

Shawn Alexander: African & African American Studies

The Creation of a Movement: The NAACP in the 1930s

This project will begin the research into the NAACP's activities in the 1930s, the decade that the civil rights organization became the group that is known today. During this decade the Association hired its legal team that would lead the fight to end segregation in education, housing, and lay the foundation for the modern civil rights movement.

For the preliminary research the student will assist in looking through the organizational papers of the NAACP, collect the articles from the group's magazine, *The Crisis* and assist in deciding what the major themes of the decade are in the Association's activity. The other steps/activity I will help develop as we move forward.

Basic computer skills. An active interest in civil rights history, African American history/studies.

Amy Burgin: Kansas Biological Survey, Environmental Studies and Ecology and Evolutionary Biology

Environmental Science Field and Lab Technician

The Burgin Lab focuses on understanding current environmental issues affecting aquatic ecosystems, including nutrient pollution and associated algal blooms (water quality), carbon storage and global warming in wetlands and how microbes drive ecosystem processes. Students working in the lab gain exposure to a wide variety of projects, while focusing their skills on a particular area of interest. More information can be found at: <https://burginlab.wordpress.com/>

Project Overview: We seek assistance from a student in developing a project to measure greenhouse gases and water quality in soils and wetlands. We rely on field sample collection and lab analysis, but also emphasize technologically advanced monitoring options, including sensors (to measure temperature or water quality) and unmanned aerial vehicles (drones) to collect water. We use these methods to understand how water and soil chemistry vary in space and time.

Tasks and Responsibilities: The student will partly work at the KU Field Station collecting water samples from Cross Reservoir for chemical analysis. The student will also assist with analyzing soils from restored wetlands (in KS and OH). Students will also assist with deploying and managing environmental sensors for recording water quality. The student will assist in developing protocols and training materials for analyses.

Qualifications and Characteristics: Curiosity in the environment and interest in learning cutting-edge analytical skills. Ability to communicate clearly and follow instructions; attention to detail, particularly for keeping lab and field notes. Interest in spending time outdoors and collecting water and soil samples. Students interested in combining scientific training with video and website production are particularly encouraged to express interest in this position. While not required for working in the lab, any skills you have pertaining to lifeguarding, boating or outdoor recreation would be helpful. Any skills related to technology, including video or audio production, website development or computer programming, would also be useful in this position. Must be available for at least a 3 hour block within the 8-5 window.

Jennifer Gleason: Ecology and Evolutionary Biology

The Reproductive Biology of an Invasive Species

Zaprionus indianus, a fruit fly native to India and Africa, has invaded the New World and was found in Kansas for the first time in 2012. The species is a pest of figs, causing economic losses. Very little is known about its reproductive biology, but all of our preliminary data indicate that the species has unusual courtship behaviors and egg laying patterns, at least in comparison to its closely related *Drosophila* species. In this project, we will investigate the courtship behaviors and determine the factors that affect male and female fecundity. All of the results have implications for both the evolution of the species and control of the pest.

To investigate the behavioral biology and the reproductive output of the flies, the student will maintain cultures of the flies, sort flies for experiments, and perform experiments. All experiments will involve manipulation of the flies or environmental variables. The student will be completely trained in the lab by lab personnel that have extensive experience raising the flies, thus no prior experience is needed. As the student becomes familiar with the flies and how they behave, there will be opportunities for the student to develop new hypotheses and then design and execute the experiments to test the hypotheses. In addition to specific experiments, the student will be expected to contribute to basic lab maintenance (such as making fly food) as all lab members are required to do.

The ideal student for this project is excited to learn about evolutionary biology and animal behavior. The student will need to have a set schedule each week, though the exact schedule is flexible. The student must be available during regular working hours for at least four two-hour blocks a week, but fewer, longer blocks are good as well. The student must have attention to detail, be organized and be willing to ask questions. The student will need to do some problem solving and troubleshooting because the experiments to be done have never done before. The experiments are not technically difficult, but may require some thought, as well as trial and error, to be executed properly. The student will need to be persistent and not easily discouraged.

This project does not require any field specific knowledge or experience. All that is needed is a willingness to try.

Richard Glor: Ecology and Evolutionary Biology/Biodiversity Institute

Research Assistant

The University of Kansas is an internationally recognized leader in research on reptiles and amphibians. The KU Herpetology Division is home to the 4th largest collection of reptile and amphibian specimens in the United States and a diverse group of more than a dozen active researchers. KU Herpetology conducts research on global reptile and amphibian diversity through a combination of field work and specimen-based research on the KU campus.

Numerous distinct projects related to systematics, evolution, biogeography, genetics, morphology, conservation, ecology, or behavior of reptiles and amphibians will be available to undergraduate researchers. The work required for these projects could range from cataloging biodiversity specimens to acquisition and analysis of genomic sequence data. The student and their potential mentor will work together to choose a project that is most appropriate given the students interests and prior experience.

Entry-level students will generally be expected to assist with inventory, cataloguing and maintenance of biodiversity specimens and associated databases. Students who are successfully trained in these areas will move on to receive training in advanced morphological methods, molecular genetics and related areas.

Students must be available for at least two significant (3+ hour) blocks of time during business hours each week. This position will involve work in a laboratory environment, and therefore requires attention to detail and the ability to learn and follow laboratory safety protocols. Students should also have a strong interest in biology or biodiversity science with an interest in potentially pursuing a career in these fields.

Sarah Gross: Visual Art, Ceramics

Studio Assistant

The project encompasses beginning several artistic inquiries working towards a large solo exhibition. My spatial installation generally uses repetition and modular construction to construct ceramic artwork that references architecture, bricks, and tiles. Components often number in the hundreds and an assistant will learn the skills to see a large-scale project through from research and development to completion and gallery set-up. We will begin with technical material testing including clay and glaze samples, and move through the refinement of the idea and production phase of a piece.

Tasks will begin with mixing clay and glazes, recording and organizing test results such as working properties, texture and color of materials. Depending on the method of production the student will learn various mold-making and casting processes, glazing and/or painting, kiln loading, and will be expected to assist in the packing and shipping of artwork to out-of-state exhibitions. Other tasks will include maintaining an organized workspace and assisting with moving and photographing work. Due to the nature of my work many tasks are repetitive and hands-on. You will get dirty.

Experience is not necessary but this position requires attention to detail, organization, initiative taking, and the ability to remember and follow instructions with great care. Students with an interest in the visual arts and especially ceramics will be given valuable experience that will benefit their pursuit of a serious art career. A regular and reliable schedule is required to fit blocks of time to meet and go over tasks.

Remy Lequesne: Civil, Environmental, and Architectural Engineering

Engineering Research on Reinforced Concrete Structures

Our laboratory is interested in how reinforced concrete (RC) structures respond to a variety of loads. We study ways to make RC structures safer and more efficient. Much of our work is experimental, which means we build structural components (pieces of buildings like beams, and walls) and then load them until failure. By studying the failure, we learn a lot about how to improve the design.

As a member of our team, you would be mostly working in the laboratory with other undergraduate and graduate students. Your responsibilities would include helping to build the formwork, tie reinforcement, and cast concrete, as well as setting up for and helping test the specimens. You could attend our group meetings and help interpret the results.

We are looking for students thinking about studying Civil or Architectural Engineering or that have an interest in structural engineering. Given the type of research we do, experience with construction or tools is great - but absolutely not required. We teach you what you need to know to contribute while also being safe.

Amy Mendenhall: School of Social Welfare

Children's Mental Health in Kansas

In the United States, child and adolescent mental health disorders are a national concern as the Center for Disease Control (2013) estimates nearly 20% of U.S. children and adolescents experience a mental disorder in a given year. In Kansas, 16% of children and adolescents ages 2 through 18 have one or more emotional, behavioral, or developmental conditions. Additionally, researchers estimate almost 80% of children and adolescents 6-17 years of age who are in need of mental health services do not receive it (Kataoka, Zhang, & Wells, 2002). This means that there is a lot more research that needs to be done to understand these issues and what we can do to be sure that all youth receive the care they need.

The project would be a combination of two areas related to children's mental health. First, the research team is working with community mental health centers in Kansas to help them learn and implement a new method for serving youth called the strengths case management model. The strengths model focuses on helping youth identify strengths and resources that they have and utilizing these to achieve life goals while simultaneously working on strategies to reduce mental health symptoms. The student's work on this aspect of the project would center around data collection, organization and analysis. Second, the research team is exploring the impact of mental health literacy (what people know and think about mental illness) on mental illness in youth and on mental health services. The student's work on this aspect of the project would be to support our initial exploration of this area by finding, organizing and summarizing information.

The student will be involved at all levels of the project. Student tasks will include, but not be limited to the following: finding relevant research articles; reading and summarizing research articles; creating a database with relevant articles; transcribing qualitative research interviews; assisting with interview coding; doing quantitative data entry; and assisting in development of model implementation materials. It is not expected that students will have experience in any of these tasks, and so a part of the project will involve learning the necessary skills from the project investigator and project coordinator.

This position would be most ideal for a student who is interested in the field of social work and/or in the area of children's mental health. Additionally, due to the nature of the tasks, the student should be organized, pay close attention to detail, and enjoy writing.

Cecilia Menjivar: Sociology

Depictions of Immigrants and Immigration in the Media: A Comparison of State-Level Contexts

The aim of this project is to analyze how the printed media (e.g., newspapers) depict immigrants and immigration in two states, one (Arizona) that has passed several immigration laws to restrict immigrants' access to social goods and the other (New Mexico) that has not passed similar laws. The states are comparative but differ in some important respects, such as media depictions of immigrants and immigration.

The data for the project consist of 10 years of newspaper articles from the two major newspapers in Arizona and New Mexico, which are being coded for whether they represent immigrants and immigration in a positive, negative, or neutral way. The project primarily codes text but it will also code images and photos. The student would assist in coding articles and images that have appeared in these newspapers during this time period, and would work under the supervision of a doctoral student who is primarily in charge of coding.

The student's responsibilities would be:

- (1) assisting in content coding
- (2) assisting in data management of large amounts of qualitative data.
- (3) transferring clipped articles from the Arizona Republic and Albuquerque Journal into a shared folder or analytical software system. This task would involve downloading each saved PDF individually out of the saved articles.

In sum, the student would be assisting in the creation of a data base for social science research of media and immigration.

The student would need to be very attentive to detail, meticulous and organized. In addition, the student needs to be very responsible and work well with others because a doctoral student as well as a professor are involved in the project. It would be a plus if the student is interested in this topic.

Brad Osborn: School of Music

American Culture Through the Lens of Music Videos, 1990–1994

With my first book on the shelves this fall (*Analyzing Radiohead*, Oxford University Press, 2016), I am starting work straight away on my second book project. This project analyzes a set of 293 music videos, called “Buzz Clips,” that aired on MTV in the 1990s. The student will help me to understand how some cultural changes in America—especially the formation of a new “alternative masculinity” (Schippers)—were portrayed in these music videos. By helping me go through each of these 293 videos to pick out certain recurring themes, the student will actually help determine what sorts of cultural messages were being transmitted in these videos. Whereas the tone of my first book was geared specifically toward music academics, this one will juggle visual analysis, cultural studies, American studies, and only the most universal forms of music analysis to reach a wider audience. My model for this sort of American studies/music analysis crossover is our very own Sherrie Tucker.

This job entails:

- obtaining high-quality video files for all videos in question
- assist in contacting MTV’s archives in New York to assess what resources are available
- help with proofreading grants (NEH summer fellowship, ACLS grants, etc.) for future work on this project

A student working with me in this project will be highly motivated and, just as importantly, highly organized. With 293 videos in the corpus, it is vital that the student possess basic familiarity with spreadsheets (either Excel or Numbers) to help organize the data. In order to assist in gathering materials for research, the student should be a patient reader who can search through potential research sources not just for key words, but for key concepts. Basic library catalog searching skills are vital. The student must also have the patience to watch all of these videos closely in order to spot recurring elements. Excellent written language skills are a must for this project. The student will be available for approximately one hour of meetings each week, and my meeting schedule is flexible. The ideal student would have an interest in either music, American studies, film/media studies, or the broader humanities.

Meagan Patterson: Educational psychology

KU Social Development Lab

The KU Social Development Lab, directed by Educational Psychology faculty member Meagan Patterson, conducts research on various aspects of social development. We are interested in how children develop both inside and outside of educational contexts. General areas of interest include how children and adolescents think about social groups, understanding how experiences with racial and gender diversity influence academic and socio-emotional outcomes, the developmental consequences of prejudice and prejudice awareness, and approaching education and development through a social justice lens. There are typically 3-5 current projects in the lab each semester.

Current projects in the lab address the following research questions:

How do parents talk with their children about important social categories, such as race?

When and how do beliefs about the gender-typing of certain traits emerge?

How do perceptions of discrimination impact youths' civic and political engagement?

Can positive psychological interventions promote a growth mindset in elementary school students?

Can experience with literature promote empathy or influence people's moral reasoning?

Students would be fully supervised by faculty and could develop research ideas in conjunction with current projects.

This position may include interviewing children and their parents for a variety of research projects, most likely studies relating to the development of negotiation skills, political socialization (how children learn about political process from parents, teachers, and other adults), and racial socialization (how parents talk to their children about race and racial bias). The position may also include entering data (typing responses from interviews into a computer data file) and coding data (reviewing interview transcripts and classifying responses into categories).

Required qualifications for this position include interest in working with children and strong organizational and communication skills. Preferred qualifications include prior experience working with children and an interest in psychology or education. Availability in the late afternoon hours (approximately 2-6 pm) on some weekdays (2 days per week, days flexible) is required, since interviews will take place at after-school care sites. Research assistants will also be expected to attend monthly meetings with the research team and weekly meetings with the faculty supervisor. Access to a car is desirable but not required.

Holly Storkel: Department of Speech-Language-Hearing

Kindergarten Children Acquiring Words through STORYbook Reading (KAW STORY)

The KAW STORY program is a research project on interactive book reading conducted by the Word and Sound Learning Lab, supported by the Department of Speech-Language-Hearing. Interactive book reading has been shown to be an effective way to teach new words to kindergarten children. The purpose of our current project is to find out how effective this method is when it is used to treat kindergarten children with language impairment who have difficulty learning words. The student will assist the project through a variety of tasks in preparing and conducting clinical trials involving evaluation and treatment of children with language impairment, and scoring and managing the test results and data.

The student will be assigned a variety of tasks for different phases of data collection:

1. Assisting project coordinator and graduate research assistants in preparation of recruitment and data collection materials such as photocopying and assembling forms, making files, etc.
2. Assisting project coordinator with the organization of office supplies and data collection materials
3. Administering standardized clinical tests and vocabulary treatment to kindergarten children with specific language impairment (SLI)
4. Collecting data for treatment progress (outcome measures) from kindergarten children with specific language impairment (SLI)
5. Scoring of standardized clinical tests and outcome measures
6. Entering data into a database

We are looking for a student who

1. Is highly organized with strong attention to detail
2. Is able to work 2-3 hour block at a time
3. Is able to attend a weekly lab meeting if possible
4. Has basic knowledge of Microsoft Word and Excel
5. Has experience/is interested in working with young children
6. Access to a car is desirable but not required

George Tsoflias: Geology

Kansas earthquakes

When we think of earthquakes we think of California. However, in the last five years we have seen a large increase in the number of earthquakes occurring in Kansas and Oklahoma. We believe that wastewater produced in oilfields that is subsequently injected underground can cause earthquakes. In this project we use a network of seismic sensors installed at Wellington (south central Kansas) to detect earthquakes, pinpoint their location and measure their magnitude.

Understanding better how those earthquakes occur can help us manage the potential for damages caused to property and danger to human life.

No prior knowledge in earthquake research is needed. The student will work in a team with undergraduate and graduate students (2 or 3) and will learn the methods we use to analyze data for detection of earthquakes. The data is in digital form and it is handled by computer. Typical tasks involve downloading data from the network, reformatting data and reading it into the software for analysis, visual observation of the data, identification of earthquakes, analysis of earthquakes for determination of location and magnitude. In addition, we conduct monthly visits to the network at Wellington KS for routine maintenance. The student applicant will be involved in all aspects of the research as the other team members. Students spend most of their time at Moore Hall, Kansas Geological Survey, on West Campus.

Interest in physical sciences and curiosity on how natural processes work and affect our lives. Detail oriented and organized. Ability to work well with others. This is a team project and our work depends on the work of others. Reliable, responsible and able to complete tasks within the timeframe agreed. Work hours are flexible, but overlap with other students is essential for communication and training.

Lorie Vanchena: Germanic Languages & Literatures (project also under auspices of European Studies Program)

World War I American Immigrant Poetry

This Digital Humanities project seeks to collect and make accessible in digitized form poems written by immigrants in the U.S. during the World War I era. We identify poems in archival materials on campus and in print publications and online sources. We then transcribe and encode the poems using XML mark-up language, a process that entails typing a poem text into a template using an XML editor, thus rendering the texts machine-readable. The XML files will eventually be styled for display on a website for use by scholars who want to conduct data analysis. We are also transforming the encoded poems into human-readable files for deposit into KU ScholarWorks, so that teachers, for example, can download poems for classroom use. All poems will be annotated. In spring 2017 we plan to create a website while continuing to expand the database. The Emerging Scholar will learn a range of research and digital humanities skills during the academic year and contribute to different aspects of the project. The student will also perform tasks to support the faculty mentor's work on scholarly articles related to WWI poetry.

The Emerging Scholar will complete the following tasks, listed in order of increasing difficulty and responsibility, during the academic year:

1. Read selected print and online sources to acquire an introduction to the history and culture of the World War I era
2. Learn how to work with 100-year-old archival materials
3. Scan, print, and organize project materials
4. Conduct searches using the KU Libraries catalog and online databases to identify sources of immigrant poetry
5. Complete tasks to support faculty mentor's work on project-related scholarly articles (identify and download online articles, scan materials, assist with the bibliography, for example)
6. Proofread encoded poems
7. Learn and use Digital Humanities skills such as encoding poems using the oXygen XML editor
8. Learn and use best practices for naming, organizing, and backing up encoded and scanned files
9. Possibly assist with the creation of a website in spring

Preferences:

1. Willingness to collaborate productively with team members (undergraduates and faculty mentor)
2. Ability to complete tasks independently
3. Availability for mandatory team time at the Max Kade Center, preferably one 3- to 4-hour session each week, as well as shorter sessions with 1-2 other team members (schedule depends on students' schedules and will be determined prior to start of semester).
4. Curiosity about the First World War and the poetry it generated, the immigrant experience, and Digital Humanities
5. Strong computer skills and an aptitude for learning new computer skills such as encoding with oXygen Editor and possibly web design
6. Reading knowledge of a European language preferred