

NRE 395 – Research in Natural Resources and Environmental Science Course Syllabus

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Course Description

Study and independent work on selected problems related to natural resources and environmental science conducted under the supervision of a faculty member and with clear relevance to the student's Analytic Skills Development Area (ASDA) and/or Environmental Systems Emphasis Area (ESEA). The goal of NRE 395 is for students interested in research to have an authentic research experience, working directly with a faculty member or graduate student in data collection and analysis, as well as conducting a portion of the research independently. A typed and signed Learning Contract must be completed, submitted, and approved prior to the start of the experience. (This course will work in conjunction with NRE 400, unless a given student decides to use a different internship or research experience for that purpose.)

Prerequisites and Learning Contract

NRE 201 and Completed and Approved Learning Contract

Consent of appropriate faculty and approval by NRES Experience Coordinator.

Consent of research advisor and completion of a learning contract before registration. The learning contract must be prepared by the student and approved by the research advisor and experience coordinator BEFORE work begins on the research.

Note that as long as we are under COVID-19 restrictions, approval of your research experience by the Associate Dean for Instruction will also be required.

Student Learning Outcomes

After completing this course, students will be able to:

- Make use of materials that are often associated with career/employment search strategies
- Demonstrate use of safe and appropriate work behaviors in a professional setting.
- Apply knowledge and skills learned in UKCore, Major, and/or ASD/ESEA courses.
- Elaborate on how the research undertaken contributes to your ASD/ESEA
- Reflect upon and integrate in/out of class experiences to inform future course selection and career direction(s).

According to the National Association of Colleges and Employers (NACE) an internship is a form of experiential learning that integrates knowledge and theory learned in the classroom with practical application and skills development in a professional setting. Internships give students the opportunity to gain valuable applied experience and make connections in professional fields they are considering for career paths; and give employers the opportunity to guide and evaluate talent. For more information <http://www.naceweb.org/about-us/advocacy/position-statements/position-statement-us-internships/>.

It is important to understand what the criteria for an experience to be defined as an internship/research experience according to NACE. To ensure that an experience—whether it is a traditional face-to-face experience or one conducted remotely or virtually—is educational, and thus eligible to be considered a legitimate by the NACE definition, all the following criteria must be met:

1. The experience must be an extension of the classroom: a learning experience that provides for applying the knowledge gained in the classroom. It must not be simply to advance the operations of the employer or be the work that a regular employee would routinely perform.

2. The skills or knowledge learned must be transferable to other employment settings.
3. The experience has a defined beginning and end, and a job description with desired qualifications.
4. There are clearly defined learning objectives/goals related to the professional goals of the student's academic coursework.
5. There is supervision by a professional with expertise and educational and/or professional background in the field of the experience.
6. There is routine feedback by the experienced supervisor.
7. There are resources, equipment, and facilities provided by the host employer that support learning objectives/goals.

Required as Part of Learning Contract

Provide / Write a two page (~500 words) (double spaced, 12 pt. font, 1 inch margins) position description that includes an overview of the organization for your NRE 395 experience. Include: Mission/Vision of the Organization, Impact of the Organization (For example: What do they do for the environment?), Approximate Number of Employees, and Organization Website address.

Provide / Write a one-page formal cover letter of application.

Provide / Write a one or two-page resume applying for this experience.

Provide / Write a one-page list of at least three references. This list should include: name of reference, title, organization, how you know them, how long you have known them, email, and phone number.

Required online Preparation (Preferably) Prior to Start of this Experience

In consultation with your faculty advisor, please select from the list below and/or additional online sources of training/content that is appropriate to your experience specifically and related to your chosen ASD/ESEA.

UK Institutional Review Board (IRB) (<https://www.research.uky.edu/office-research-integrity/training-education>)

- UK IRB: Getting Started (YouTube Video)
- What Research Activities Need Institutional Review Board (IRB) Review? (YouTube Video)
- Institutional Review Board (IRB) Review: Research Recruitment and Advertising (YouTube Video)
- Waiver of Informed Consent/Assent Process and Documentation (YouTube Video)
- CITI – Human Subject Protection (HSP) Training for IRB
 - <https://www.research.uky.edu/office-research-integrity/initial-citi-hsp-training-irb-approval-faqs>
 - Initial Human Subject Protection (HSP) Training or the Refresher training for Biomedical or Social/Behavioral Investigators and Key Personnel.
- CITI – Responsible Conduct of Research (RCR) Training
 - <https://www.research.uky.edu/office-research-integrity/initial-citi-hsp-training-irb-approval-faqs>

UK Environmental Health and Safety Class List (<https://ehs.uky.edu/classes/>):

- All-Terrain Vehicle (ATV)
- Advanced Radiation Safety
- Autoclave
- Biological Safety
- Bloodborne Pathogens (General)
- Bloodborne Pathogens (Researchers)
- Chemical Fume Hood
- Chemical Hygiene Plan / Laboratory Safety - General Awareness
- Emergency Eyewash and Shower Station Use and Inspection
- Fire Extinguisher Training
- First Aid
- Hazard Communication
- Hazardous Waste - General
- Heat Stress
- Laboratory Safety for Non-Laboratory Workers
- Office Ergonomics

- Passenger Van Training
- Respirator Use
- Utility Cart Training

Recommended Reading to Review for Implementing Experience Best Practices and Reflection

- Amulya, J. (2011). *What is reflective practice?* Gaithersburg, MD: Community Science - Creating social change with knowledge. Retrieved from <http://www.communityscience.com/images/file/What%20is%20Reflective%20Practice.pdf>
- Dommeier, C. J., Gross, B. L., & Ackerman, D. S. (2016). An exploratory investigation of college students' views of marketing internships. *Journal of Education for Business*, 91(8), 412-419. doi:10.1080/08832323.2016.1251388
- Fredrich, B. (2017). *What are the best practices in overall intern experience among highly desirable internship programs?* Available from Cornell University, ILR School site: <http://digitalcommons.ilr.cornell.edu/student/173>
- Grasgreen, A. (2012). Resume-builder or rip-off? *Insider Higher Ed*. Retrieved from <https://www.insidehighered.com/news/2012/02/03/growth-short-term-internships-over-academic-breaks>
- Silva, E. M., and Muller, G. (2013). Experiential learning through partnership: A case study of collaborative, hands-on program to teach high school students organic farming. *HortTechnology*, 23(3), 376-381.
- Sonti, N. F., Campbell, L. K., Johnson, M. L. & Daftary-Steel, S. (2016). Long-term outcomes of an urban farming internship program. *Journal of Experiential Education*, 39(3), 269-287. doi:10.1178/10538259.6655444

Experience Assignments:

Reflective Essay

You will submit via Canvas a reflective essay of a minimum of 1,200 words on a double-spaced page with 1-inch margins, 12-point Times New Roman font, with headings and sub-heading as appropriate to reflect on your experience. It is reasonable and some would argue even better if you were to space these responses out over the experience duration so that each number item helps the experience to be even more meaningful. So, if you prefer to structure these as formal journal entries with a date as a heading, please feel free to do so.

Your reflective essay will include:

1. Experience introduction: What were your motivations for choosing this location for your experience? What were your expectations going into your experience? What were you most looking forward to learning? (You might want to start this before the experience actually starts and then revise.)
2. Expectations vs. reality: How have your expectations compared with the reality of your work? If there are differences, why do you think that is? What aspects of the online pre-preparation did you find informative relative to your ASD/ESEA?
3. Best and worst: What do you like most about your experience duties and why? What do you like least and why?
4. Course work: What knowledge and skills have you learned in NRES courses that prepared you for this experience? What skills do you wish you had learned in the classroom prior to this experience? What courses are you now looking forward to taking because of this experience?
5. Debrief: What are the three to five most important things you learned during the experience? What are your next steps moving forward (e.g. courses to take, internships or jobs, graduate school to look for)?

Site Evaluation(s)

As part of this experience you will evaluate the site you selected for your out of class experience as well as have your site supervisor evaluate your performance at this site. Both evaluations are available through Canvas.

- Student Evaluation of the Experience Site via Canvas
- Site Supervisor Evaluation of the Student (to be sent directly to Larry Grabau from your site supervisor but you must confirm the receipt of it through Canvas.)

Course Credit

The on-the-job portion of this pre-professional experience is recommended to be a minimum of 150 work hours in order to get an academically meaningful experience. This recommendation is based on literature referenced elsewhere in this syllabus. In addition, students will use this course to gather the materials and experiences in order to complete NRE 400 in a subsequent term. The NRE 400 is the NRES program's Graduate Composition and Communication (GCCR) course as required by the university. The NRE 400 syllabus is available on the NRES website. Unpaid internships with for-profit organizations must meet Department of Labor criteria (<https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/whdfs71.pdf>).

Grading System

Each item below is explained elsewhere in this syllabus.

Grading

<u>Item</u>	<u>Value</u> (points)	<u>Value</u> (percentage)	<u>Grading: Minimum points</u>	
1 credit				
Complete learning contract	100	~14%	A—90%	630
Position description	50	~7%	B—80%	560
Application letter, resume, refs	50	~7%	C—70%	490
Online preparation safety modules	100	~14%	D—60%	420
On-the-job participation	250	~36%	E < 60%	NA
Reflective essay	100	~14%		
Site / Student evaluations	50	~7%		
Total	700	100%		

*Please Note: This syllabus is designed to show how a 1-credit NRE 399 experience would work. If additional credits (up to 3 total) are desired, the additional assignments will be discussed with the student by the faculty advisor and included in the learning contract. It is anticipated that most students would complete a 1-credit experience.

Distance Learning Resources

The Experience Coordinator is available for in-person and well as phone and *virtual* office hours by appointment. The preferred method for reaching the instructor is email or phone with a maximum timeframe for responding to student communications is two business days.

Most of the course work will be expected to be completed on a personal computer and submitted via Canvas while relying on UK Libraries to provide the information infrastructure to support your use of discipline specific information literacy. There are a number of resources that are available to you that you should be aware and know that you can depend on them to support your learning.

Canvas Support Hotline/Chat (<https://uk.instructure.com/>; Click Help Button for 24/7 service)

Information Technology Services (ITS) Customer Service Center (<http://www.uky.edu/UKIT/Help/> and 859-218-HELP).

Distance Learning Programs: <http://www.uky.edu/ukonline/>

UK Libraries – Ask Us - <http://libraries.uky.edu/Ask> for multiple modes to communicate with library staff.

Information on Distance Learning Library Services

- Carla Cantagallo, DL Librarian
- Web: <http://libraries.uky.edu/DLLS>

- Phone: 859 218-1240
- Email: carla@uky.edu
- DL Interlibrary Loan Service: <http://libraries.uky.edu/ILL>

The technological requirements for the course include the use of computer hardware and software that will support the composition (Microsoft Word) and communication (Microsoft PowerPoint) requirements for this course as well as an Internet connection that will allow you to upload and download files to the Canvas learning management system.

The procedure for resolving technical concerns is to use the resources described above. This is in addition to keeping the faculty advisor and course instructor informed of the issues you are having and what you are doing to resolve the issues in a timely fashion most likely through email or phone communication.

Course Policies

Mid-term grades will be posted in myUK by the deadline established in the Academic Calendar (<http://www.uky.edu/registrar/calendar>). There is no final examination for this course.

Excused Absences

Students need to notify the professor of absences prior to class when possible. *Senate Rules 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, (e) interviews for graduate/professional school or full-time employment post-graduation, and (f) 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. Two weeks prior to the absence is reasonable, but should not be given any later. Information regarding major religious holidays may be obtained through the Ombud (859-257-3737, <https://www.uky.edu/ombud/excused-absences>).

In situations where a student’s total EXCUSED absences exceed 1/5 (or 20%) of the class periods scheduled for the semester, students are strongly encouraged to withdraw (take a “W”) from the class as per university policy. If a student has excused absences in excess of one-fifth of the class contact hours for that course, the student shall have the right to receive a ‘W’, or the Instructor of Record may award an ‘I’ for the course if the student declines to receive a ‘W.’

Per *Senate Rule 5.2.4.2*, students missing any graded work due to an excused absence are responsible: for informing the Instructor of Record about their excused absence within one week following the period of the excused absence (except where prior notification is required); and for making up the missed work. The professor must give the student an opportunity to make up the work and/or the exams missed due to an excused absence, and shall do so, if feasible, during the semester in which the absence occurred.

Verification of Absences

Students are 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 when feasible and in no case more than one week after 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.

<https://www.uky.edu/ombud/plagiarism-and-cheating>. Please also see <https://www.uky.edu/ombud/plagiarism-what-it>.

Senate Rules 6.3.1 (see <http://www.uky.edu/Faculty/Senate/> for the current set of *Senate Rules*) 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 a question of plagiarism involving their 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 content from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism.

Plagiarism includes reproducing someone else's work (including, but not limited to a published article, a book, a website, computer code, or a paper from a friend) without clear attribution. 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 or information, the student must carefully acknowledge exactly what, where and how he/she has 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.

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 (DRC). The DRC coordinates campus disability services available to students with disabilities. It is located on the corner of Rose Street and Huguélet Drive in the Multidisciplinary Science Building, Suite 407. You can reach them via phone at (859) 257-2754 and via email at drc@uky.edu. Their web address is <http://www.uky.edu/DisabilityResourceCenter>.

Non-Discrimination Statement and Title IX Information

The University of Kentucky faculty are committed to supporting students and upholding the University's non-discrimination policy. Discrimination is prohibited at UK. If you experience an incident of discrimination, we encourage you to report it to Institutional Equity & Equal Opportunity (IEEO) Office, 13 Main Building, (859) 257-8927.

Acts of Sex- and Gender-Based Discrimination or Interpersonal Violence

If you experience an incident of sex- or gender-based discrimination or interpersonal violence, we encourage you to report it. While you may talk to a faculty member or TA/RA/GA, understand that as a "Responsible Employee" of the University these individuals MUST report any acts of violence (including verbal bullying and

sexual harassment) to the University's Title IX Coordinator in the IEEO Office. If you would like to speak with someone who may be able to afford you confidentiality, the Violence Intervention and Prevention (VIP) program (Frazee Hall – Lower Level; <https://www.uky.edu/vipcenter/>), the Counseling Center (106 Frazee Hall, <https://www.uky.edu/counselingcenter/>), and the University Health Services (<https://ukhealthcare.uky.edu/university-health-service/>) are confidential resources on campus.