

Biology, Geology, and Environmental Science

Dept 2653

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www.utc.edu/biology-geology-environmental-science

October 30, 2020

Ashley Manning-Berg is submitting a proposal on behalf of the Geology faculty to apply an Experiential Learning designation to our Senior Seminar (GEOL 4900) course. Geology faculty develop, modify and take turns teaching this course in the Spring semesters. When discussing adding an EL designation to this course, the faculty agreed that it would be taught the same no matter who the designated instructor for the semester might be. We look forward to offering this course to our students with the EL designation.

Sincerely,



Amy Brock-Hon

Geology Professor and Associate Department Head

Department of Biology, Geology and Environmental Science

Amy-Brock-Hon@utc.edu

423-425-4409



Application for ThinkAchieve: *Beyond the Classroom* (BTC) Experiential Learning Designation

Experiential Learning at UTC takes students beyond the classroom to connect theory and practice through creative endeavors, research, internships, leadership, service-learning and intercultural opportunities.

APPLICATION INSTRUCTIONS FOR FACULTY AND STAFF

Please complete the application and submit to think@utc.edu. More information on ThinkAchieve, UTC's platform supporting Experiential Learning is at www.utc.edu/think. If you have questions, please call Bengt Carlson at (423)-425-5825.

Application Content Requirements

- 1) Complete the General Information section
- 2) Select the *Beyond the Classroom* experience category most applicable
- 3) Describe the experiential element in the course or program by responding to the two *Beyond the Classroom* Description prompts
- 4) Attach current Syllabus or experience description/program materials that clarify or highlight the experiential element of the course or program

GENERAL INFORMATION

Faculty/Staff Name: Ashley Manning-Berg

Course/Experience Title (if course, please include course number): GEOL 4900 Senior Seminar
** The name of this course is changing for the 2021-2022 academic year; however, the course number will remain the same

Department or Office: Biology, Geology, and Environmental Science

First Semester the Course/Experience will be Offered: Spring 2020

How often do you plan to offer this Course/Experience? Every Spring semester

BEYOND THE CLASSROOM EXPERIENCE CATEGORIES (select one)

This application will be evaluated using a *rubric corresponding to one of the experience categories*. More information is available at www.utc.edu/think.

_____ **Creative:** Articulate, implement, and reflect on a substantive application of their academic foundations to solving a real-world problem or providing and interpretation or expression

- ___ **Intercultural** (Domestic and International): Interact with a culture and/or region distinct from their own. Engage in academic inquiry and application afforded by the specific off-campus setting
- ___ **Internship:** Practice skills or methods related to their field of study through supervised work in a professional or organizational setting
- ✓ **Research:** Work from a research question, hypothesis, or thesis statement, apply research design/methods to generate findings, communicate findings through presentation, publication, or other methods of dissemination
- ___ **Service Learning:** Articulate, implement, and reflect on a substantive application of their academic foundations to a real-world service setting and/or need
- ___ **Leadership:** Articulate, implement, and reflect on a substantive application of their academic foundations to develop skills for leadership

BEYOND THE CLASSROOM DESCRIPTION PROMPTS

Please specifically and concisely describe the experiential element of this opportunity in the three areas below. The experiential element should constitute ¼ of the credit or non-credit bearing opportunity.

1. **Authentic Responsibility:** Student demonstrates initiative in the creation and/or execution of the experience; takes ownership of process and outcomes (see detail in category specific rubric)
 GEOL 4900 is a course taken by geology majors as they are finishing their degrees. The course follows a prerequisite course, GEOL 4800, in which the students are responsible for the development of a research project and writing a research proposal. The next semester they complete the research. There are several checkpoints built in throughout the semester to check their progress and the end result is a poster presentation to the geology faculty.
2. **Reflection:** Share, using the table below, how the course or program requirements direct students to critically reflect before, during and after the experience, integrating theory with practice and generating critical reflection on self and/or society. (e.g. student reflects on the activity; articulates personal, civic/social, and/or academic learning; identifies values and attitudes developed through the activity. See detail in category specific rubric)

Description of <u>pre-experience</u> reflection activities	Prior to entering the class, students will have submitted a research proposal. At the beginning of the course, each student will be asked to reflect on the strengths and weaknesses they see in their ability to do the proposed research and how they will address roadblocks that they might encounter in their research.
Description <u>during the</u> experience reflection activities	In their lab notebooks, students will be asked to perform weekly reflections on the progress that they have made that week toward their research and any goals that they may have for the next week.
Description of <u>post-experience</u> reflection activities	At the end of the semester, the students will be asked to reflect on how they handled challenges that they faced during the semester and how well they anticipated the challenges at the beginning of the course. They will also be asked to reflect on what they would do differently if they were to redo the research.

3. **Regular mentorship, supervision, and feedback:** Mentorship entails responding regularly to student work; supporting student reflection (more description below), integrating learning through the activity and goal-setting for future involvement or inquiry (see detail in category specific rubric)

As students move through their research projects in GEOL 4900 they will receive mentorship from both the professor(s) assigned to teach the class that semester and the professor that they have chosen to work with as a mentor/subject expert. At the beginning of the semester, the students will be asked to outline a research plan with goals for where their research will be at specific times in the semester. Students will complete several assignments throughout the semester that will serve as progress checkpoints that are designed to help them establish those research goals. These assignments include weekly documentation of, and reflection on, their progress in their lab notebooks (checked 3-4 times in the semester), presentations on the data being collected, the methods used, and the preliminary results of their data (3 presentations total), and they will present their poster to the geology faculty. Each of the checkpoints allows for the professor(s) teaching the course to provide timely feedback on the progress being made and the work being completed. Feedback time will vary according to the number of students enrolled in the course but will be returned generally within 10 days of the due date.

The University of Tennessee at Chattanooga

SENIOR SEMINAR

Spring 20XX

GEOL 4900, section 01, CRN 21445, face-to-face, 2 credit hours

INSTRUCTOR: Varies

Email:

Phone:

Office: Grote 218

Office hours: Varies by semester and professor

Inquiries will be replied to as soon as possible, normally within 24 hours

MEETING DAYS, TIMES, AND LOCATION

Varies by semester

Room: GROTE 208

CATALOG DESCRIPTION

Culminating senior experience giving students an opportunity to design and conduct research related to geological problems. Spring semester.

PREREQUISITE: GEOL 4800 and department head approval.

COREQUISITE: None

EXPECTED STUDENT LEARNING OUTCOMES

Upon completion of this course, it is expected that students will be able to:

- Apply their knowledge of fundamental sciences to interdisciplinary studies of Earth
- Design and conduct geologic research using their knowledge, skills, and critical thinking abilities
- Communicate geotechnical information by written, oral and graphical means

TEXTBOOK: None

The **UTC Bookstore** will price match Amazon and [BN.com](https://www.bn.com) prices of the exact textbook - same edition, ISBN, new to new format, used to used format, and used rental to used rental format, with the same rental term. For more information, go to [Bookstore Price Match Program webpage](#), visit the bookstore, email sm430@bncollege.com, or call 423-425-2184.

TECHNOLOGY REQUIREMENTS

Because some aspects of this course are communicated by email and are to be completed using UTC Learn (Canvas), access to the internet, via a computer, is required. Access to the internet is also essential to research expectations of this course.

TECHNOLOGY SKILLS REQUIRED

Because some aspects of this course are communicated by email and are to be completed using UTC Learn (Canvas), technology skills necessary to navigate the internet, via a computer, are required. Such technology skills are also essential to research expectations of this course.

COMMUNICATION

Course-related communication will be made through UTC Learn (Canvas) and/or UTC email, both of which should be checked on a regular basis.

TECHNOLOGY SUPPORT

If you have problems with your UTC email account or with UTC Learn, contact IT Solutions Center at 423-425-4000 or email itsolutions@utc.edu.

COURSE ASSESSMENT

The final numerical grade for this class will be computed as follows.

15 %	Research notebook and reflections	_____	x 0.15 =	_____.
10 %	Presentation of data collection and progress do date	_____	x 0.10 =	_____.
10 %	Presentation of methodology and progress do date	_____	x 0.10 =	_____.
10 %	Presentation of prelim. results and progress do date	_____	x 0.10 =	_____.
10 %	Abstract	_____	x 0.10 =	_____.
10 %	Draft of poster	_____	x 0.10 =	_____.
25 %	Poster presentation	_____	x 0.25 =	_____.
5 %	Attendance	_____	x 0.05 =	_____.
5 %	Participation	_____	x 0.05 =	_____.
100			TOTAL (Final numerical grade) =	_____.

The final letter grade for this class will conform to the following scale, based upon the computed final numerical grade.

F≤59, D=60-70, C=70-80, B=80-90, A=90-100

For this purpose, the final numerical grade will rounded to the nearest whole number. For example, a grade of 89.4 rounds to 89, which is a B; a 69.5 rounds to a 70 which is a C.

As per the UTC Undergraduate Catalog, grades of *A*, *B*, *C*, and *D* denote superior, commendable, acceptable, and marginal performance; an *F* denotes unqualified failure.

GRADING AND FEEDBACK RESPONSE

Grading and feedback by the instructor will be completed as soon as possible, normally within 10 days.

Grades for all assignments will be reported on the basis of 100 points, i.e. as a percent value.

RESEARCH AND THE RESEARCH ADVISOR

In this course, students are expected to design, conduct, and document geologic research.

Students should seek out a member of the geology faculty (Drs. Brock-Hon, DeVries, Hossain, Manning-Berg, or Mies, or Mr. Brodie) to advise (supervise) them in their research efforts. Note that the supervisor's name is required for the research proposal, which was due **Dec. 8**. Regardless of the supervisor, and the advice he or she provides, it is the student's responsibly to meet deadlines described in this syllabus and to keep the instructor informed of any complications that arise and any significant changes that are anticipated. With this in mind, you should keep your research advisor informed of your progress and how it relates to upcoming deadlines.

ASSIGNMENTS

Unless otherwise indicated, all assignments are due at the beginning of class on the due date.

Late assignments will be accepted in only the most adverse circumstances (e.g. serious illness or accident). Documentation of the circumstance (e.g. doctor's note or police report) may be required. Otherwise, you will receive a grade of zero for the assignment.

Research notebook

Students will keep a separate lab notebook that they will use when performing research. Keeping detailed and organized notes of your research is a key element to scientific research. You will record measurements, basic data interpretation, and your progress in these notebooks. There will be periodic checks of the lab notebook.

Reflections

Each week, you will take some time to reflect on the progress you have made in your research that week. Recognize that there will be weeks that you may not make as much progress on your research as you would like; that is normal. However, your goal is to constantly move your research forward throughout the semester. Reflecting on your progress will demonstrate even small steps you have taken to move the project forward. There will also be a reflection at the beginning of the semester to identify what you believe are your strengths and challenges as you go into the research. Similarly, there will be a reflection at the end of the semester that will focus on how your research went overall and what you might do differently if you were to redo the research.

PowerPoint presentations

Students will provide brief presentations on important aspects of their research plans using PowerPoint, specifically (1) data collection and processing and (2) methodology. Students will also present their preliminary results in similar fashion. Presentations will be limited to 10 minutes and will, ideally, be followed by brief discussion and peer review.

Abstract

The abstract must adhere to guidelines and limitations (2,000 character limit, not counting spaces, no graphics) used for abstracts published by the Geological Society of America (GSA). The abstract, due at the time that the draft poster is due, should be turned in as a separate document.

Poster

The poster, both draft and final, should be complete with respect to (1) **abstract**, (2) **problem to be addressed** or **hypothesis to be tested**, (3) **background** or **introduction** (provides context and importance of project), (4) **methodology**, (5) **results**, including **interpretations** and **conclusions**, and (6) **references cited**, each with appropriate headings and subheadings. Of course, the poster should also include a **title**, **author's name**, **affiliation**, and **contact information** and should make good use of graphics, e.g. maps for regional setting and location, outcrop photos, charts and graphs, *etc.*, with north arrow, scale, *etc.*, as appropriate. Graphics from other publications should be redrawn or modified to better serve the purpose of the poster and the source should be appropriately cited. Citations and the list of references cited should be in GSA format. Anticipate that the poster will be printed 24" x 36" (landscape) when making choices of layout, font size, *etc.*

Note that the completed (final) poster is due 5 days prior to the presentations to provide ample time for it to be printed.

ATTENDANCE AND PARTICIPATION

Students are expected to attend class regularly and to participate in class discussions. Attendance and participation will be considered in the final grade. (See Course Assessment.)

Students are expected to be prepared for class, attentive, and respectful of others. To this end, there will be no use of cell phones or similar devices during class.

Students are expected to be punctual.

STUDENT CONDUCT POLICY

UTC's Academic Integrity Policy is stated in the Student Handbook.

HONOR CODE PLEDGE

I pledge that I will neither give nor receive unauthorized aid on any test or assignment. I understand that plagiarism constitutes a serious instance of unauthorized aid. I further pledge that I exert every effort to ensure that the Honor Code is upheld by others and that I will actively support the establishment and continuance of a campus-wide climate of honor and integrity.

All students are expected to follow the UTC Honor Code.

COURSE LEARNING EVALUATION

Course evaluations are an important part of our efforts to continuously improve the learning experience at UTC. Toward the end of the semester, you will receive a link to evaluations and are expected to complete them. We value your feedback and appreciate you taking time to complete the anonymous evaluations.

This syllabus is subject to minor changes