courses. Removal of the written comp examination will not impact courses.
e. The proposed course, ESCI 6600 Seminar, is a new course and has not previously been offered.
f. In addition to a new listing under the heading "Courses in the Earth Sciences and Geology" other sections of the M.S. Earth Sciences catalog copy that will need to be revised to account for both the required seminar course addition and the written examination removal include "Degree Requirements," "Written Comprehensive Examination", and "Graduate Coursework". No other programs, departments, or colleges will be affected – only the M.S. Earth Sciences program.

III. RESOURCES REQUIRED TO SUPPORT PROPOSAL

A. **PERSONNEL:** No need to add new faculty. The graduate coordinator of the M.S. in Earth Sciences program will have ultimate responsibility for organizing the seminar course, including inviting guest speakers and arranging the order in which students make presentations. This could represent a modest increase in the coordinator responsibilities. Dr. Matthew Eastin, the current program coordinator, is interested in teaching the inaugural course while serving as coordinator. In the future, new coordinators or other interested Earth Sciences graduate faculty will serve as instructors (Drs. Sandra Clinton and Craig Allan have expressed interest).

B. **PHYSICAL FACILITY:** No need of any new facilities. Classrooms in McEniry are available and adequate.

C. **EQUIPMENT AND SUPPLIES:** No need of new equipment and/or supplies.

D. **COMPUTER:** Computing laboratories in McEniry are adequate.

E. **AUDIO-VISUAL:** Existing audio-visual equipment are adequate

F. **OTHER RESOURCES:** No need for additional resources

G. **SOURCE OF FUNDING:** N/A

IV. CONSULTATION WITH LIBRARY AND OTHER DEPARTMENTS OR UNITS

A. LIBRARY CONSULTATION. See attached recommendation from Atkins Library

B. CONSULTATION WITH OTHER DEPARTMENT. No need for consultation with other departments. All proposed courses and curriculum changes only impact the M.S. Earth Sciences program.

V. INITIATION, ATTACHMENTS AND CONSIDERATION OF THE PROPOSAL

A. ORIGINATING UNIT: The faculty desired a common core course for the M.S. Earth science program as a means to bring together students with differing academic backgrounds and research foci and discuss the common themes, as well as the discipline-specific issues, within the Earth sciences. After considerable discussion of multiple course styles and content, a seminar-style course was selected due to its additional potential to improve student's oral communication skills. The proposal was evaluated by the departmental graduate committee and circulated to all GES faculty. No objection was brought up by the departmental faculty, and the proposal passed by a unanimous vote.

B. CREDIT HOUR:

☑ The GES Graduate Advisory Committee (responsible for graduate curriculum) has reviewed the course syllabus and determined the assignments are sufficient and meet the university definition for a credit hour.

C. ATTACHMENTS:

1. CONSULTATION: See attachment below from Atkins Library
2. COURSE SYLLABUS: See attachment below
3. PROPOSED CATALOG COPY: (check all that apply)

   ☐ This course will be cross listed with another course.
   ☑ There are pre-requisites for this course.
   ☐ There are co-requisites for this course.
   ☑ This course is repeatable for credit.
   ☐ This course will increase/decrease the number of credits hours currently offered (required) by its program
   ☐ This proposal results in the deletion of an existing course(s) from the degree program and/or catalog.

   Note: Only those sections of the M.S. Earth Sciences catalog copy to which text is to be added or changed are included below (using the red-strike and blue-underline format). All other portions of the catalog remain unchanged.

Degree Requirements

The program requires a minimum of 36 hours of graduate credit. The student must complete at least 18 of the 36 credit hours in courses at the 6000-level or above. Of these at least two credits will consist of ESCI 6600 (Earth Sciences Seminar) and at least nine credits will consist of ESCI 6900 (Earth Sciences Research). Up to six graduate credits may be accepted as transfer credit. Only courses with grades of A or B earned at an accredited university are eligible. Transfer credits are not automatic and require the approval of the Graduate Coordinator and the Graduate School. The amount of transfer credit may not exceed the limit set by the Graduate School (6 hours).

~~Written Comprehensive Examination~~

~~To complete the program, each student must pass a comprehensive examination covering general aspects of the discipline. This exam should be administered before beginning the 3rd semester. This is a written exam in which the student must respond to questions submitted by the faculty. These questions will examine knowledge from the area of study and coursework completed by the student to date in the program. The questions are solicited from the entire graduate faculty of the department by a memo from the student's primary research advisor who then administers the examination. This exam may not be administered if the student has outstanding incomplete grades in any graduate coursework.~~

Graduate Coursework

The M.S. in Earth Sciences graduate program generally follows a traditional numbering scheme with 5000 and 6000 level courses. The 5000-level numbers identify courses that cover accepted bodies of knowledge within the earth sciences with the emphasis placed on mastery and critical assessment of the theoretical and empirical foundations within the discipline. The 6000-level courses are divisible into ~~two~~ three categories. The first category is the Earth Systems topic courses wherein graduate students review and analyze the dominant current working hypotheses that drive contemporary research within conceptual areas such as geodynamics, global biogeochemical cycles, climate change, severe weather dynamics, or urban ecology. The second 6000-level category is the common core seminar course, wherein graduate students discuss holistic themes and discipline-specific issues in the Earth Sciences over the course of two separate fall semesters. The ~~second~~ third 6000-level category is the directed research courses. This category provides the framework for graduate students to complete the research requirements within the program and also identifies the area of concentration of the directed research.

COURSES IN EARTH SCIENCES AND GEOLOGY

Earth Sciences (ESCI)

ESCI 6600. Earth Sciences Graduate Seminar. (1) Prerequisite: Admission into the M.S. Earth Sciences program. Discussion of holistic themes, discipline-specific issues, and current challenges in the Earth Sciences. Each student will actively participate in seminars delivered by student researchers, faculty, and invited speakers. Participation in this course will count for a total of 2 credit hours (1 credit hour for each of two academic years). Prior to graduation, each student will make at least two seminar presentations and provide at least one formal critique of a presentation. May be repeated for credit. *(Fall)*

4. ACADEMIC PLAN OF STUDY (UNDERGRADUATE ONLY): Does the proposed change impact an existing Academic Plan of Study?

   ☐ Yes
   ☐ No
   ☑ N/A

5. STUDENT LEARNING OUTCOMES: Does this course or curricular change require a change in Student Learning Outcomes (SLOs) or assessment for the degree program?

   ☐ Yes
   ☑ No
   ☐ N/A

6. TEXTBOOK COSTS: It is the policy of the Board of Governors to reduce textbook costs for students whenever possible. Have electronic textbooks, textbook rentals, or the buyback program been considered and adopted?

   ☐ Yes
   ☐ No
   ☑ N/A – No textbook is required

IMPORTANT NOTE: A Microsoft Word version of the final course and curriculum proposal should be sent to facultygovernance@uncc.edu upon approval by the Undergraduate Course and Curriculum Committee and/or Graduate Council chair.

ESCI 6600 Earth Sciences Graduate Seminar
Fall 2014

Place & Time: Friday 12:00 – 12:50 pm, 401 McEniry

Pre-requisites: Admission to the M.S. Earth Sciences program

Instructor: Dr. Matthew Eastin
209 McEniry
704-687-5914
mdeastin@uncc.edu

Textbook: None (any readings will be provided as handouts)

Instructional Method: This course will be conducted as a seminar-style course whereby students are expected to attend departmental seminars, present seminars on their research, and critique seminars presented by others. Instruction will be provided regarding the "best" practices for developing visual materials and orally-presenting an effective seminar.

Course Description: Each student will actively participate in seminars delivered by student researchers, faculty, and invited speakers. Participation in this course will count for a total of 2 credit hours (1 credit hour for each of two academic years). In the first year, each student will present a preliminary research project proposal. In the second year, each student will present preliminary findings from their own research. Prior to graduation, each student will make at least two seminar presentations and provide at least one formal critique of a presentation.

Objectives: Throughout the program, M.S. Earth Science students, regardless of background, will come together in this interdisciplinary seminar course to make and critique presentations and participate in discussions on topics related to the Earth sciences. They will strengthen their appreciation of the interdisciplinary nature of the Earth sciences and the impacts of their disciplines upon each other.

Course Policies:

- Students are responsible for knowing and following the UNCC Code of Student Academic Integrity (http://www.legal.uncc.edu/policies/ps-105.html) and the UNCC Code of Student Responsibility (http://www.legal.uncc.edu/policies/ps-104.html) in all aspects of their work in this course.
- UNCC abides by interpretations of the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973 that stipulates no student shall be denied the benefits of an education "solely by reason of a handicap." Disabilities covered by law include, but are not limited to, learning disabilities, hearing, sight or mobility impairments, and other health related impairments. This course will gladly provide accommodations for students with documented needs. If you feel you need an accommodation, please contact the Office of Disability Services, Fretwell Room 230, phone 704-687-4355 for the necessary evaluation and documentation.
- Regular class attendance and active participation in is expected. You are responsible for all information presented in class.
- Use of phones, email, texting, or music players during class is prohibited.

Revised 10/11/13 OAA

Evaluation: The course grade will be based on a student's cumulative performance on (a) an individual research or proposal presentation, (b) a critique of another student's presentation (second year only), (c) active discussion of topics presented each week, and (d) attendance at departmental talks. The grading scale will be a standard percentile scale. The final grade will be calculated based on the following total points:

	First-Year	Second-Year
Proposal/Research Presentation	100	100
Critique of Presentation	---	100
Class Participation	50	50
Attendance at GES Seminars	50	50
Total	200	300

Percent	Grade
90-100	A
80-89	B
70-79	C
0-69	U

Tentative Class Schedule:

Week	Date	Subject
1	8/22	Introduction to the course and each other
2	8/29	Effective visual aids for seminars
3	9/05	Effective oral presentation styles for seminars
4	9/12	How to critique another presentation
5	9/19	Guest speaker – GES Faculty
6	9/26	Guest speaker – GES Faculty
7	10/03	Second-year student presentations
8	10/10	Second-year student presentations
9	10/17	GES Seminar
10	10/24	Second-year student presentations
11	10/31	Second-year student presentations
12	11/07	GES Seminar
13	11/14	GES Seminar
14	11/21	First-year student presentations
15	11/28	No Class – Thanksgiving Break
16	12/05	First-year student presentations
Final Exam Time		First-year student presentations

UNC CHARLOTTE

J. Murrey Atkins Library
Consultation on Library Holdings

To: Matthew Eastin

From: Alison Bradley

Date: 10/24/13

Subject: ESCI 6600 – Earth Sciences Graduate Seminar

Summary of Librarian's Evaluation of Holdings:

Evaluator: Alison Bradley **Date:** 10/24/13

Check One:

1. Holdings are superior ____
2. Holdings are adequate __x__
3. Holdings are adequate only if Dept. purchases additional items. ____
4. Holdings are inadequate ____

Comments:
Library holdings should be adequate to support student research for this course (see list of items held by subject heading below). Students will have access to relevant databases including GeoRef, Compendex, Environment Complete, Web of Science, ScienceDirect, and many others.

LC Subject Heading	Books	Journals	Electronic Resources
Geology	4927	297	825
Meteorology	1224	229	379
Hydrology	1068	123	300
Environmental Science	837	115	524
Ecology	5907	385	1547

Alison Bradley

Evaluator's Signature

10/24/13

Date