

PhD Career Exploration Fellowship

Participating Centers

2020

Center for Teaching and Learning

The Center for Teaching and Learning promotes teaching excellence at the University of Pennsylvania. CTL works to help instructors at Penn excel in their teaching, to enhance the culture of teaching at the university, and, in turn, to increase the quality of education at Penn.

CTL consults individually with instructors considering diverse teaching challenges or ambitions, and offers a wide array of teaching workshops and discussions. To encourage instructors to reflect on their own teaching and engage with each other, CTL brings faculty and other instructors together for collegial, often faculty-led, conversations.

Instructors at all levels of experience and expertise — from senior faculty to new teaching assistants, from those acclaimed to those struggling — participate. Instructors from across Penn are welcome at CTL programs and can consult with CTL about their teaching.

Students applying for the CTL fellowship ought to have an interest and enthusiasm for thinking about, discussing, and improving teaching methods. Students interested in investigating research questions pertaining to teaching methods are especially welcome.

This fellow may have the opportunity to:

- Meet and shadow a variety of CTL staff members
- Attend select CTL meetings and/or workshops
- Partake in planning sessions for CTL workshops
- Provide organizational, logistical and promotional support for CTL's Spring 2019 public events
- Conduct a small research project investigating particular teaching questions
- Document stories of effective or innovative teaching. Specifically, visit and take photos of classes, and interview faculty

This fellow will work primarily with Senior Associate Director Ian Petrie who holds a PhD in South Asian History from the University of Pennsylvania.

Children's Hospital of Philadelphia (CHOP) - Department of Biomedical and Health Informatics

The Children's Hospital of Philadelphia's (CHOP's) Research Institute is developing an initiative called Arcus to link clinical and research data in order to accelerate and enable secure, collaborative, reproducible, and computational research.

The Arcus project includes work from teams focusing on application development, library science, data science, data education, privacy analysis and protection, systems architecture, communications, and clinical data management and transformation, to build a system that is responsive to the needs of current and future researchers.

Arcus offers a platform, privacy and data training, a data catalog and archive, and more, with the goal of positioning scientists to be at the forefront of emerging research questions in pediatric medicine.

Arcus is being developed within CHOP's Department of Biomedical and Health Informatics (DBHi), which comprises professionals from a variety of background, including researchers, postdoctoral fellows, librarians, and developers from academic backgrounds.

The fellow may have the opportunity to:

- Shadow an Arcus developer who entered the development and data science domains from a doctoral background in the social sciences.
- Sit in on meetings related to policy creation, development, and implementation for the Arcus project.
- Speak with DBHi staff about current needs and expectations in a fast paced, collaborative healthcare and development environment.

The fellow will work with Jacob Levernier, an Analyst / Programmer within the DBHi. Prior to becoming part of CHOP, Jacob completed a PhD in Personality and Social Psychology with a Supporting Area in Data Science, followed by a postdoctoral Data Science fellowship in the University of Pennsylvania Libraries as the Bollinger Fellow in Library Innovation.

The Franklin Institute

In the spirit of inquiry and discovery embodied by Benjamin Franklin, the mission of The Franklin Institute is to inspire a passion for learning about science and technology. As the most visited museum in Pennsylvania, The Franklin Institute is one of the leading science centers in the country and provides resources that help people to connect with science and technology in creative ways that resonate with learners of all ages and backgrounds. The Institute directly reaches more than 1 million people each year with informal learning experiences that engage students, adults, and families. Though its historic museum is a central learning space, the Institute has evolved to provide people with educational resources in their own neighborhoods through hands-on activities in classrooms, workshops in libraries, community centers, and other settings, and through ways to interact online. The Franklin Institute works toward this mission via:

- Offering 12 world-class permanent exhibits that provide hands-on learning experiences and hosting renowned traveling exhibits that draw local, national, and international visitors to the museum.
- Partnering with cultural organizations and corporations support unique collaborative outreach initiatives and events, including youth programs and the annual Philadelphia Science Festival.
- Presenting public lectures and opportunities for discussion of current science events as they unfold throughout the year to create an informal and educated dialogue about the most important science issues facing the public.
- Holding curatorial collections—particularly those related to Benjamin Franklin and the Wright Brothers—that are considered national treasures. At nearly 200 years old, The Franklin Institute Awards program is America's oldest and most prestigious recognition of achievement in science, technology, and industry.

The fellow may have the opportunity to:

- Observe and assist with operations of a public program at the Institute
- Participate in informational interviews with members of the Institute's science, evaluation, or educational programs teams
- Sit in on meetings related to Institute initiatives (for instance, planning meetings related to the Institute's exhibits, public programs, professional development workshops, or digital content)
- Learn about The Franklin Institute's vision and master plan to reimagine the museum experience with changing science and technology in the next 10 years

The fellow will work with Jayatri Das, Director of Science Content and Chief Bioscientist, Ph.D. in ecology & evolutionary biology.

Gender, Sexuality and Women's Studies at Penn

The Gender, Sexuality and Women's Studies Program and the Alice Paul Center for Research on Gender, Sexuality and Women work to advance feminist and queer research, learning, and practice at Penn. The GSWS Program offers an undergraduate major and minor in the School of Arts and Sciences, and a graduate certificate for graduate students enrolled in programs across the University. The Alice Paul Center collaborates with Departments and Centers at Penn and with organizations in the broader Philadelphia community to provide programming and funding for innovative feminist and queer research, artistic work, and pedagogical practices.

The fellow may have the opportunity to:

- shadow the Associate Directors of GSWS and APC
- sit in on Center and Program meetings, attend GSWS and APC seminars and workshops
- take part in planning meetings for GSWS and APC programming.
- assist with drafting grant proposals
- assist with undergraduate and/or graduate curriculum development
- conduct research into feminist pedagogical practices
- help with the launch of the trans oral history project.

The fellow will work primarily with Gwendolyn Beetham, Associate Director of GSWS, who holds a PhD in Gender from the London School of Economics and Political Science and Maria Murphy, the Interim Associate Director of APC, who holds a PhD in Musicology from the University of Pennsylvania.

Kleinman Center for Energy Policy – Communications

Established in July 2014 with a generous gift to University of Pennsylvania's School of Design from Scott and Wendy Kleinman, The Kleinman Center for Energy Policy's mission is to create the conditions for policy innovation that support a just and efficient transition to sustainable energy. Our vision is an energy system that optimizes productivity through smart demand, sustainable supply, and compensated externalities. The Kleinman Center focuses on projects that:

Foster thoughtful and impactful energy-related research. We support Penn research through a variety of programs and bring distinguished energy leaders and scholars to Penn for visits and residencies. Develop the next generation of energy leaders. We engage student learners by providing energy-related courses, a certificate program, lectures, internships, and grants for research and professional development.

Create conditions for energy policy stakeholders to explore options and develop agendas. We convene thought leaders with diverse interests in settings that foster productive conversations and action. This fellowship centers on the Kleinman Center's communications efforts. The Communications Director manages the voice of the Kleinman Center across all platforms, developing new content, preparing research for publication, serving as the center's press contact, and ultimately striving to grow the center's audience.

This fellow may have the opportunity to:

- Review and update content for our website and social media platforms Help with social media campaigns and online events
- Assist with the planning and promotion of our events
- Assist with communication surrounding publications, blog posts, and podcasts
- Help read and copyedit publications before they go to print
- Look at our web traffic and newsletter data to help make new recommendations
- Help communications director refine an RFP for a website redesign
- Explore and assess tools or apps that improve our process or output

We ask that candidates have the following qualifications:

- A background in the social sciences and should have some level of experience with volunteer work and/or public outreach.
- An interest in writing, story-telling, relationship building, and partnerships, as much of our work involves these components.

The fellow will work with Lindsey Samahon, Director of Communications.

Kleinman Center for Energy Policy - Research

Established in July 2014 with a generous gift to University of Pennsylvania's School of Design from Scott and Wendy Kleinman, the Kleinman Center for Energy Policy's mission is to create the conditions for policy innovation that support a just and efficient transition to sustainable energy. Our vision is an energy system that optimizes productivity through smart demand, sustainable supply, and compensated externalities.

The Kleinman Center focuses on projects that:

- Foster thoughtful and impactful energy-related research. We support Penn research through a variety of programs and bring distinguished energy leaders and scholars to Penn for visits and residencies.
- Develop the next generation of energy leaders. We engage student learners by providing energy-related courses, a certificate program, lectures, internships, and grants for research and professional development.
- Create conditions for energy policy stakeholders to explore options and develop agendas. We convene thought leaders with diverse interests in settings that foster productive conversations and action.

This fellowship sits in our research area. We explore critical issues and address challenges that have regional, national, and global implications. Our growing body of academic research is informed by regular conversations with scholars, industry leaders, and policy makers—who help shed light on today's most urgent research questions.

Further details about the Research grant program can be found on the Kleinman Center website:

<https://kleinmanenergy.upenn.edu/>

This fellow may have the opportunity to:

- Support the Research Grant Program of the Center by participating in the identification, selection and drafting of the research call.
- Research background information for each selected topic and summarize findings to support the definition of the most relevant questions.

We ask that candidates have the following qualifications:

- an interest and good understanding of energy or climate policy, as well as excellent writing, communications and analytical skills.
- familiarly with any energy /climate news outlets like E&E News and reports <https://kleinmanenergy.upenn.edu/e-resources>, Utility Dive and Greentech Media.
- ability to commit to 20 hours of work over the course of the fellowship

This fellow will work primarily with Angela Pachon, the Director of Research.

The Laboratory on the Research and Structure of Matter- Education and Outreach

The Laboratory for Research on the Structure of Matter (LRSM) is host to the National Science Foundation supported Materials Research Science and Engineering Center (MRSEC) at the University of Pennsylvania. The MRSEC at the University of Pennsylvania pursues a multidisciplinary approach to solve fundamental materials problems that are likely to underlie future technologies, and thereby, substantially impact the research and educational needs of society.

The primary goal of the LRSM *Education & Outreach* efforts is to attract more Americans to STEM fields and take them to the highest educational level possible, with emphasis on underrepresented minorities, women, and the disabled. A second goal is to increase awareness in the general public about materials science & engineering and its societal relevance.

This fellow may have the opportunity to:

- Assist with design of educational programs for all groups (k-12, undergraduate, graduate, faculty, and general public). This could include:
 - Designing calendar of events
 - Designing presentations for professional development workshops
 - Creating and/or modifying program assessment tools
 - Creating demos and kits for outreach projects
- Benchmarking best practices in STEM education. This could include:
 - Researching undergraduate STEM education trends at Ivy+ institutions as they relate to underrepresented groups
 - Researching latest practices in student experiences for STEM undergraduates at PWIs and comparing to minority serving institutions
 - Researching and developing effective recruitment strategies
 - Researching effective and relevant pedagogical methods in STEM disciplines
- Review and edit program guides for programs. This could include:
 - Checking for inconsistencies, editing, and updating guides
 - Creating a user-friendly format from student perspective
 - Compiling and archiving past versions

We ask that this candidate have the following qualifications:

- a background in the STEM fields and/or in education
- interest in improving participation of groups traditionally underrepresented in STEM, inclusivity, teaching culture, and student affairs is highly desirable
- willingness to participate in open-ended project work with regular meetings to determine progress, and firm deadlines.

This fellow will work primarily with Dr. Ashley Wallace, Assistant Director of Education and Outreach for the LRSM, who has a PhD in Chemistry.

Merck-Digital Analytics and Technologies

The speed at which the field of digital health is evolving offers a significant opportunity to overhaul clinical trials. The objective of the Global Digital Analytics and Technologies (GDAT) Department is to transform clinical trials through pre-competitive collaboration, the evaluation and introduction of new technologies into the clinical trial paradigm to reduce patient burden, improve adherence, enable higher quality, faster, more frequent data collection, and obtain a more meaningful understanding of patients outside of the clinical site.

The Internet of Things technologies are able to provide metrics by means of active (prompted) or passive (unnoticed) measurements, offering considerable flexibility in approach and unprecedented insights into both behavior and disease. The ability to integrate these devices, will provide objective measurements of biological processes and improve how we derive clinical endpoints today. More importantly, this strategy will position us to identify novel biomarkers to support the ever-increasing complexity of the pipeline of tomorrow. Our focused approach is aligned with neuroscience programs particularly movement-related disorders such as Parkinson's Disease (PD).

This fellow may have the opportunity to:

- Sit in on informational session(s) outlining the drug discovery and clinical trial process at Merck.
- Tour Merck's West Point campus and the Digital Innovation Laboratory.
- Participate in informational interviews with GDAT scientists on a variety of topics including current digital health devices to support ongoing projects, the design of trials that will utilize digital health devices and the data analysis and interpretation of results from digital-enabled clinical trials.
- Shadow scientists in the performance of non-lab responsibilities, including attending cross-functional team meetings, administrative duties, etc.
- Observe data analyses to explore relationships between digital health/sensor data, disease state, and clinical endpoints, leveraging statistical and/or predictive algorithm approaches.

This fellow will work primarily with Bryan J. Hansen, Ph.D., Associate Principal Scientist, Merck Global Digital Analytics and Technologies.

Please note that this off-campus opportunity is located in West Point, PA. The selected Fellow must have their own transportation to/from the host office.

Merck-Infectious Disease and Virology

Merck has a long-standing history of discovering, developing, and manufacturing innovative medicines and vaccines to prevent and treat infectious diseases. Merck has pioneered scientific breakthroughs leading to novel interventions against infectious pathogens, including bacteria, viruses and fungi that has led to the improvement of human health and saved lives.

At Merck, we leverage diverse thinking, skills and technologies to be on the leading edge of science and to fuel novel drug & vaccine discovery and development. Scientists in the Infectious Disease and Vaccines Department at Merck interrogate pathogen and host biology to gain a deeper understanding of infection and pathogenesis, and to identify, characterize and validate targets for therapeutic interventions. We work across functions and sites, combining biology, immunology, chemistry, engineering, and pharmacological expertise to investigate these targets and advance molecules and vaccines into clinical study.

The fellow may have the opportunity to:

- Participate in informational interviews with members of the Infectious Disease & Vaccine department and collaborating departments.
- Meet with junior and senior staff to gain perspectives on work duties, such target identification, chemical screens, vaccine design, bioengineering, immunological assays and resistance testing, formulations, and clinical study.

The fellow will work primarily with Bonnie Howell, Ph.D., Executive Director in Infectious Disease and Vaccines

Please note that this off-campus opportunity is located in West Point, PA. The selected Fellow must have their own transportation to/from the host office.

Merck-Neuropharmacology

Merck Discovery Neuroscience works broadly across diseases of the brain and peripheral nervous system. We are seeking new approaches for the treatment of serious diseases with high unmet need, significant societal burden and urgency to develop symptomatic or disease modifying treatments. This includes Alzheimer's disease (AD), Parkinson's disease (PD), amyotrophic lateral sclerosis (ALS), pain, sleep disorders and mental health disorders such as depression and schizophrenia.

- Neuropharmacology works to understand the relationship between pharmacodynamic and pharmacokinetic data in the pursuit of clinically translatable biomarkers of disease
- Our group helps to build and support Research Operating Plans (ROPs) to advance early leads to advanced compounds that have the desired biological and chemical properties to constitute preclinical candidates
- We utilize our unique *in vivo* capabilities to support mechanism of action, target validation and biomarker development for the Neuroscience department

The fellow may have the opportunity to:

- Gain insight into how Neuropharmacology leverages its *in vivo* experimental capabilities to support the Neuroscience pipeline targeting neurodegenerative disorders, neuropsychiatric disease, pain, and sleep disorders
- Understand how our unique expertise in techniques such as cognition, behavior, electrophysiology, transgenic models, quantitative EEG, and complex data acquisition and automation support our disease targets
- Meet with other members of the Neuroscience department to discuss their roles and tour their lab spaces
- Shadow Ph.D. level staff in the performance of experimental studies, data analysis, program team decision making and scientific discussions

The fellow will work primarily with Steve Grauer, member of the Neuropharmacology group, who has worked in the biopharmaceutical industry for 28 year as a behavioral pharmacologist.

Please note that this off-campus opportunity is located in West Point, PA. The selected Fellow must have their own transportation to/from the host office.

Merck- Quantitative Biosciences

The Quantitative Biosciences department at Merck engages with and supports all therapeutic areas (oncology, neuroscience, cardiometabolic, vaccines, infectious diseases, etc.) represented across our discovery portfolio. We serve as members of cross-functional program teams, offering both experimental and theoretical program support through the various phases of pre-clinical drug discovery, including Target Validation, Hit-to-Lead ID, and Lead Optimization efforts, ultimately resulting in a pre-clinical candidate for first-in-human studies. The department consists of both *in vitro* and *in vivo* scientists with various backgrounds and expertise.

This fellow will have the opportunity to:

- Sit in on informational session(s) outlining the drug discovery process at Merck.
- Tour Merck's West Point campus and Quantitative Biosciences facilities.
- Participate in informational interviews with Quantitative Biosciences department members with expertise in pharmacology, biochemistry, biophysics, assay operations, cell biology, chemical biology, and *in vivo* biology, as well as current Postdoctoral Fellows exploring a career in drug discovery.
- Shadow scientists in the performance of non-lab responsibilities, including attending cross-functional team meetings, administrative duties, etc.
- Observe *in vitro* and/or *in vivo* experiments performed by Quantitative Biosciences department members.

This fellow will work primarily with Marla L. Watt, Ph.D., Principal Scientist, Merck Quantitative Biosciences.

Please note that this off-campus opportunity is located in West Point, PA. The selected Fellow must have their own transportation to/from the host office.

Education and Professional Development (REACT) at Penn Engineering

React for human habitat is a Partnerships for International Research and Education (PIRE) project funded by the National Science Foundation (NSF), the School of engineering and applied science (SEAS) at the University of Pennsylvania, aimed at Research and Education in Active Coatings Technologies (REACT) for human habitat. This PIRE project addresses key fundamental research challenges through an international educational platform to develop Active Coating Technologies (ACTs) that divert, collect and purify water (ACT 1), suppress bacteria adhesion and proliferation (ACT 2), and convert and store solar energy (ACT 3). To enable coatings that will transform the human habitat, the three ACTs take advantage of the versatility provided by polymers, nanoparticles and their mixtures to create coatings with tailored chemistry, surface texture and function.

This fellow may have the opportunity to:

- learn about a staff position that straddles the research and education missions of the university and how a STEM PhD may be used in positions that play critical roles in the universities research and education missions.
- contribute to a discrete part of a project/program, depending on the goals of the fellow

This fellowship may be particularly relevant for students who are unsure of what path they want to take – not so much as to offer a model path, but to help think about creative ways of thinking of their skills/motivations/goals and as evidence that not all paths are planned or conventional ... and interesting and rewarding careers can still be made.

This fellow will work with Associate Director of Education and Professional Development, Kristin Field, who holds a PhD in Behavioral Ecology. Kristin spends half of her time as co-PI and manager on an NSF grant that supports student research opportunities abroad and the other part of her time on educational/professional development programs for the Singh Center for Nanotechnology.

Office of Research and Academic Services (RAS) at Penn Engineering

The Office of Research and Academic Services (RAS) is the central advising office for all students in Penn Engineering, serving approximately 1,800 undergraduates, 1,300 Master's students, and 600 PhD candidates. All rules, regulations, guidelines, academic options, student support, education policy, etc. is coordinated through RAS.

Starting in the fall semester of 2020, Penn Engineering will launch a new undergraduate curriculum with 37 course unit requirement (down from 40 course units). In conjunction with the launch of the new curriculum, the entire Undergraduate Student Handbook will be updated will intent to create user friendly guide that clearly delineates all new rules, regulations, and guidelines. The Undergraduate Student Handbook is the document by which we expect all our students, faculty, and administrators to adhere to in order to ensure the academic progress of our 1800 undergraduate students.

This fellow will have the opportunity to:

- Create Undergraduate Student Handbook with improved clarity of language, policies, and instructions

We ask that this fellow have the following qualifications:

- Good writing skills.
- Interest in higher education policy.
- Must be a proponent of the Oxford Comma.

This fellow will work primarily with Sonya Gawk, Director of Student Life and Undergraduate Education, Penn Engineering. Sonya obtained her PhD in Education from the University of Pennsylvania.

Penn Center for Innovation (PCI) - Ventures

PCI Ventures within the Penn Center for Innovation provides a path for faculty, staff and students that have an interest in being entrepreneurial but don't have the resources to pursue that interest on their own. Since 2009, we have built several programs designed to meet the varying needs of different projects with varying amounts of service from our team. Our suite of services and hands-on support promote entrepreneurship activities and incubate early-stage technology-based businesses as they make their way towards commercial success. PCI Ventures has created several company formation programs and accelerators for the Penn community to tap into, including UPSTART, UPADVISORS, and UPtheOdds.

See our website at <https://www.pci.upenn.edu/pciventures/> for details on these programs.

This fellow may have the opportunity to:

- Research and network with investors, organize and attend investor meetings, collect and manage data on investor networks
- Participate in weekly round table discussion of ongoing activities at portfolio companies
- Participate in board meetings for portfolio companies
- Advise companies on developing their deck and practicing their pitch

We ask that this fellow have the following qualifications:

- passion for and commitment to entrepreneurship
- availability on some Fridays from 9-12.

This fellow will work primarily with Mike Dishowitz, Director of UPstart, PhD in Bioengineering.

Office of the Vice Provost for Global Initiatives

Driven by the University of Pennsylvania's [Strategic Framework for Global Initiatives](#), the Office of the Vice Provost for Global Initiatives spearheads the effort to provide strategic direction for Penn's global endeavors, with a focus on efficient investment of university resources for global activities. The Office serves as a central point of contact for Penn Global's seven divisions, and for Penn's Schools, centers, and programs with a global focus.

As a university resource for global activities, the Office of the Vice Provost for Global Initiatives also seeks to: collect and assess data on Penn's global activities, share and disseminate information on the University's global footprint with the Penn community and beyond, and administer funding opportunities for Penn faculty and staff.

Housed in the Provost's Office in College Hall, the Office of Global Initiatives serves as a central point of contact for the Penn Global reporting offices, supporting and coordinating the work of Penn Abroad, International Student and Scholar Services, Global Support Services, the Perry World House, and the Penn Biden Center for Diplomacy & Global Engagement.

Home to over 60 research centers with a global focus and 200 global programs and partnerships, the University of Pennsylvania is more globally connected than ever before. The Office of Global Initiatives collaborates with Penn's Schools and Centers across the University to further Penn as a global institution by catalyzing cross-school collaborations to integrate knowledge that addresses key issues relating to a rapidly globalizing world.

The Office of the Vice Provost for Global Initiatives also provides important services in support of the University's global endeavors. Core activities include:

- Collecting and assessing data on Penn's global activities. Mechanisms to collect data include the [Global Activities Registry](#) and the Faculty Global Profiles database.
- Sharing and disseminating data on the University's global footprint with the Penn community and beyond. Mechanisms to disseminate this information include our [Global Activity Map](#) and Penn in the World snapshots.
- Administering funding opportunities for Penn faculty and staff. Such opportunities include the [Global Engagement Fund](#), the [China Research and Engagement Fund](#), and the [India Research and Engagement Fund](#), which support the projects and research abroad of faculty across fields and disciplines.

This fellow may have the opportunity to:

- Learn about how the Office supports faculty, manages several large funds, and organizes events, including a Latin America Symposium on March 27 and a U.S. – China bioethics dialogue in June.
- Assist faculty and staff with the planning of the U.S – China bioethics event by synthesizing the biomedical research backgrounds of potential speakers and helping to shape discussion questions for the event
- Attend multiple meetings with other Penn Global divisions covering a range of administrative and policy issues, event planning, etc.

This fellow will work primarily with Scott Moore, China Program Director (PhD in Politics).

Penn Libraries – Areas Studies

The Penn Libraries serve the students and faculty of Penn's 12 schools and have many physical locations around campus, as well as extensive online resources. A strength of the collections lies in the extensive non-Western-language materials collected at the libraries in subjects largely focused on humanities and social sciences, such as literature, history, art history and architecture, religion, anthropology, gender studies, and more. Collectively referred to as "area studies" collections, these are overseen by specialist librarians who have advanced subject degrees (often a PhD) in their areas of expertise, often in addition to a professional Master's degree.

Area studies librarian duties range from collection development and budget management to advanced cataloging work, reference and liaison activities with their respective communities, developing research guides, mentoring students, and instruction and teaching. They work closely both with library colleagues at a variety of positions and departments, and with faculty and students in a range of departments/centers that include area studies components.

This fellow may have the opportunity to:

- assist with revising and expanding online research guides
- assist with cataloging or inventorying collection materials
- write a blog post about special materials in a collection
- write a short report comparing a trend in area studies at Penn and other institutions
- conduct background research for a collection development initiative
- write a newsletter copy
- learn about how area studies librarians develop, maintain, and promote research collections
- see behind-the-scenes logistics of subject specialist librarianship from the perspective of those who fill many roles (from cataloging and acquisitions to reference and instruction, management of physical spaces and existing collections, and more)

We ask that this candidate have the following qualifications:

- Expertise in geographic and language area outside Western Europe, with reading knowledge of at least one relevant language (from the Middle East and North Africa, Eastern Europe and Russia, or any area of Asia)
- Research background in a humanities or social science discipline

This fellow will be working with Molly Des Jardin (Japanese and Korean), Brian Vivier (Chinese and interim Middle East), Jef Pierce (South Asia), and Michael Williams (Area Studies Technical Services). The fellow may also partly work with Dennis Hyde (Slavic).

Penn Libraries - Education Commons

Located in the Weiss Pavilion, on the northeast side of Franklin Field, the Education Commons (EC) is a dynamic, collaborative space for teaching, learning, and innovation. As a hub for emerging technology, the EC aims to make its resources and services accessible to a diverse population, both by providing equipment users may not otherwise have access to and by creating a space where experimentation is celebrated, mistakes are welcomed, and users are empowered. As part of the Penn Libraries system, the EC is committed to providing a welcoming, inclusive, and supportive space for all Penn community members. Current initiatives to support this goal include developing a makerspace – the EC TinkerLab – and a gaming studio to play and create video games.

This fellow may have the opportunity to:

- Prepare and teach or co-teach (depending on the fellow's interest and comfort) a workshop involving makerspace activities and/or emerging technologies
- Assist with communication and outreach efforts
- Design and create promotional materials for services and workshops
- Help build the EC's web and social media presence
- Research interesting uses of emerging technologies in course instruction
- Design a patron survey to assess value of current and potential services
- Work with EC staff and staff at the Museum Library and/or Fine Arts Library to develop a project or workshop integrating the EC's services with theirs

We ask that this fellow have the following qualifications:

- enjoy collaborative work and have an interest in librarianship and a desire to explore the use of emerging technologies in formal and informal teaching and learning.
- experience with one or more makerspace and emerging tech activity/tool is helpful but not required (e.g. virtual or augmented reality, 3D printing/modeling, 3D scanning, basic robotics, microcontrollers, sewing, etc.)
- enthusiasm for experimenting with emerging technologies and developing new skills is much more important than prior experience!

This fellow will work primarily with Chava Spivak-Birndorf (Emerging Technologies Librarian, J.D. and Masters in Library and Information Science)

Penn Libraries - Kislak Center

Kislak Center for Special Collections, Rare Books and Manuscripts is a vibrant center of research, teaching, and learning at Penn. It houses hundreds of thousands of books, manuscripts, ephemera, and digital facsimiles from across the world and from time periods ancient to modern. This fellowship is designed to introduce students to some of the many facets of working in a special collections library.

This fellow may have the opportunity to:

- meet curatorial staff and to be introduced to current and ongoing projects in the Kislak Center.
- observe the research process and patron services in the Reading Room
- examine collections relevant to the fellows's own scholarship
- assist with pedagogy (classes and tours)
- sort gift collections
- observe exhibition preparation
- learn about digital humanities projects
- attend lectures and workshops as time allows

Projects and scheduling arrangements will be negotiable.

This fellow will work primarily with John Pollack, Curator of Research Services, PhD in English, and Betsy Bates, Director of Operations, but may also work with other staff.

Penn Libraries – Teaching, Research, and Learning (TRL)

The Penn Libraries Teaching, Research, and Learning (TRL) directorate drives initiatives that support the larger functions of teaching, research, and learning at the University of Pennsylvania. By collaborating with partners on campus and beyond, we explore new classroom technologies and methodologies, foster new forms of scholarship and research, and contribute to innovative and groundbreaking efforts at the core of education and information science.

This fellowship would sit in the Learning Design group. The Learning Design group provides programming, spaces, equipment, and services that enable new kinds of teaching and allows learners to explore new technologies and research practices. We create systems that make new forms of teaching and scholarship more accessible. Developing assignments, supporting courses, and fostering pedagogical experimentation, we collaborate with faculty and librarians to teach research better. We also work with students, providing instruction, opportunities to explore technology, and spaces for all kinds of learning. In addition, we study Penn students in order to better support them as they become empowered users of information and technology.

This fellow may have the opportunity to:

- Observe or develop plans for scaling access and support for PennImmersive (which focuses on VR, AR, 3D modeling and printing, tactile computing, AI)
- Help plan and implement teaching modules for digital assignments
- Gain first-hand knowledge about management and program-building in academic libraries

This fellow will work primarily with Katie Rawson, Director of Learning Innovation, PhD in American Studies, but may also work with other staff.

Penn Museum – Academic Engagement

The Academic Engagement Department of the University of Pennsylvania Museum of Archaeology and Anthropology supports instructional use of the Museum's galleries and collections for university classes and public audiences, student research on the collections, and extra-curricular programming for university audiences.

The fellow may have the opportunity to:

- Attend Academic Engagement team meetings
- Take part in discussions regarding academic and programmatic offerings at the Museum
- Attend planning meetings with faculty and staff across campus for Penn Museum-related events and courses
- Assist with day-to-day tasks, such as course planning, program management, exhibition update meetings
- Meet and connect with other museum professionals at the Penn Museum

We ask that this fellow have the following qualifications:

- An interest in museum collections and research, object-based learning, and/or university and public engagement.

Fellows will work primary with Anne Tiballi, Director of Academic Engagement at the Penn Museum, PhD in Anthropology, or with Sarah Linn, Research Liaison at the Penn Museum, PhD in the Art and Archaeology of the Mediterranean World.

Penn Online Learning Initiative

Penn's Online Learning Initiative (OLI) cultivates the integration of online programs across campus, supporting Penn's schools in the creation of online degree and non-degree programs. The University offers a range of online educational opportunities including certificates, continuing education, microcredentials, and six online degrees.

In 2012, Penn launched its first Massive Open Online Courses (MOOCs) and created an office dedicated to online learning. The office's preliminary focus was producing MOOCs with Penn faculty and advising Penn leadership on online initiatives. Now we serve as the nexus for information and resources on a range of online offerings and are a pathway connecting learners to Penn.

The fellow may have the opportunity to:

- Participate in university-wide working groups focused on digitalization of learning. These include groups focused on instructional design, marketing, and student services support.
- Read and discuss industry focused research on online learning.

This fellow will work primarily with Rebecca Stein, Executive Director, Ph.D. in Economics.

Penn Sustainability

The Office of Sustainability at Penn is housed in Facilities and Real Estate Services. Penn Sustainability is a University-wide initiative to advance environmental sustainability at the University of Pennsylvania, and coordinate programs to develop a more sustainable campus. President Amy Gutmann's signing of the Presidents' Climate Commitment in 2007 charged Penn to develop a strategic plan outlining the University's goals for carbon reduction.

To carry out this mission the Environmental Sustainability Advisory Committee (ESAC) was formed. The Environmental Sustainability Advisory Committee is a cross-campus collaboration that includes a representative group of faculty, staff, and students who advise the President on environmental sustainability issues. ESAC subcommittees developed recommendations for short- and long-term actions to address the Commitment's requirements. These recommendations now serve as the backbone of Penn's Climate and Sustainability Action Plan 3.0. Academics, Utilities & Operations, Physical Environment, Waste & Recycling, Purchasing, Transportation, and Outreach & Engagement. The Sustainability Office is currently in the process of implementing the recently released Climate and Sustainability Action Plan 3.0.

This fellow may have the opportunity to:

- Transportation:
 - o Create or conduct research for a sustainable vehicle purchasing guide
 - o Research alternate transit incentives
 - o Conduct a lighting survey of campus garages

- Resource Use and Sustainability:
 - o Quantify economic savings associated with using fewer or different resources
 - o Use historical data to map the water footprint of various areas of campus
 - o Research the feasibility of rooftop solar projects on campus
 - o Evaluate waste infrastructure and research best practices

- Education and Curriculum Development:
 - o Research opportunities for applied learning and using the Penn campus as a living lab
 - o Research how other universities using course sequencing to create cohesive sustainability undergraduate education

This fellow will work primarily with Natalie Walker, Sustainability Manager who holds a Master's of Science in Sustainable Engineering.

Philadelphia Museum of Art- Library and Archives

How do we sustain long-term infrastructure, discoverability, and access to information in today's digital world? Led by the Arcadia Director of the Library and Archives, the Library and Archives at the Philadelphia Museum of Art is working to create a sustainable, institution-wide information culture that will benefit data creation, access, and preservation, and ultimately make our data more accessible to the public. We analyze and document how our art information is created, used, and stored. Based on museum priorities, we work with staff to find ways to improve workflows, processes, and the leveraging of our art information.

We accomplish this foundational work through exploratory and active institution-wide initiatives such as an Andrew W. Mellon Foundation supported Art Information Commons grant, implementing digital asset management and a system across the institution, as well as exploring linked data through a Duchamp Research Portal collaboration with the Centre Pompidou and Association Marcel Duchamp.

The fellow may have the opportunity to:

- Shadow the Arcadia Director of the Library and Archives and key members of the Art Information Commons, Digital Asset Management, and Duchamp Research Portal teams
- Sit in on meetings related to culture change, strategy development, metadata creation and workflows, and collaborative idea generation
- Gain understanding of data sustainability and infrastructure opportunities and challenges for museums

Prior experience with data, libraries and archives is **not required**. Preference will be given to students outside library, archives and information science.

This fellow will work with Kristen Regina, Arcadia Director of the Library and Archives.

Philadelphia Museum of Art- Publishing

The Publishing department at the Philadelphia Museum of Art supports the museum's mission to extend the reach of its collections and exhibitions to a diverse audience as a source of delight, illumination, and lifelong learning. It furthers scholarly study through the publication of in-depth collection and exhibition catalogues, both in print and online, and develops popular books and handbooks for visitors of all ages. The Director of Publishing sets the strategic priorities for the museum's publishing program and oversees a staff of six responsible for managing individual book projects. Members of the Publishing department collaborate closely with content experts, including museum curators and outside authors, in shaping and executing book projects in a variety of scales. Current projects include a scholarly systematic catalogue of the museum's collection of American silver, exhibition catalogues on contemporary art and design, the launch of a new series of children's publications, and development of the museum's program of online scholarly publications.

The fellow may have the opportunity to:

- Shadow the Director of Publishing and meet with members of the department editorial staff to learn about current projects
- Gain understanding of the field of museum publishing and art publishing in general, including the various roles and positions available
- Learn the nuts and bolts of publishing books, from early planning, through editorial and design, to production and distribution
- Gain understanding of digital publishing opportunities and challenges for museums

Prior experience in editing or the publishing field not required.

The fellow will work with Katie Reilly, the William T. Ranney Director of Publishing, MA in Art History.

Price Lab for Digital Humanities

As the centerpiece of the School of Arts and Sciences strategic initiative Humanities in the Digital Age, the Price Lab supports innovative uses of technology in the study of history, art, and culture. We work in close partnership with the Penn Libraries and Penn Museum of Archeology and Anthropology to help train faculty and students in the latest digital tools and methods, encourage development of new computing-intensive humanities courses, and promote collaborative faculty-student experiments and research projects.

Established in 2015 with a gift from Michael and Vikki Price, as well as additional support from the Mellon Foundation, the Lab is located alongside the Wolf Humanities Center on the 6th floor of Williams Hall. The Price Lab serves as a central node of communication and exchange across Penn's many departments, centers, and schools with expertise and interest in the digital humanities.

Through seminars, workshops, lectures, and symposia, we provide forums for presentation and discussion of work by leading scholars from on campus and around the country. We are also pleased to host fellowships for undergraduates, graduates, postdocs as well as teaching faculty and research staff. Through our curricular initiatives, we oversee development of courses in digital methods specifically aimed at humanities majors and graduate students. These courses are designed to enhance students' ability to use computational tools, improve their collaborative learning and research skills, and better position them for 21st-century careers.

Fellows may have the opportunity to:

- Sit-in on meetings related project planning and development
- Gain first-hand knowledge about the process of managing a digital project from beginning to end
- Work collaboratively with other fellows or individually to build a simple digital humanities project such as an online exhibit, digital map, or interactive timeline

Fellows will work primarily with Stewart Varner, Managing Director of the Price Lab, PhD in American Studies and Masters in Library and Information Science, but may also work with other staff.

Perelman School of Medicine - Office of Research and Diversity Training

One of the missions of the Office of Research and Diversity Training Programs is to recruit and provide educational and research training opportunities to scholars from populations that have traditionally been underrepresented in the biomedical sciences, including those who are from underrepresented minority groups (URM) groups or are disadvantaged or disabled.

This fellow may have the opportunity to:

- Coordinate program activities for the 2020 Summer Undergraduate Internship Program (SUIP).
- Program activities include: orientation, faculty seminar series, social events, research symposium, RCR training, etc.
- Coordinate workshops for SUIP: EHRS safety training, animal training, admissions, and career panel.
- Work with office staff to develop a budget for the summer program.
- Participate in office meetings to discuss academic and professional development workshops and activities for SUIP.
- Communicate with related campus offices, e.g. Hospitality Services, Weingarten Center, BGS, to coordinate activities and resources for students participating in SUIP.

This fellow will work primarily with Mr. Nagee Brown, Program Coordinator, and Dr. Arnaldo Diaz, Assistant Dean for Research Training Programs.

Science Outreach Initiative

The Science Outreach Initiative (SOI) serves faculty and other researchers in the University of Pennsylvania's School of Arts and Sciences by helping them develop outreach program ideas and proposals, locating potential partners, and promoting information and resource exchange among all of Penn's STEM outreach programs.

The SOI was established in 2012 to encourage and support faculty participation in initiatives towards the development of research efforts which will more broadly impact public understanding of science. Advancing the frontiers of science through research is crucial to our Nation's future, as is the development of a more scientifically literate citizenry. Major external funders like the National Science Foundation now place an emphasis on "Broader Impacts" -- initiatives which work towards this scientific literacy goal. The SOI staff will guide interested researchers through the process of effectively responding to outreach requirements of funding agencies, including the "Broader Impacts" criterion.

This fellow may have the opportunity to:

- Review and produce content for SOI's website and social media platforms
- Assist with communication and outreach efforts
- Collect data and create databases
- Promote SOI events
- Assist with grant proposals
- Assist with program implementation (either at Penn or in collaboration with the National Alliance of Broader Impacts)
- Compile information for a newsletter promoting science opportunities for high school students
- Assist with SOI programs that place high school students in Penn labs Assist with the planning of Penn's many activities associated with the Philadelphia Science Festival (staged in late April)

We ask that this fellow have the following qualifications:

- background in the natural sciences
- some level of experience with volunteer work and/or public outreach.
- interest in relationship building and partnerships, as this is what much of SOI's work is structured around

Fellows will work primarily with Kristen Coakley, Assistant Director of SOI, PhD in Biomedical Sciences.