Art History

**Project:** Professor Jessica Horton in the Department of Art History is seeking a student with fluency in Japanese language to assist with primary research and translations into English concerning the reception of Native American art and culture in Japan in the 1960s and 1970s. Research topics will include Japanese collections of Native American art, Japanese novels featuring Indigenous themes, environmental justice in Japan, and Expo 70, a World Fair that took place in Osaka, Japan, in 1970. This research will support the publication of a scholarly book, *Earth Diplomacy: Indigenous American Art and Reciprocity, 1953-1973*, under contract with Duke University Press.

**Contact:** Dr. Jessica Horton - jhorton@udel.edu

Biology

**Title:** Market Research for Commercializing Synthetic Biology and Plastic Biodegradation

**Lab:** Cellular Engineering & Applied Synthetic Biology / Chemical Engineering

**Job Description:** The Cellular Engineering & Applied Synthetic Biology Lab, led by Prof. Mark Blenner, engineers biological systems to solve problems in sustainability, human health, and national defense. In some projects, the outcome is engineered microbes capable of making value added compounds in a renewable and petroleum-free manner. In other projects, we are discovering biological systems for waste plastic recovery, degradation, and upcycling.

The market research team is expected to have 3-4 undergraduates working closely with the graduate students and Prof. Blenner to better understand the commercial potential for the technologies developed by the lab. The market research team would meet bi-weekly with the lab, and on their own in between, to strategize and prioritize the tasks.

**Required Skills:**
- Be in good academic standing (GPA of 3.0 or above)
- Some background and/or interest in business, marketing, commercialization, or synthetic biology (biochemistry, microbiology, biomolecular, chemical engineering, or bioengineering)
- Diligent, organized, and attentive to details
- Good time-management skills

**Time commitment:** Approximately 5-10 hours per week, depending on the student’s availability

**Contact:** Prof. Mark Blenner via email (blenner@udel.edu)
Communication and Media

**Project Description:** Dr. Ellithorpe’s lab conducts research related to media use and media effects, especially topics such as video games and decision making, health behaviors, and media enjoyment. Research assistants will work with Dr. Ellithorpe and the graduate students in the lab to run lab studies, assign credit in SONA for online studies, and help design, create, and test stimuli for studies. RAs will also be expected to attend the biweekly lab meetings (schedule allowing).

**Required skills:** Interest in communication and media, familiarity with video game controls (console and/or PC). Further training will be provided.

**Preferred skills:** Experience with video and photo editing software is a plus, but not necessary.

**Time required:** Up to 10 hours per week, flexible.

**To apply:** Email Dr. Ellithorpe at mellitho@udel.edu with your CV, a description of your interest in the position, and the skills you would bring to the lab.

Education

University of Delaware work study students are needed to help establish, maintain, and strengthen community-engagement and participation in anti-racism research in K-8 schools across Delaware. **Community Ambassadors** will be supervised directly by Tia Barnes, PhD. Ambassadors will also work closely with Danielle Hatchimonji, PhD, Kira Branch, PsyD, and other members of the Actions Against Racism team from Nemours Children’s Health in addition to collaborators and staff members in Delaware schools.

This position is an opportunity for students interested in a youth-serving profession like teaching or social work, or for those interested in healthcare professions, like medicine, public health, counseling, or psychology. Community Ambassadors can choose to focus on clinical/teaching skill development, research skill development, or both.

**The position is available immediately and is a hybrid position based virtually and across schools in Delaware.**

**Job Duties:**

1. Community Ambassadors will make approximately one visit per week to a specific Delaware school to support classroom teachers and observe school practices that support social-emotional and anti-racist development among staff and students.
2. The time requirement is approximately 10 hours per week, including transportation to/from school, school visit, and supervision meetings with research and clinical staff from the Actions Against Racism team.

3. If accepted as a Community Ambassador, students will need to complete the appropriate onboarding in a timely manner to be able to visit schools.

**Position Requirements:**

- Work study student enrolled at the University of Delaware
- Effective verbal and written communication skills.
- Comfortable establishing rapport with new people.
- Must be able to coordinate and establish priorities among diverse tasks.
- Previous experience with schools or working with children is preferred.
- Must have reliable transportation to schools.

Send resume/CV and cover letter outlining your qualifications and experience, including why you are interested in the position and how it fits with your future career goals to [tnbarnes@udel.edu](mailto:tnbarnes@udel.edu) and [actionsagainstracism@nemours.org](mailto:actionsagainstracism@nemours.org).

**Education**

**Project Title:** Examining Individual Differences in Mathematical Learning and Cognition

**Faculty Mentor(s):** Christina Areizaga Barbieri

**Hours/Week:** 8-10

Dr. Barbieri’s research program centers broadly on instruction for students who struggle in math. Specifically, her work focuses on the evaluation and application of learning principles to improve mathematical competencies and motivation for math, especially for students at risk for low mathematics achievement. Dr. Barbieri studies mathematical competencies from preschool to adulthood. A core part of her work aims to understand how common mathematical errors can be used most effectively to reduce misconceptions and improve learning in math content areas that students commonly struggle with. Recently this has involved both algebra and fractions, both gateway topics for success in STEM disciplines and careers. Dr. Barbieri also considers the role of motivation and attitudes towards mathematics in student learning.

In Spring 2023, Dr. Barbieri’s various projects on mathematical cognition and learning will have a range of both in-person and remote activities for an undergraduate scholar to receive mentoring in, such as analyzing students’ problem-solving skills and explanations, reading and coding/note-taking literature, creating databases, coding for meta-analyses, preparing conference submissions, and potentially collecting data in classrooms. This apprenticeship can either be in-person or remote and mainly
asynchronous for Spring 2023, with the exception of about one 1-hour Zoom meeting per week, depending on student preference. Please contact Dr. Christina Barbieri – barbieri@udel.edu for more information. More information about Dr. Barbieri's lab can be found here: https://sites.udel.edu/barbieri/

Required Skills:

- Be in good academic standing (GPA of 3.0 or higher)
- Interested in student thinking and learning
- Diligent, organized and attentive to detail
- Have good time-management skills
- Have a stable Wifi connection and access to a laptop
- Be able to commit to at least 8 hours a week (up to 10) of work (excluding finals week).

Recommended Skills:

The following are preferred but not required:

- Education, Psychology, or other Social Sciences majors preferred.
- Have experience using Excel.
- Have experience using SPSS or another statistics software.
- Some experience tutoring mathematics (at any grade level)
- Comfortable thinking and talking about mathematics (at various grade levels)
- Interest in attending graduate school
- Availability to stay on for fall 2023 if interested and in good standing.

Education

Project: Comprehensive Description of Lead in the Water of US Public Schools

Description: I am looking for one to two project managers that will help in the development of a large database documenting the prevalence of lead in the water of US public schools.

Responsibilities:

- Documentation of available data,
- Identifying and marking PDF documents to indicate where data are located,
- Communicating with state and federal representatives,
- Communicating with data analysts about project goals,
- Documenting project milestones and progress, and
• weekly meetings with Dr. Kenneth Shores (CV here: https://www.cehd.udel.edu/wp-content/uploads/2020/09/Shores_CV.pdf)

Minimum Qualifications:
• Organization
• Professional communication
• Facility with PDF tools and Microsoft packages

Benefits: This project will provide undergraduates with a unique experience Interacting with state and federal representatives at different levels of governance and developing large datasets. Opportunities to continue the project across years are available, depending on eligibility. The results of this study are very important for public policy—at local, state, and federal levels—and are likely to generate considerable public attention once completed. This project will be especially attractive to students that are interested in the intersection of health, education, and equity.

Contact: Interested parties can reach out to Kenenth Shores - kshores@udel.edu) with questions.

Education

Job Description: The Rutherford Lab researches student learning and motivation in online contexts for Pre-K through university students. Current projects include examining how teachers support upper elementary students’ emotions while they work through an online mathematics software; determining how features of a coding game relate to performance between experts and novices; researching how student motivation changes throughout elementary and middle school and across classes and years in college; exploring how eye movements and biometrics relate to regulation during problem solving; and examining how motivation relates to desired careers.

The lab is a vibrant research community with postdocs, doctoral students, and undergrads working together toward shared research goals. Weekly lab meetings facilitate problem-solving and sharing across projects. We work hard to develop a work environment (even virtually) that is fun, collaborative, and productive, and is one that supports undergraduate researchers in learning content, skills, and professional norms for Psychology and Education research.

Contact: Teya Rutherford - teomara@udel.edu

Education

Project Title: Studying Student Participation in Classroom Discussions in Elementary Classrooms
Position Details:
Children’s learning can be supported through talking about their thinking in classrooms with their classmates and teacher. Our research seeks to understand how elementary school teachers use classroom discussions to deepen and support students’ learning and participation. Teachers learn how to support discussions across mathematics, English Language Arts, and science through professional learning activities known as Learning Labs where they plan and teach lessons in their classrooms with colleagues. We examine how teachers learning evolves through examining their practice, responses on surveys and in interviews. We seek organized and responsible undergraduate students to support with data management, including cleaning transcripts of teaching, interviews, and of teachers working with colleagues. Undergraduate researchers will meet regularly with project staff to identify goals and activities. Students from all disciplines are welcome to apply.

Preferred Qualifications:
- Experience with transcribing data
- Familiarity with data management programs

Required skills:
- Be in good academic standing
- Be organized
- Have good time management skills
- Have good communication skills
- Be attentive to detail
- Be interested in learning about the research process
- Be interested in issues related to education

Time Commitment: 5-10 hours/week, depending on weekly scheduling needs.

Contact: Steve Smith (smithsa@udel.edu) for more information and to apply. Subject Line: McDonnell Grant Research Assistant and the following information:
- Name
- Weekdays and Hours of Availability
- Cell phone number
- Preferred email address
- A short statement about why you are interested in working with us

Electrical and Computer Engineering

Position Description: From a heartbeat sensor embedded in a t-shirt to a soft robot picking up wounded soldiers on the battlefield, interacting with soft and squishy biological systems (i.e. humans) requires new electronic materials and structures able to
stretch by tens or even hundreds of percent without damage. The Soft Electronics and Robotics Lab is looking for enthusiastic undergraduate researchers interested in joining a variety of projects on making electromagnetic devices for wearable wireless power systems and soft robotic actuators.

Although specific background/preparation is not necessary, past experience with one or more of Matlab, COMSOL, AutoCAD, SolidWorks, cleanroom fabrication, or 3D printing will be considered favorably.

**Time Commitment:** 10 hours a week

**Contact:** Dr. Lazarus at nlazarus@udel.edu with a copy of your CV and a description of your interest in the position.

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**English**

**Project:** Prof. Siobhan Carroll is researching the history of creative writing in the 20th and 21st Century. She is looking for a research assistant to read through archived copies of Writer’s Digest magazine from 1929-2001 to identify articles on plot and summarize their advice. The project is aimed at uncovering how attitudes toward “proper” plot structure and character agency has changed over time.

**Preferred Skills:** Research assistants should be well-organized and self-motivated. The ability to read quickly is a valued skill for this position.

**Time Commitment:** 5 hours / week.

**Contact:** Dr. Carroll - sicarrol@udel.edu

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**Fashion and Apparel Studies**

**Project Description:** Fashion History and discovery. We are seeking a student interested/knowledgeable in fashion history, art and art history, or material culture. Research on art movements of the 1920s and how those were expressed through women's clothing of the time period is the focus of this project. The student will collect images of 1920s dresses from online museum collections and conduct a visual comparison with those in the UD Fashion and Textiles Collection. Includes hands-on work in the Historic Fashion and Textiles Collection. This research is part of a larger project to develop both museum and virtual exhibitions celebrating the impact of social
and cultural influences on dress in the 1920s.

**Contact:** Dr. Belinda Orzada - orzada@udel.edu

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**History**

**Call for Applications: Research Assistant, Slavery, Freedom, and Mobility in Delaware Project**

The UD Antiracism Initiative Legacies of Slavery and Dispossession at UD committee (UDARI Legacies) invites applications for an undergraduate research assistant for the Spring 2023 semester, for work on the Slavery, Freedom, and Mobility in Delaware Project

Working under the supervision of Prof. Dael Norwood, co-chair of the UDARI Legacies committee, the undergraduate research assistant to investigate the history of slavery and freedom in the state of Delaware, with a particular focus on mobility and community. Using print, microfilm, and digital collections, the undergraduate research assistant will locate and describe primary sources relevant to this topic, create bibliography and spreadsheet entries, and, where appropriate, digitize materials for inclusion in the UDARI Legacies primary source collections.

The position pays $11.25 per hour for the Spring 2023 semester, the standard UD Research Apprenticeship Work-Study (UDRAW) program rate.

To apply, applicants should send a résumé (including GPA) and brief cover letter, detailing their interest, relevant experience, and expected benefits of the position to their academic or postgraduate career plans, to Professor Dael Norwood at dnorwood@udel.edu.

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**Human Development and Family Studies**

The [Queer Development Lab](#) is launching the *LGBTQ Socialization Project* where we will study the processes through which lesbian, gay, bisexual, trans, and other queer (LGBTQ) teens and young adults learn from others how to build community bonds, strengthen and understand their LGBTQ identity, and develop skills for navigating discrimination. The long-term goal of this project is to understand how LGBTQ socialization occurs and whether this process can provide protection against elevated rates of mental health problems and suicidality among LGBTQ youth.
Primary tasks for research assistants will be:

- Identifying and reaching out to LGBTQ-serving organizations regionally and nationally
- Identifying and reviewing existing mentoring programs for LGBTQ youth
- Reviewing and summarizing academic literature on LGBTQ youth development and mentoring
- Contributing to study design and conceptualization
- Supporting the establishment of an LGBTQ community advisory board
- Preparing materials for LGBTQ youth recruitment and outreach

Students seeking this opportunity should have experience or interest in working with LGBTQ individuals and issues. Research assistants may have opportunities to work in a limited capacity on other related LGBTQ research projects based on their interests and project needs. Research assistants will be expected to meet weekly with all members of the Queer Development Lab, led by Dr. Eric Layland.

**Time Commitment:** Up to 10 hours/week

**How to apply:** Follow [this link](#) to submit your resume and indicate your interest in working in the Queer Development Lab. For questions: layland@udel.edu. You may submit your interest form directly without contacting Dr. Layland.

**Marine Science and Policy**

**Job Description:** The student will support the work on a model of climate change economics, as part of Dr. James Rising's Open Modeling Group. The model, called PAGE, has been used by the U.S. EPA to estimate the social cost of carbon emissions. The goal of the project is to develop a new version of this model with country-level estimates of climate risk, economic growth, and potential for adaptation and emissions reduction. To do so, the student will draw upon and analyze economic and climate risk data, update model numbers and assumptions, and visualize model results. As part of the job, the student will learn about the model and underlying research, as well as activities to develop future climate and social projections.

**Required Skills:** Quantitative data processing and programming experience. Capacity to self-start.

**Time Required:** 5 - 10 hours per week, with half-hour meetings every week or two.

**To Apply:** Send a letter of interest to James Rising [jrising@udel.edu](mailto:jrising@udel.edu)
Available student project - Optical characterization of 2D materials and heterostructures

Research Field: Materials Science/Optics/Physics/Chemical Engineering/Electrical Engineering/Mechanical engineering

Project details: 2D materials, such as graphene and transition metal dichalcogenides, exhibit extraordinary optoelectronic and mechanical properties compared to their bulk counterparts. These properties depend on the crystal structure of the material and, as such, are affected by local environment and structural defects. This project will investigate the structure and defects in 2D materials and various 2D material based electrical and mechanical devices by optical spectroscopy and material simulation. Both in-person and remote project activities will be available.

Through the project, the student will develop skills in the area(s) of:
- 2D material transfer technique
- Building optical setup
- Materials processing and characterization
- Semiconductor clean-room technology
- Multiphysics modeling of complex physical phenomena
- Data acquisition, analysis and interpretation
- Critical thinking

Required:
- Working toward an engineering or science degree
- Organized and excellent time management skills
- Ability to work independently
- Willingness to learn new things
- Some experience with working in a science lab will be preferred
- Time commitment of approximately 8-10 hours per week

Preferred Major: Physics, Chemistry, Materials Science and Engineering, Electrical Engineering, Chemical Engineering, Computer Science

Contact: Dr. Chakraborty (cchakrab@udel.edu)

Website: https://sites.udel.edu/cchakrab/

Material Sciences

Available Project: 2D Materials exfoliation, identification, and transfer
Description: Two-dimensional (2D) materials, in the form of thin films with one or few atom layer thickness, exhibit extraordinary electrical, optical, mechanical, and thermal properties. High quality 2D materials are typically prepared by mechanical exfoliation from their bulk crystals. Then, they are transferred to desired substrates for subsequent fabrication or characterizations. The undergraduate student will contribute to the exfoliation of two-dimensional (2D) materials. The student will use the optical microscope and the micro-Raman system to identify exfoliated 2D materials and practice the transfer procedure. The student will be involved in procedure development to figure out ways to improve yield. In addition, the student, if interested in, will participate in the production of outreach videos.

Preferred Skills: Image/video processing and programming are preferred but not required.

Contact: Dr. Wang – wangxi@udel.edu

Physical Therapy

Job Description: The Move to Learn Innovation Lab is located in Star Campus. Our Super Suits FUNctional Fashion and Wearable Technology Program focuses on designing garments to help improve quality of life for people with disabilities. We are seeking one or two undergraduate research assistants to engage in a variety of research activities with our team. Our team’s current projects focus on early intervention, parent education, and rehabilitation technology. Students will assist in a variety of tasks, including coding of data from videos of parent-child activity or apps about child development and play, digitally gathering scientific articles, and data processing and organization. No prior experience with these tasks is required as training will be provided; individuals with experience using sewing machines are preferred for some of the tasks.

The benefits of the position include working with our interdisciplinary team members to learn more about how to scientifically design interventions and clothing that support and assist movement for children with disabilities and participation in a supportive environment with students pursuing a variety of careers in health sciences.

Approximately 8-10 hours of work required per week.

Contact: Michele Lobo – malobo@udel.edu

Psychology and Brain Sciences

Project description: Help scan (magnetic resonance imaging) babies. We bring infants whose mothers are receiving an early intervention in to the lab to be scanned at 6 and 12 months. UDRAW student would assist with the scan. This involves late night work occasionally (e.g., 9 p.m. – 1 a.m.).
Psychology and Brain Sciences

Project: Effect of prenatal immune activation on brain development and risk of neurodevelopmental disorder

Job Description: Prenatal infection is a major risk factor for many neurodevelopmental disorders, including schizophrenia and autism. We use a rat model of prenatal immune activation, then we allow the pups to grow up at which point we test learning behaviors and examine how differences in the brain developed. Students will perform molecular biology, histology, and some animal behaviors, thus should feel comfortable with animal research models.

Lab Website: https://www.psych.udel.edu/lab-sub-site/jschwarz-sub-site/Pages/Jaclyn-Schwarz.aspx

Contact: Dr. Jaclyn Schwarz, Associate Professor; Department of Psychological & Brain Sciences Email: jschwarz@udel.edu