Fall 2019
Undergraduate Research Apprenticeship Positions

-AREAS/CONCENTRATIONS FOR RESEARCH-

Archaeology
Bioarchaeology
Environmental Social Science
Evolutionary Anthropology
Global Health
Hydrological and Climate Modeling
Linguistics
Museum Studies
Religious Studies
Sociocultural Anthropology

Students should be certain to review all positions as many opportunities are combined with one or more other concentrations or disciplines.

Highlighted positions can be completed remotely and by online students.
**Research Project or Internship Title:**
Anthropology Collections Practicum Research Apprenticeship

**Academic Discipline:**
Archaeology  
Bioarchaeology  
Museums  
Anthropology  
Sociocultural Anthropology

**Project Description:**
This hands-on internship is ideal for students who are interested in the possibility of working in museums and those who would like to gain experience with material culture collections (ethnographic, archaeological, physical anthropological, and archival). Interns will learn standard museum collections practices relating to the research, cataloging, and care of anthropological artifacts by working with the anthropology collections curated at ASU.

Most of the anthropological collections at ASU are curated by the Center for Archaeology and Society Repository and include material from the subdisciplines of archaeology, physical anthropology, and sociocultural anthropology. The majority of the collections are archaeological and were acquired in the course of systematic research at thousands of sites, primarily from Arizona and the Southwest.

**Student's Duties:**
Students will be working closely with faculty, graduate, and advanced undergraduate supervisors in assisting with care and curation of Anthropology Collections. Please indicate your areas of interest on your application (you may choose more than one).

1) If students are interested in working with archaeological collections, they will gain experience with a variety of ceramics, lithics, groundstone, and ornaments recovered from archaeological excavations. These projects have associated archives including field notes, laboratory analyses, photographs, maps, and reports. The students will help to create permanent records in the catalog database. To do this they will learn how to catalog, categorize and describe artifacts, label, and photograph artifacts and objects. Transitioning artifacts to archival packing and preparing appropriate curation spaces are part of the activities.

2) If students are interested in working with physical anthropology collections*, they will gain experience with a variety of materials and will learn about these collections, the archaeological excavation collections that recovered these, and appropriate care and documentation for the collections. They will learn identification and documentation procedures while assisting with preparing and verifying the research catalog records. Transitioning collections into appropriate archival packing and storage materials will be included in these activities. *Osteology course preferred.

3) If students are interested in working with ethnographic, or archival records, they will gain experience with professional and research materials related to projects and collections. Students will learn the basic principles of sorting, inventoriting, arranging, describing, preserving, and re-housing historical and archival materials.

**Required Qualifications or Pre-requisites:**
There are no pre-requisites for this internship. This internship is ideal for students looking for ways to gain more experience in the field of anthropology through experience with material culture collections.
We are looking for students with the following personal qualities: punctuality, ability to commit to and keep a regular schedule, attention to detail in record keeping, a sense of curiosity, and a desire to learn.

Recommended qualifications: Strong writing and research skills, experience using Excel spreadsheets, and the ability to work with a team are highly recommended. If you have some skills in photography or previous experience in a museum or museum-like setting, or data entry, record keeping, be sure to mention that in your application.

**Project/Internship Location:**
SHESC curates Anthropology collections in three different buildings. A variety of collections are curated at each location and internship opportunities provide experience with a variety of materials. > Center for Archaeology and Society Repository (Alameda Building), 734 W. Alameda, Suite 120, Tempe, AZ 85282. Free parking available. Students should allow time in their schedules to get back and forth between CASR and campus for classes.

**Hours Per Week or Days and Times Needed:**
You can receive academic credit for this internship. If you can commit to 6 hours a week you will receive 2 credits; if you can commit to 9 hours a week you can receive 3 credits. You must commit to at least 6 hours a week to qualify for this internship. Acceptance of an applicant is also based on schedule coordination. Be sure to specify your days and hours of availability in your application. [M-F, 8-5, no evening hours, no weekend hours.]

**Project Supervisor:**
Melissa Powell

**Supervising Faculty:**
Melissa S. Powell, Ph.D., Assistant Research Professor/ Curator of Collections

**Contact Information:**
[melissa.powell@asu.edu](mailto:melissa.powell@asu.edu)
480-965-6957
Center for Archaeology and Society Repository, 734 W. Alameda Drive, Suite 120, Tempe AZ 85282
**Research project or internship title:**
Archaeology of Pilgrimage

**Academic discipline:**
Archaeology
Religious studies

**Project description:**
The History of the Archaeology of Pilgrimage around the globe.

**Student's duties:**
Collect published sources and bibliographies on the archaeology of pilgrimage. Assess trends in the methodologies and interpretations in pilgrimage archaeology.

**Required qualifications or pre-requisites:**
None

**Project/internship location:**
SHESC 226

**Hours per week or days and times needed:**
6-12 hours per week.

**Project supervisor:**
Joel Palka

**Supervising faculty:**
Joel Palka

**Contact information:**
Joel.Palka@asu.edu
Research project or internship title:  
**ASU ADVANCE: Equity among Faculty**

Academic discipline:  
Global Health  
Sociocultural Anthropology

Project description:  
ASU ADVANCE is a social science project that examines how ASU's explicitly interdisciplinary environment affects the academic life course of faculty. We are particularly interested in how diverse faculty members build their careers in this context.

Student’s duties:  
• Assisting research associate with transcribing recorded faculty interviews on the interaction of interdisciplinarity and intersectionality in their careers.  
• Assisting research associate with collecting and entering data about faculty, using the academic curriculum vitae in particular.  
• Attending and contributing to research design meetings to ensure program goals are being met

Required qualifications or pre-requisites:  
• Familiarity with Microsoft Suite, especially Word and Excel  
• Ability to work with minimal supervision  
• Working knowledge of Google Drive

Project/internship location:  
Matthews Center, 203WF, flexible

Hours per week or days and times needed:  
Flexible; most work can occur on your own time.

Project supervisor:  
J. Nalubega Ross

Supervising faculty:  
Monica Gaughan

Contact information:  
Dr. Monica Gaughan  
School of Human Evolution and Social Change (SHESC)  
Mail Code: 2402  
Phone: 480-727-9973
Research project or internship title:
Article Digital Archive Project

Academic discipline:
Physical Anthropology

Project description:
Digitize printed journal articles to an online database system via scan and citation processes.

Student's duties:
Organize printed physical anthropology articles by subject type, scan and categorize articles to a searchable online database system, and reduce the number of printed article copies to 3 or less.

Required qualifications or pre-requisites:
Familiar with Physical Anthropology subjects, must be detail-oriented, highly organized, trainable on the online digital database Bookends, and works well in a team atmosphere (collaborative, receptive to team suggestions, can communicate ongoing project objectives).

Project/internship location:
Institute of Human Origins, SS103

Hours per week or days and times needed:
6 hours per week. A permanent schedule will be created and adhered to throughout the semester once student and project needs are addressed.

Project supervisor:
Dr. Bill Kimbel, IHO Director

Back up supervisors:
Lindsay Mullen, Program Manager
Julie Russ, Assistant Director

Supervising faculty:
Dr. Bill Kimbel

Contact information:
Lindsay Mullen
Email: llmullen@asu.edu
Research project or internship title:  
Chronological trends in Neanderthal stone tool use at Tabun Cave, Israel

Academic discipline:  
Archaeology  
Evolutionary Anthropology

Project description:  
A major debate in paleoanthropology is centered on the similarities and differences between Neanderthals and *Homo sapiens*. In particular, why did Neanderthals go extinct and *Homo sapiens* inhabit most of the earth? Many arguments for their extinction have been made that include biological, behavioral, ecological, and cultural differences between these two hominins. One way archaeologists can better understand hominin behavior is through stone tool function. Stone tools are the primary way in which hominins interacted with the landscape for over 3 million years. The goal of this research is to investigate Neanderthal stone tool use over time at Tabun Cave, Israel using the edge damage distribution method (Schoville, 2010). This project will focus on analyzing Levallois points and blades from three technological facies: Tabun B, C, and D. Tabun Cave is an important archaeological site to address behavioral differences between Neanderthals and *Homo sapiens* because both of these hominins inhabited the Near East during similar time periods. Further, it has a long, diachronic archaeological and paleoanthropological sequence. The results of this research have implications for Neanderthal technological behavior and stone tool use over time. Additionally, it can shed light on the validity of the Tabun technological facies concept from a functional perspective.

Student's duties:  
- Utilize ArcMap to georeferenced images of Levallois points  
- Create shapefiles of each Levallois point  
- Maintain an organized spreadsheet

Required qualifications or pre-requisites:  
None - all skills will be taught in the lab; however, previous GIS experience is a plus.

Project/internship location:  
SHESC Building/ASU Tempe Campus

Hours per week or days and times needed:  
Minimum of 3 hours per week.

Project supervisor:  
John Murray

Supervising faculty:  
Curtis Marean

Contact information:  
johnkurtmurray@asu.edu
Research Project or Internship Title:  
Citizen Sociolinguistics: Piloting a novel methodology for capturing naturally occurring instances of small talk

Academic discipline:  
Sociocultural Anthropology  
Linguistics/Linguistic Anthropology

Project description:  
Data Collection  
We are testing a language data collection method that requires students to document natural instances of conversation that they overhear in public settings. Students will be assigned short language phrases (or words) to collect over a 4-6 week period of time.

First, students will need to do CITI (Human Subjects) training and receive their certificate (the class will provide all materials for this).

Second, students will do background reading on this particular method of data collection. Third, students will do background reading on the particular kinds of language/phrases we are targeting. Fourth, students will collect data for the majority of the semester/session, doing data entry and checks along the way.

Required qualifications or pre-requisites:  
Current ASU student.  
Access to a smart device (e.g., cell phone or tablet) for data entry.  
Access to a computer for course materials.

Project/internship location:  
Online students

Hours per week or days and times needed:  
Depending on units requested.

Project supervisor:  
Cindi SturtzSreetharan

Supervising faculty:  
Cindi SturtzSreetharan

Contact information:  
csturtzs@asu.edu
**Research Project or Internship Title:**  
Communications Intern

**Project Description:**  
This internship will involve providing support for the School of Human Evolution and Social Change Marketing and Communications team, with a primary focus on generating student-centric (including perspective, current and alumni) content and engagement strategies across school social media accounts (Instagram, Facebook, Twitter, YouTube).

The role is also expected to contribute to multiple other efforts and communication mediums, including articles and profiles, emails, website content, photos and video, graphic design, events and other general marketing support.

This internship is unpaid but qualifies for ASU’s ASB 484 Credit for the semester in which the internship will take place. Credit hours to be determined by a research contract between the student and SHESC and relate to the number of hours per week.

**Essential Duties:**  
- Pitches, researches and creates consistent content and photography (and/or videography) for social media (multiple posts per channel, per week), including a focus on student experience content for Instagram.  
- Interfaces with staff, faculty and students to identify positive data points and write ups on in-depth student and alumni success stories in different mediums.  
- Helps create, organize and send the school’s email newsletter and other mass communications.  
- Helps manage, edit and improve the school’s website content.  
- Assists with additional marketing communications projects as assigned.

**Desired Qualifications:**  
Skilled in effective verbal and written communication. Experience with AP style a plus.  
Skilled in social media platforms, trends, best practices.  
Able to handle changing priorities and multiple, tight deadlines.  
Able to make good decisions that align with ASU and SHESC brand guidelines and identify/ up-channel important communication and issues.  
Experience with photography or videography.  

In your application, a resume must be included. Resumes should clearly illustrate how prior knowledge and experience meets the Minimum and Desired qualifications of this position. Candidates are encouraged to include any relevant work or school samples (links or attachments) with their application.

**Project/internship location:**  
School of Human Evolution and Social Change, 900 S. Cady Mall, Tempe, AZ 85281

**Hours per week or days and times needed:**  
Part-Time

**Project Supervisor:**  
Aaron Pugh

**Contact Information:**  
Aaron.Pugh@asu.edu
Research Project or Internship Title:
Culture, Health, and Environment Laboratory Intern

Academic Discipline:
Global Health
Sociocultural Anthropology

Project Description:
The Culture, Health, and Environment Laboratory (CHEL) has several ongoing projects each semester that combine methods and theory from anthropology, public/global health, and sustainability. Primarily, our work focuses on the Global Ethnohydrology Study (GES), a transdisciplinary, multi-year, multi-site research project that examines cross-cultural perceptions of water issues in the context of globalization, urbanization, and climate change. Our work this semester will primarily focus on water sharing as a form of disaster response. CHEL’s internship program operates each semester with approximately 15 undergraduate interns who work collaboratively with each other and graduate students in data management, analysis, and tool design. The program is designed to encourage students to return in subsequent semesters to develop more advanced research skills.

Student’s Duties:
As a result of our many projects, students’ duties will vary. Each student will likely participate on more than one project within the lab. First time interns will begin with data entry and data quality management of the 2018 GES. Returning interns will be working on qualitative data coding of GES surveys. Other duties and projects may develop throughout the semester.

Required Qualifications or Pre-requisites:
There are no requirements or pre-reqs; we welcome interns at all stages of undergrad study. *Please indicate if you are fluent in languages other than English on your application. *Please indicate if you have any experience with analytic software (e.g., R, SPSS, SAS, MAXQDA, NVivo, UCInet) ** Please indicate if you are a returning intern on your application

Project/Internship Location:
SHESC 265

Hours Per Week or Days and Times Needed:
3 hours per week minimum (preferably in one time block). Exact times will be set around selected Interns.

Project Supervisor:
Charlayne Mitchell

Supervising Faculty:
Amber Wutich and Alexandra Brewis

Contact Information:
cfmitche@asu.edu
**Research Project or Internship Title:**
Cutmarks and Hominin Diet: Developing a statistical model for identifying bone surface modification in archaeological samples.

**Academic Discipline:**
Archaeology

**Project description:**
In the study of human evolution, one critical area of research by anthropologists involves examining the shift in hominin diets to include significant amounts of meat. This shift likely fueled the evolution of larger brains and other adaptations widely considered unique to modern humans. Determination of the spatiotemporal context of this shift rests on accurate identification of fossil bone surface modifications (BSM), such as stone tool butchery marks. The criteria used to identify hominin-made traces on bone surfaces are hotly debated. We are developing an objective statistical approach, a Bayesian model, using experimentally generated BSM. In order to do this, bone surface modifications generated through experimental stone-tool butchery, crocodile feeding, and ungulate trampling will be scanned using a 3D optical scanner, and resulting BSM spatial data will be modeled using Bayesian probability theory. The undergraduate apprentice will be an integral part of the data preparation in this study, participating in the coding and 3D scanning of sample materials.

**Student's duties:**
Duties include assisting in conducting experimental butchery and trampling experiments and 3D scanning of cut marks on the surface of animal bone using Keyence VR3200 3D Optical scanner.

**Required qualifications or pre-requisites:**
None

**Project/internship location:**
SHESC 158

**Hours per week or days and times needed:**
10 hours a week.

**Project supervisor:**
Jacob Harris

**Supervising faculty:**
Curtis Marean

**Contact information:**
Jacob.A.Harris@asu.edu
**Research Project or Internship Title:**
Global Impact Collaboratory Intern

**Academic Discipline:**
Global Health
Sociocultural Anthropology

**Project Description:**
The Global Impact Collaboratory (GIC) partners with international development organizations to figure out how we know when development projects are actually “working” from the perspectives of the people on the ground they are meant to be helping. The GIC has implemented signature projects that feature the innovative application of social research methods for monitoring, evaluation, and learning of projects across a range of topical areas. We endeavor to provide the world’s best learning laboratory for training the next generation of development practitioners. We are looking for undergraduate research interns for two projects:

1. To code qualitative interview and focus group discussion transcripts for our signature programs. There may be opportunity to work on future research within the Global Impact Collaboratory or in an allied research group after completion.

2. To conduct quantitative research based on clinic records and surveys in a community-based participatory research study on Prenatal Care Utilization in partnership with the Refugee Women’s Health Clinic.

**Student’s Duties:**
(1) Interns will be trained on qualitative data analysis methods and the coding software MAXQDA. Interns will be expected to reach proficiency in coding and then go on to independently code transcripts of interviews and/or focus group discussions. Other duties and projects may develop throughout the semester.

(2) Interns will be trained to work with electronic health information systems EPIC and ChartMaxx in data abstraction. Interns will be expected to independently enter data from medical records into a survey format for a prenatal care utilization and breastfeeding study and quantitative analysis. Interns will be trained in quality control and quantitative analysis. Other duties and projects may develop throughout the semester.

**Required Qualifications or Pre-requisites:**
None
Preferred: SSH/ASB 100: Introduction to Global Health or ASB 102: Introduction to Sociocultural Anthropology
- Please indicate if you are fluent in languages other than English on your application.
- Please indicate if you have worked in the Culture, Environment, and Health Lab or qualitative data analysis
- Please indicate if you have worked in medical records, or quantitative data entry or analysis in your application.

**Project/Internship Location:**
SHESC 265

**Hours Per Week or Days and Times Needed:**
9 hours per week
(1) During SHESC operational hours (8am – 5pm) for lab access
(2) May be more flexible times and locations

Project Supervisor:
N/A

Supervising Faculty:
Dr. Roseanne Schuster

Contact Information:
roseanne.schuster@asu.edu
Research project or internship title:
Global Inequalities and Health

Academic discipline:
Global Health
Social Anthropology

Project description:
This project explores how various forms of social and economic inequality around the world shape health risks and create health disparities. A major focus of the project this year is to characterize ethnic and caste disparities across a range of low-income countries and analyzing the consequences of such disparities for health and well-being in diverse contexts.

Student's duties:
Weekly attendance at one-hour lab meetings. Completion of weekly lab activities and preparation for lab meetings (2-3 hours + 1 hour lab meeting). In the project, apprentices will gain experience in developing a codebook on worldwide ethnic disparities and finding information on ethnic inequalities in low- and middle-income countries around the world. It also will involve using excel and analysis software to analyze relationships between ethnic inequalities and health.

Required qualifications or pre-requisites:
We are seeking motivated and meticulous apprentices who can work both independently and in a team.

Project/internship location:
MCENT 203N

Hours per week or days and times needed:
3-4 hr

Project supervisor:
Dr. Daniel Hruschka

Supervising faculty:
Dr. Daniel Hruschka

Contact information:
dhruschk@asu.edu
Research project or internship title:
Heat treatment strategies in the production of stone tool technology

Academic discipline:
Archaeology
Evolutionary Anthropology

Project description:
The heat treatment of stone to enhance flaking attributes was an important advance in the adaptive toolkit of humans and a major step in pyrotechnology. The earliest evidence for this is the heat treatment of silcrete ~164 ka at the Middle Stone Age site, Pinnacle Point 13B in South Africa. Recently, our research team has developed a new method to identify heat treated stone tools using 3D microscopy and silicon peels that record roughness measurements from the surface of artifacts. Currently, the origin and complexity of heat treatment technology is debated and its role in the production of specific stone tool technologies is little understood. This research focuses on determining which stone tool technologies are being heat treated prior to production and how this technological strategy varies over the MIS 5 to MIS 4 transition in South Africa. In order to accomplish this, we will be applying our new method to a range of stone tool technologies that includes cores, flakes, backed pieces, and microblades. We will utilize a Keyence VR3200 to scan silicon peels taken from the surface of artifacts from the site of Pinnacle Point 5-6. Our results will have implications for hominin technological strategies during the MIS5/4 transition and the role heat treatment may have played in the production of formal toolkits.

Student's duties:
- Utilize a 3D microscope to scan replica stone tool surfaces
- Maintain an organized spreadsheet

Required qualifications or pre-requisites:
None - all skills will be taught in the lab.

Project/internship location:
SHESC Building/ASU Tempe Campus

Hours per week or days and times needed:
Minimum of 3 hours per week.

Project supervisor:
John Murray

Supervising faculty:
Curtis Marean

Contact information:
jkmurra5@asu.edu
Research project or internship title: Managing Boom-Bust Cycle of Fracking in Appalachia

Academic discipline: Environmental Social Science

Project description: Appalachia has faced economic stress for decades, if not centuries. Beginning around 2010, hydraulic fracturing, otherwise known as fracking, became economically viable due to natural gas prices and technological advances in Ohio, West Virginia, and Pennsylvania. Since that time numerous counties have experienced tremendous fracking activity, but it is unclear how or whether these communities will be able to leverage the fracking boom to create more sustainable futures.

Student's duties: The student will work with an interdisciplinary team to generate literature reviews, analyze data, and present results for professional and community audiences. The student will assist in interview transcription and coding.

Required qualifications or pre-requisites: None

Project/internship location: SHESC 265 or online

Hours per week or days and times needed: 3-6 hours per week

Project supervisor: Abigail York

Supervising faculty: Abigail York

Contact information: Abigail.York@asu.edu
**Research Project or Internship Title:**
Population specific patterns of genetic integration of the human dentition

**Academic discipline:**
Bioarchaeology

**Project description:**
The project uses 3D scans of dental arcades to infer patterns of genetic integration and heritability for human dental measurements and morphological data types. The ultimate goal is to provide a quantitative genetic foundation to studies that use human dentition as an evolutionary proxy.

**Student's duties:**
Scanning and photographing cast specimens, data extraction from 3D models, web design and implementation.

**Required qualifications or pre-requisites:**
Experience with dental anatomy a plus.

**Project/internship location:**
SHESC 302

**Hours per week or days and times needed:**
Variable

**Project supervisor:**
Chris Stojanowski

**Supervising faculty:**
Chris Stojanowski

**Contact information:**
cstojano@asu.edu
Research project or internship title: Predictive modeling of isotope and abiotic variables for understanding human adaptations to environmental change

Academic discipline:
Archaeology
Global Health
Bioarchaeology
Hydrological and Climate Modeling/ GIS/ Remote Sensing

Project description:
The APU (Andean Paleomobility Unification) Project is a two-year examination of isotopic values and environmental conditions throughout the complex hydro-geological systems of the Andes. Baseline isotopic values of strontium and oxygen are being compiled for water, soils, flora, and fauna in the natural environment and from cultural features such as puquios (wells) to develop predictive isoscape models that will allow us to probabilistically assign archaeological skeletons or artifacts to likely places of origin. In addition to facilitating sample geolocation, the isotope data will be used in conjunction with climate and paleoclimate data to understand how prehistoric Andean societies adapted to periods of intense flood and drought cycles that may have impacted their water and food security.

The project has several components: 1) meta-analysis/ mapping all bioarchaeological and environmental isotope data in the region (focusing on the oxygen isotope system and the water cycle in the fall of 2019); 2) pulling field data from summer 2019 collaborators into the database; and 3) isotopic analysis of summer 2019 field baseline data in the ACL and Keck Labs. In year 2, we will be creating isoscapes for the strontium and oxygen isotope systems based on the new baseline data points and sharing those with the public and in peer-reviewed journals. This project is a collaboration between the Archaeological Chemistry Laboratory and PI Beth K. Scaffidi, pursuant to support from the National Science Foundation.

Student’s duties:
The project needs 2-3 students with some experience in GIS or remote sensing to assist with data compilation, hydrological and ecosystem modeling, and geostatistical modeling. The APU project maintains raster and vector data on elevation and environmental variables in the Peruvian Andes, which now needs to be scaled up to include the entire range, at various spatial resolutions. The project has recently been granted access to 10,000 km2 of high-resolution time-series RGB/ NIR data through the Planet’s Research and Educational Program, and the apprentice will be assisting with data organization, procurement, and pre-processing of this and other new data sources. Students will also be plotting isotope data and x, y coordinates from publications within and beyond anthropological sources. They will also help with testing the field data collection app and gain some experience in preparing and analyzing isotope samples, if desired. Finally, there will be opportunities for presenting research results at conferences, assisting with peer-review journal submissions, and field data collection during the summer 2020 season.

Required qualifications or pre-requisites:
Students should have a working knowledge of GIS and/or Remote Sensing principles, either in QGIS, ESRI (ArcMap, etc.), ENVI or similar software packages, gained either through an introduction to GIS class or through intensive field or lab work. Beth Scaffidi has taught several Intro to GIS classes and will be training students on advanced methods, but students should know enough fundamentals of GIS/ RS to be able to work independently if needed.

Students should have a broad interest in understanding how societies adapt to challenging environments, and how changing climates can impact social structure, cultural practices, migration, and health. Students are encouraged to apply their own expertise and interests to the project, so students
with prior coursework in hydrology, geosciences, biogeochemistry, climate change, ecology, global health, and computer-based modeling would be particularly well-suited to maximize the experience.

**Project/internship location:**
SHESC building, office 318/ Archaeological Chemistry Lab. After the assignments have been explained, apprentices can complete the work from other locations.

**Hours per week or days and times needed:**
5+ hours/week, at least 3 of which must be in-person at SHESC. Additional hours can be completed from other campus locations or times as appropriate.

**Project supervisor:**
Beth K. Scaffidi

**Supervising faculty:**
Kelly Knudson

**Contact information:**
beth.scaffidi@asu.edu
**Research Project or Internship Title:**
Research on Teotihuacan as an Ancient City

**Academic Discipline:**
Archaeology
Museum Studies

**Project Description:**
Teotihuacan was one of the largest ancient cities in the New World, and there is a long tradition of ASU research there (including an on-site lab holding collections from over 40 field projects). One of the initial projects in the 1960s, the Teotihuacan Mapping Project, recorded the locations of thousands of structures and made systematic collections of artifacts from each one. For whatever reason, this project left many of the analyses unfinished. We are completing data entry for several types of data that were recorded on paper forms but never entered into a computer format (including ground stone analyses, figurines and jewelry production), updating GIS files, and creating literature reviews of past work on particular artifact types. These studies are revealing important new information about life at the ancient city of Teotihuacan.

**Student’s Duties:**
Students will do both general data entry and data-checking, and background research on a related topic. Students will be expected to complete data entry into computer databases, and to scan paper forms to pdf. Students may also perform basic analyses of the artifact categories that they are most interested in, such as GIS mapping the spatial distributions of artifact classes, and checking whether artifact classes are correlated with ceramics from specific time periods, or with particular types of buildings. Once familiar with the site and datasets, students may develop individual research projects.

**Required Qualifications or Pre-requisites:**
Completion of or current enrollment in ASB 222 or 223 (or a higher-level archaeology class) required. Previous experience with Access or other database programs, experience with GIS programs, computer graphics, completion of ASB 337, and the ability to read Spanish are not required. However, they are considered pluses and should be noted on your application.

**Project/Internship Location:**
SHESC 104 - Mesoamerican Archaeology Lab

**Hours Per Week or Days and Times Needed:**
3-9 hours/week, days and time flexible

**Project Supervisor:**
Dr. Michael E. Smith

**Supervising Faculty:**
Dr. Michael E. Smith

**Contact Information:**
mesmith9@asu.edu
Research project or internship title:
ARC-NAV: Arctic Robust Communities-Navigating Adaptation to Variability

Academic discipline:
Environmental Social Science

Project description:

The Arctic is warming on average twice as rapidly as the rest of the planet, which is leading to significant changes in sea ice to which local communities must respond. Beringia, a region of the Arctic encompassing US and Russian territory, is expected to experience some of the highest variability in sea ice conditions in the coming century. This project focuses on the question: how do we design better and more flexible governance and infrastructure to adapt to changing Arctic conditions? To answer this question, the team is taking a convergence approach to forecast potential changes in the Arctic sea ice environment and the impacts on social and ecological systems resulting from those changes and identify adaptive strategies to enhance resilience to those impacts. The project fully engages local and Indigenous communities and decision makers in the Arctic throughout the research process to generate information and models about critical hot spots of sea ice change relevant to local communities. This will help build local and regional governance capacity and allow the researchers to model and predict the robustness of communities to forecast changes.

Coproduction of knowledge between local and Indigenous communities and scientists and across US-Russia borders and disciplinary boundaries will be used to address four key research questions: 1) How do people understand and perceive changing sea ice, and how do they adapt to variability in ice conditions? 2) Where are the current critical hot spots of variability in sea ice, and where will they be in the future as the environment and communities change? 3) How will governmental and non-governmental organizations in the region navigate changing sea ice conditions and interact with communities to respond to their changing needs? and 4) What features of the existing, and potential, social-ecological systems are robust/fragile to forecast changes in sea ice? This project will document diverse narratives and critical policy challenges around biogeophysical changes and associated livelihood and economic opportunities/costs between and within communities through grounded ethnography and cultural consensus analysis. Satellite data will be used to highlight “hot spots” of sea ice variability and provide a starting point for community and stakeholders’ discussions of “change”. Interviews with governance actors will identify priorities and responses and generate spatially explicit policy networks. A multi-agent model will link these analyses and be utilized to explore the diversity of issues, projections of change, and fragility or robustness of communities and the infrastructure systems they rely on. Through this research, the project will derive new understandings of community and institutional responses to change, the impacts of spatial and temporal variability within a trend, and robustness-fragility trade-offs that can be applied to other regions as they navigate transitions around the globe in the Anthropocene.

Student’s duties:
The student will work with an interdisciplinary team to generate literature reviews, analyze data, and present results for professional and community audiences.

Required qualifications or pre-requisites:
None
Project/internship location:
SHESC 265 or online

Hours per week or days and times needed:
3-6 hours per week

Project supervisor:
Abigail York

Supervising faculty:
Abigail York

Contact information:
Abigail.york@asu.edu
Research Project or Internship Title:
Ancient Tuberculosis Evolution in the Americas

Academic Discipline:
Bioarchaeology
Evolutionary Anthropology
Molecular Anthropology
Anthropological Genetics

Project Description:
Tuberculosis (TB) is a re-emerging infectious disease that has infected humans for thousands of years. This project entails extracting ancient TB-causing pathogen DNA from archaeological skeletal remains. Extracts will be screened for TB and positive samples will undergo whole-genome sequencing. The resulting data will be analyzed to understand how the ancient strains are related to modern strains.

Student's Duties:
The student will complete "DNA Bootcamp" in Dr. Anne Stone's molecular anthropology lab, where they will learn basic lab methods by extracting their own DNA and identifying their mitochondrial haplogroup. After completion of this training, Kelly Blevins will train the student to work in the ancient DNA (aDNA) lab, which has restricted access and much more stringent anti-contamination protocol due to the degraded quality of aDNA. First the student will shadow Kelly in the aDNA lab through each step of process, then the student can be responsible for processing samples on their own. Once we generate genomic data, the student will be able to learn the basics of bioinformatics and how to clean, map, and analyze data.

Required Qualifications or Pre-requisites:
Preferably ASM/BIO 446, but this is negotiable. It is necessary to have an interest in genomics and how genomic data can be applied to bioarchaeological/anthropological questions. If a student is interested in aDNA but does not have any genetics training, they are still encouraged to apply.

Project/Internship Location:
Life Sciences Building C and E

Hours Per Week or Days and Times Needed:
3 hours per week minimum (preferably in one time block). Exact times will be set around selected Interns. Negotiable, but preferably 5-10 hours per week.

Project Supervisor:
Kelly Blevins

Supervising Faculty:
Anne Stone

Contact Information:
keblevin@asu.edu
Research Project or Internship Title: Maternal predictors of infant development in wild olive baboons

Academic Discipline: Evolutionary Anthropology

Project Description:
We aim to examine how maternal signals -- in this case maternal behavior and hormone levels -- during pregnancy and lactation predict the infant's development. Specifically, we examine how maternal signals predict the infants' activity budget (i.e., time spent in play versus feeding or resting or moving), growth rate, and glucocorticoid profile. We also examine whether infants face a tradeoff between investment in body growth and time spent active.

Student's Duties:
We will provide you with photographs of wild baboons. In each photo, a set of parallel lasers appear on the baboon to allow for photogrammetric measurements. You will be trained to use a computer program to make measurements on each photograph. These measurements will then be used to calculate actual baboon body size.

Required Qualifications or Pre-requisites:
Basic knowledge of computers, google drive, and spreadsheets.

Project/Internship Location:
Students can work remotely if they have a computer.

Hours Per Week or Days and Times Needed:
Negotiable

Project Supervisor:
Sam Patterson

Supervising Faculty:
Joan Silk

Contact Information:
skpatter7@gmail.com
Research Project or Internship Title:
The Rise of the Aztec Empire: Drivers of Sociopolitical Expansion in Prehispanic Central Mexico, c.1428-1521

Academic Discipline:
Archaeology

Project Description:
In less than one century, the Tenocha-Mexica transformed from a subservient city state into an integrated imperial system that conquered much of Postclassic Mesoamerica. Yet longstanding questions remain about what caused the dramatic rise to power of the Aztec Empire. The goal of this project is to build an integrated database of the archaeological and ethnohistoric records to test rival hypotheses of Aztec expansion. I am looking for 2-3 enthusiastic students to assist me in the construction of this database by transcribing and coding archaeological and ethnohistoric data from scholarly works and historical documents. Students will record information on royal lineages, wars and conquests, ceremonies and religious offerings, tribute records, marriages and alliances, merchant ventures, market goods, price lists, excavated artifacts, and monumental architecture.

Student’s Duties:
Students’ primary duties are to become familiar with published sources and standardized codebook methods to record information using Microsoft Office software. Students will be required to come to the lab weekly to record data and meet with supervisor.

Required Qualifications or Pre-requisites:
Applicants need high-level reading comprehension, written and verbal communication, and time management skills to be successful. Some familiarity with Microsoft Word and Excel is required. Students with experience in Microsoft Access, GIS software, database software, or open-source programming languages are encouraged to apply. Self-motivated students with an interest in the research area are desired (e.g. archaeology, ancient Mesoamerica, the Aztecs, ancient history, ethnohistory, other ancient state-level societies, etc.).

Project/Internship Location:
Mesoamerican Archaeology Lab, SHESC 104

Hours Per Week or Days and Times Needed:
Approx. 5 hour per week commitment. Flexible campus working hours. Exact meeting times TBD.

Project Supervisor:
Rudolf Cesaretti

Supervising Faculty:
Michael E. Smith

Contact Information:
Rudolf.Cesaretti@asu.edu