

LIBRARY TECHNOLOGY

UNRIVALED RESOURCES FOR A COMPETITIVE ADVANTAGE



PennState
University Libraries

Message from the Dean

Greetings,

As this spring edition goes to press, flowers and trees are in bloom and we are abuzz with exciting events! We are watching the rapid evolution of our new Collaboration Commons and Central Atrium, eager to celebrate its Fall 2019 opening with you, and have just welcomed Leo Lo, Associate Dean for Learning, Undergraduate Services, and Commonwealth Campus Libraries. We look forward to announcing our Associate Dean for Collections, Research, and Scholarly Communications very soon.



Like the high-speed pace of modern progress, today's technology — with its scope of impact and rapid innovation — has an enormous effect on our daily lives at home, school, work and all places in between.

This is emphatically true in academic research libraries. Today's students and faculty rely on seamless access to technology-driven information resources and services, and for study and research spaces that keep up with their demands. We work constantly to make our resources, spaces, and services as tech-supportive and easily accessible as possible, and to anticipate the needs of technology users, whether in our spaces or working remotely.

Many benefits of technology in the library can be found behind the scenes, as we ensure data systems and digital content licenses and subscriptions work seamlessly with each other within the background of our websites. Many University Libraries employees are technology experts, and having that knowledge is vital to ensuring students and scholars can access the information they seek.

Occasionally, our tech is on display, especially when we evolve spaces to welcome new partner-based services. Two examples are Pattee Library's Maker Commons for centralized 3-D printing services and, most recently, virtual reality centers for immersive learning opportunities. Learn more about this emerging service on page 8.

We hope you enjoy this special edition of *The Library*, highlighting just some of the many ways we rise to the occasion with technology.

Sincerely,

A handwritten signature in black ink that reads "Barbara I. Dewey".

Barbara I. Dewey,
Dean of University Libraries and Scholarly Communications

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On the cover: Luz Sanchez Tejada, a Spring 2019 Penn State graduate with an undergraduate degree in environmental systems engineering and a former peer research consultant in Pattee Library's Search Bar, demonstrates how to access the University Libraries' digital badging program online. Read more about digital badges on page 4. Photo by Steve Tressler/Vista Professional Studios.

Correction: Shelby Hallman and Ashley Miller, two former conservation interns referenced in a photo caption in "Focus on Interns" (page 4, Fall 2018 *The Library*), were identified as Bednar interns but actually were supported by the Sandra K. Stelts and Ronald L. Filippelli Undergraduate Internship in Rare Books and Manuscripts and Historical Collections and Labor Archives. We offer Sandra Stelts and Ron Filippelli our apologies for the error.

Code for Her

Free instruction in computer programming to build confidence — and diversity

Code for Her is a free, seven-week beginner-level workshop held in fall and spring semesters to help female-identifying and gender-diverse participants build confidence in learning basic computer programming skills. Open to Penn State students, faculty, and staff, the program was envisioned by Carmen Cole, information sciences and business liaison librarian and the 2018–2021 Sally W. Kalin Early Career Librarian for Learning Innovations.

The program's goal is to create and build a supportive, inclusive, safe, and empowering learning environment for its participants. It's important that participants feel comfortable asking questions, especially in a field where, according to numerous statistics, female-identified and gender-diverse perspectives are not frequently heard.

The workshop's approach focuses on community and active learning methods to increase engagement and retention of the subject material. Beyond the curriculum, its aim is to foster fun and positivity within the learning environment, something Cole hopes will help contribute to the tech community at Penn State.

Inspired by the nationwide after-school program Girls Who Code, offered to girls in grades 3–12 with a mission to help close the gender gap in technology, Cole launched Code for Her at Penn State during the Spring 2018 semester as a pilot program. The workshop initially focused on a student audience and relied on volunteer instruction.

Early interest expressed among faculty and staff led Cole to expand the program in Fall 2018 to include a workshop sec-

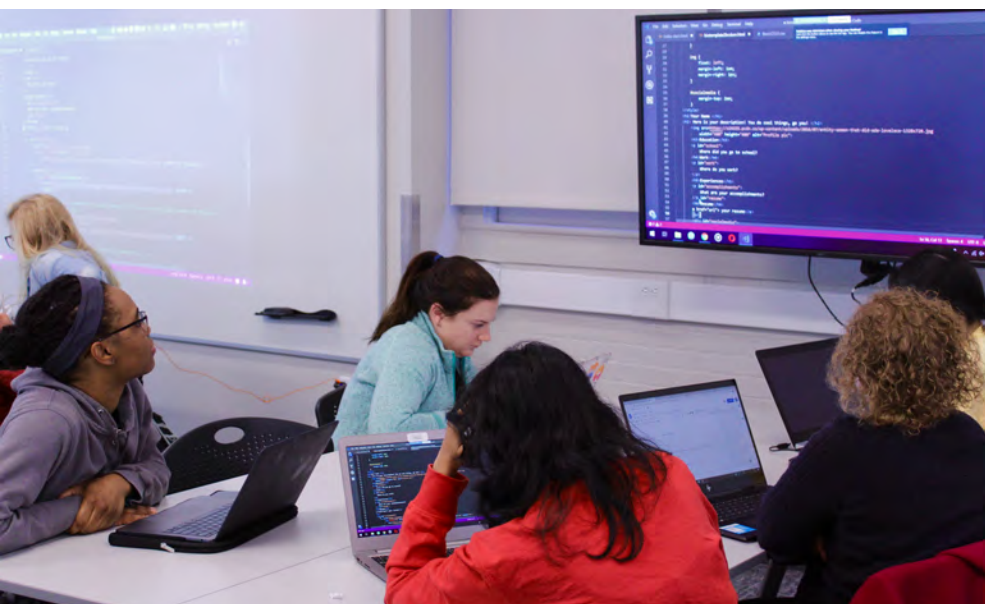


tion for faculty and staff. Funding available since Summer 2018 enabled her to grow the program, hiring coding workshop consultant Joselenne Peña, a College of Information Sciences and Technology (IST) Ph.D student in informatics, and student intern Kathyleen O'Leary, a University Libraries Bednar intern and a junior IST major.

For the Fall 2018 student and faculty/staff workshop sections, Cole received 221 total applications, among which she could seat only 25 students per section. In response to growing interest, Code for Her branched out, scheduling a single-evening workshop in Spring 2019 in Paterno Library.

Interest in Code for Her among other academic libraries also has grown. Cole and Peña offered a statewide webinar to Pennsylvania academic librarians last fall, and Cole has given national presentations about Code for Her, as it is the only free program of its kind for college students and university employees yet identified. Some of her Libraries colleagues have called it “pioneering.”

Cole plans to continue offering a Code for Her workshop in the fall and hopes to find a larger classroom on campus, to accommodate additional participants.



Digital Badges

Skill-building lessons for students' proven research savvy — and librarians' innovative impact

Digital badges, also known as micro-credentials, are an online method for individuals to gain new, incremental skills and knowledge through self-paced achievements. Participants earn badges to share evidence of their learning, especially on personal and social media websites, such as LinkedIn.

Badge earners have control over what data is displayed, such as the date earned, who issued it, or actual work submitted to earn it. Presenting these skills in a non-traditional way also gives badge holders another topic to discuss during job interviews. Many companies and organizations are implementing digital badging programs for employees' professional development and lifelong learning.

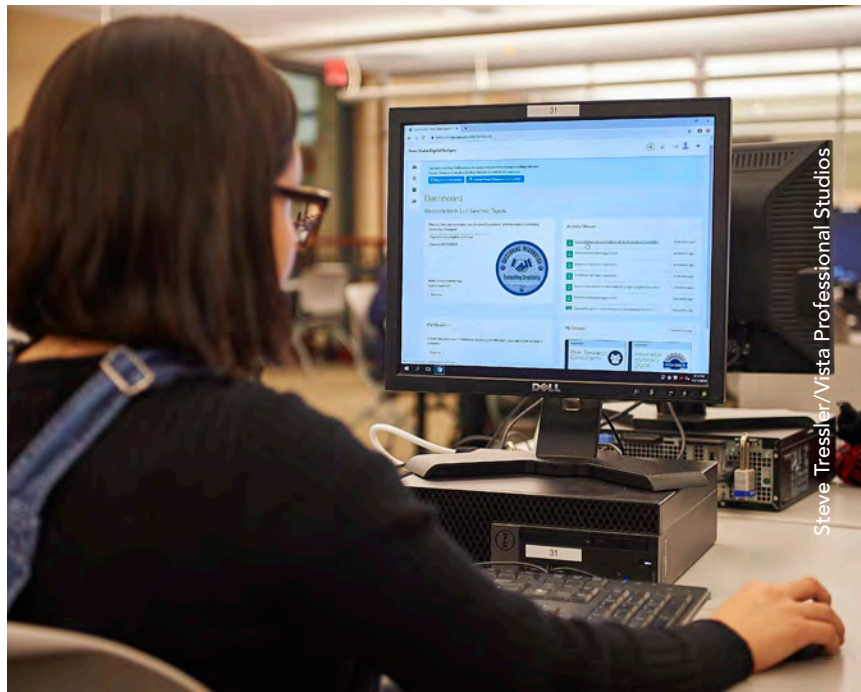
Students can earn digital badges on 15 different topics from the University Libraries through partnerships with instructors. They encourage students' participation because they see the program's value in helping students understand academic research skills and in receiving verifiable proof of their knowledge.

The Libraries' badges cover a variety of information literacy skills that support all students' academic success, such as Academic Integrity, Citations, and Evaluating Web Credibility. Each is composed of three to six steps required for completion, usually by composing responses to questions about content learned in that step. Badges are issued to students after a librarian evaluates their responses to verify that each student understands a topic.

Since 2013, when the digital badging program was implemented, the Libraries has issued more than 4,600 badges in 70 course sections, with 16 librarians from four campuses serving as evaluators.

For librarians, digital badging has introduced a new mode of instruction into the curriculum, increasing librarians' instructional reach. For students, badges and their learning opportunities help them enhance their skills and give them confidence to pursue other badging programs post-graduation.

To launch the Libraries' program, its lead, Emily Rimland, information literacy librarian and learning technologies coordinator, acknowledges the Kalin Early Career Librarianship. Rimland held the endowed librarianship from 2013 to 2015, which provided her time and funding to grow the program.



Steve Tressler/Vista Professional Studios

Rimland and Torrie Raish, online learning librarian, have worked on digital badging since the program's inception. Initially, they contracted a research organization to conduct a national survey of employers for their feedback about the badges and information literacy skills. Recently, administrative funding allowed the team to hire graduate assistant from the College of Information Sciences and Technology to design a research study focused on correlations between students' badge completion and course or assignment grades.

The library profession has noticed the significant impact of Rimland and Raish's work. Rimland received the American Library Association's Library Instruction Round Table 2018 Librarian Recognition Award, which recognizes an individual's contribution to the development, advancement, and support of information literacy and instruction. Recently, Raish was named the Association of College and Research Libraries (ACRL) Distance Learning Section's 2019 Routledge Distance Learning Librarianship Conference Sponsorship Award recipient. The award honors an ACRL member working in the field of, or contributing to, the success of distance learning librarianship or related library service in higher education.

With additional philanthropy, the team hopes to introduce artificial intelligence (AI) using machine learning to help expedite the badge grading process.

PressReader

Public access to global news via browser, app ... and printer

An “all-you-can-read digital newsstand,” the PressReader website is on the University Libraries’ list of more than 870 online library databases accessible to all Penn State students, faculty, and staff University-wide. (The full list is at libraries.psu.edu/databases.) It’s also one of the ways the Libraries’ use of technology supports the University’s mission to promote global awareness and connection for students, and provides international students with easy access to news and leisure reading content from their home countries and in their first language.

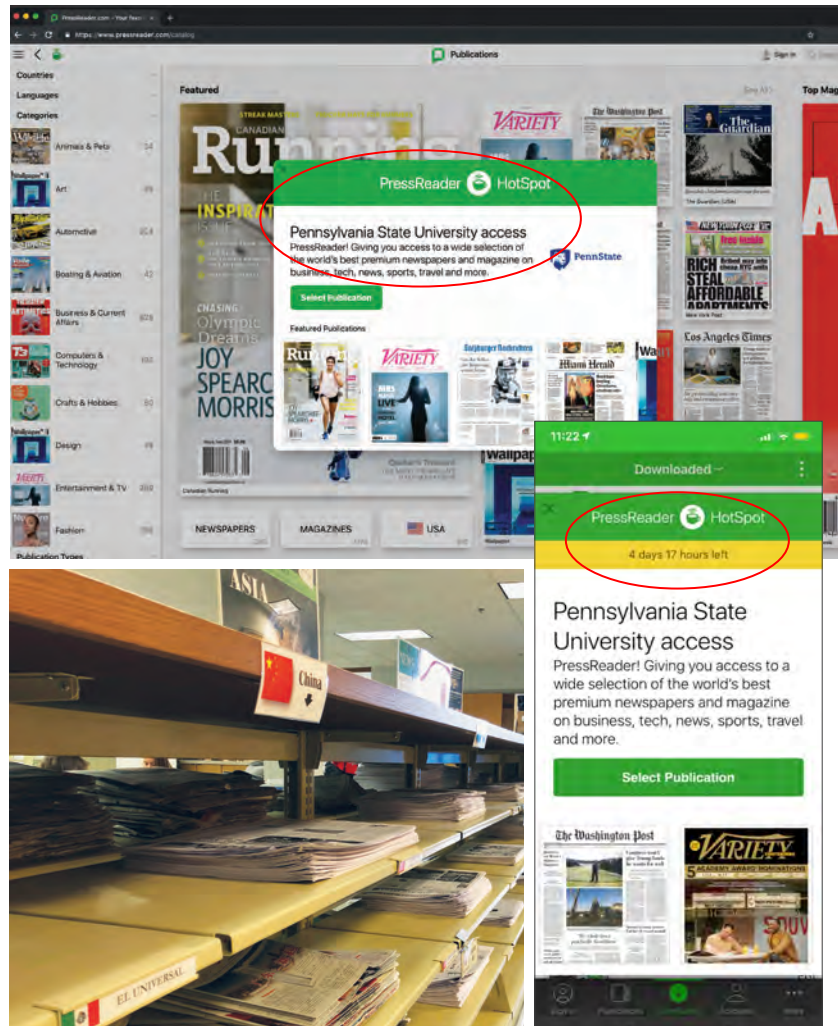
PressReader offers unlimited access to more than 2,400 current newspapers and 3,750 general magazines from 150 countries and in 60 languages. These are not text-only article collections found in other academic sources but the full-color digital format of the print publication, complete with photographs, stock pages, charts and graphs, obituaries, recipes, puzzles, advertising, and comics.

The databases’ mobile app includes settings that auto-deliver new issues and enable the user to download and save issues on a mobile device. Plus, public wifi hotspots through their subscribing partners let users tap into content at nearly 12,000 locations worldwide. PressReader’s typical subscribers are businesses, especially in the travel and hospitality industries, which provide complimentary access to their guests. Subscribers also include libraries and institutions, including the New York Public Library and the University Libraries.

The Libraries’ Pattee Library and Paterno Library location is one of a small number of university and college libraries to also host a PressReader public hotspot. All visitors — actively affiliated with Penn State or not — who download the free PressReader app to their mobile device while in the library are automatically granted seven days of free access to PressReader’s content. Every time a visitor returns to the library and opens the app, free access is renewed. In recent years, both the Nittany Lion Inn and The Penn Stater Conference Center Hotel have followed in the Libraries’ footsteps and host PressReader hotspots at their locations.

PressReader is a key component of the Libraries’ global newspaper and news magazine collections, which are accessible on the first floor of Paterno Library adjacent to the Starbucks café, open whenever the library is open. Larry and Ellen Foster Communications Librarian Jeff Knapp and News and Periodicals Assistant Jackie Dillon-Fast provide subject expertise about PressReader as well as the news collections.

What is distinctive about the way the University Libraries uses PressReader is that staff print daily editions of some of



Access to PressReader content is available University-wide via the Libraries’ databases link, and in Pattee Library and Paterno Library via the PressReader app and public HotSpot (circled in red; the HotSpot activates free access for a week via the app) and current printouts of international newspapers shelved in news collections.

its most popular international newspaper titles, offering the content to members of the public who don’t have a mobile device available. Staff often welcome family members of international students who accompany their students to Penn State and otherwise may not be able to read news about home. Also, students report feeling happy to see news from their country or region displayed in such a popular spot in the library.

Offering free online access to worldwide news content using this technology-based service is a novel way the Libraries supports the University’s strategic objective of enhancing global engagement while offering a welcoming and inclusive library environment.

e-Textbooks

Course materials for student access and searchability, without sticker shock

The left screenshot displays the interface for 'HBR's 10 Must Reads on Strategy'. It includes a book cover, title, authors (Michael E. Porter, W. Chan Kim, and Renée A. Mauborgne), and availability information. Options include 'Read Online', 'Download Book', and 'Download PDF Chapter'. The right screenshot displays the interface for 'Big Java: Late Objects' by Cay S. Horstmann. It includes a book cover, title, author, and availability information. Options include 'Read Online', 'Download Book', and 'Download PDF Chapter'. Both interfaces also provide bibliographic information and a description of the book.

The e-book program, started as University Libraries–World Campus partnership, has expanded to two pilot programs for University Park students. Titles available to students include these paperback texts for a previous World Campus course (left) and for the College of IST summer course IST 140: Introduction to Application Development, which is 1,056 pages as a physical text.

Penn State's successful e-book program, which began in Fall 2017 as a program for Penn State online students, is a partnership between the University Libraries and the World Campus. The e-book program provides direct, online access to required course materials integrated with the rest of the student's course content in Canvas, the University's course management system.

This access is provided at no additional cost to students, helping them avoid having to purchase or rent textbooks and other required materials. Available e-books licensed by the University Libraries must meet criteria that do not limit or restrict access based on conditions such as simultaneous views by multiple users or total number of views.

The program's great success prompted an expansion to University Park with campus pilots for students in two colleges, to help residential students also avoid textbook costs. In the Fall 2018 semester, the first on-campus pilot began with the College of Information Sciences and Technology (IST), with a total enrollment of nearly 1,700 undergraduates. A second pilot began in Spring 2019 with several programs in the College of Engineering — the largest college by undergraduate enrollment, with more than 8,000 students.

Like the World Campus program, instructional designers and Libraries employees reviewed IST and engineering instructors' lists of required course materials to identify titles that the Libraries could purchase or license without access limitations as e-books, to be made available to students at no charge. By default, all titles available that fit the Libraries' criteria were linked to and embedded with instructors' Canvas course content.

For the Spring 2019 semester, a total of 264 e-books were available for 159 World Campus courses, with some courses using more than one e-book. Class sizes were significantly smaller than in previous semesters, with a mean class size of 25.7 students, compared with 35.5 students for Fall 2019. Even so, the average book price rose by almost \$5, and the resulting potential savings among students was \$475,954.

While the first pilot program among University Park campus engineering students included only 35 e-books among 13 courses, their impact was significant. With a mean class size of 62.5 students, the total potential savings those e-books provided to students was \$266,562.

Students who have been surveyed about their experience with the e-book program are generally supportive, with 60 percent choosing to use only the e-book for their class. One student said, "Thank you for offering this great benefit. I prefer physical books in general. However, I was glad to take advantage of this offering. I'm very grateful to be able to save the money I would have spent on the physical text."

Another student noted, "This is a great resource. I enjoy having digital copies of the books we use, as opposed to purchasing hard copies or renting. [It] makes my studying experience much better because I can easily search the text and access it whenever I need to, without hauling a cumbersome book around."

Each e-book title added to the University Libraries' collection also is available to all current Penn State students, faculty and staff, searchable through the Libraries' online catalog and accessible to anyone with Penn State WebAccess login credentials. For more e-book program data, see "Facts and Figures," page 13.

Virtual Reality

Immersive simulations to help students — and librarians — study

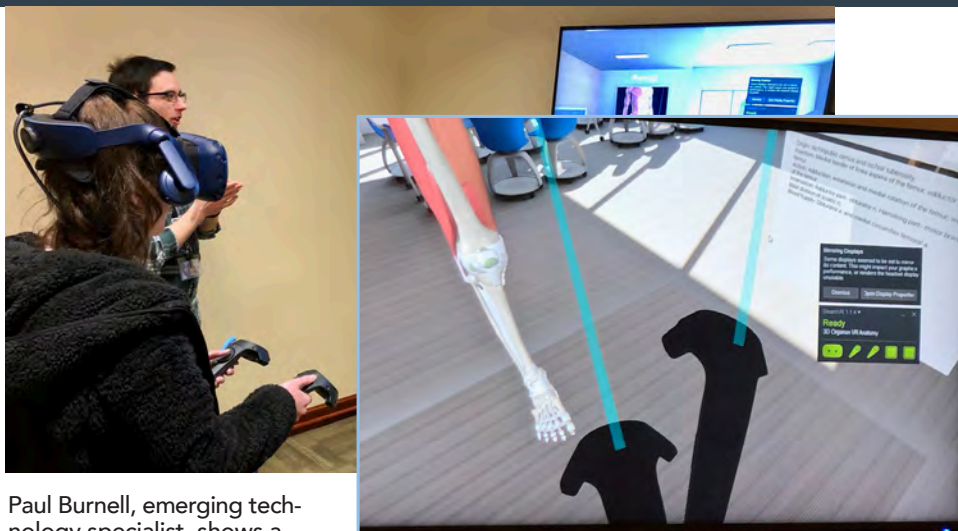
In Fall 2018, the University Libraries began investigating the use of immersive technology known as virtual reality, or VR, to assist with undergraduate student learning. Already well known for its use in video games, VR is experienced with the use of a headset and two handheld controllers. The head gear includes a stereoscopic display and head motion tracking sensors. The user sees a 360-degree view of a simulated, responsive environment and is encouraged to interact as if they were physically in that space.

One use case for VR technology that librarians have identified is for studying human physiology and anatomy. Unlike medical students, many undergraduate students don't have access to human cadavers to study how systems like skeletal and muscular structures function.

Since 2013, Valerie Lynn, the Mary M. and Bertil E. Lofstrom Library's head librarian at Penn State Hazleton, has been collaborating with Amie Yenser, Penn State Hazleton assistant teaching professor of biology and science, studying how introducing emerging technology into health sciences classrooms impacts students' academic success. When they began discussing ways to introduce and study immersive instruction, they worked with Penn State's Teaching and Learning with Technology, visiting its Dreamery space at the University Park campus to explore VR equipment and software options.

In 2017, University Park Health Sciences Liaison Librarian Christina Wissinger received a grant from the National Networks of Libraries of Medicine Mid-Atlantic Region (NNLM/MAR) to work with Lynn, Yenser, and Kat Phillips, University Park nursing and allied health librarian, to provide VR resources to anatomy and physiology students at the Hazleton campus.

Last fall, while Lofstrom Library installed a freestanding VR station as part of the NNLM/MAR grant, University Park's Pattee Library, was able to provide VR resources through a Libraries wish list gift from Dr. Patricia Green and the Libraries' Harry W. Weller M.D. and N. Jean Weller Libraries Sports Sciences and Medicine Archives Endowment. One Sidewater Commons group study room was outfitted with a wall-mounted, high-definition screen. Both locations have a PC-based computer or laptop installed with health-related VR software, and the Pattee location also has Blausen Medical Virtual Reality Modules from Penn State alumnus and donor Bruce Blausen. During fall and spring classes, students enrolled in anatomy and physiology courses at Penn State Hazleton and kinesiology students at the University Park campus received first-priority access to reserve the VR equipment.



Paul Burnell, emerging technology specialist, shows a kinesiology student how to use the VR gear and 3D Organon Anatomy (onscreen, inset) in Sidewater Commons, Pattee Library.

The Fletcher L. Byrom Earth and Mineral Sciences (EMS) Library also has VR service installed in a group study room. It is positioned as a “pan-STEM” center for use especially by students and faculty across the sciences, technology, engineering, and mathematics, or STEM, fields to enhance their learning, research, and instruction. An interesting feature of the room is that its monitor swivels for exterior viewing through large glass windows, enabling a small audience to follow the VR user's real-time interaction in a group-instruction setting.

All three VR Centers offer tutorial-level applications to help new users become accustomed to using the equipment and the interactive environment, which can cause motion sickness in some users. Each location also has select standard and advanced content available for individual and course-related use. Several STEM-related titles were created at Penn State, such as Physical Geology Field Trip for Geosciences 001 students, and Volcano Basic, useful to students enrolled in Geosciences 434, Volcanology.

In Fall 2018, a VR module of a geologic field trip to the Bald Eagle Formation near State College was a required part of Associate Professor Peter LaFemina's Geosciences 001 course. Both EMS and Sidewater VR centers, along with the Dreamery, hosted more than 70 students completing the assignment. In Spring 2019, 16 student volunteers tested the newest module, a virtual field trip of the Salona Formation in State College, which will be incorporated into the Geosciences 001 curriculum in Fall 2019. Both virtual field trips were developed by Professor of Geography Alex Klippel's ChoroPhronesis research group.

More information about the Libraries' VR Services is available at libraries.psu.edu/services/virtual-reality-services. For data about VR center usage, see “Facts and Figures,” page 13.

Digital Scholarship

Digital and data research services, redefining today's academic library support

The University Libraries is continuously enhancing its capacity to support computational analysis and scholarly publishing, aligning with Penn State's priority to drive digital innovation.

According to its department head, Cynthia Hudson-Vitale, the Libraries' Department of Research Informatics and Publishing, or Ripub (pronounced "REE-pub"), was created "to enhance the technology-driven teaching and research capacity of the Penn State community." Ripub supports the developing needs of students for technology-related research and learning through computational analysis and new modes of publishing.

"Ripub partners with students, faculty, and staff to consult, provide training, and support projects in the areas of data management, digital humanities, mapping, statistical analysis, and open publishing," Vitale said.

Ripub is composed of five service centers based on the tenets of openness, innovation and technology, collaboration, and support. Each unit — Digital Humanities Services, Research Data Services, Open Publishing Services, Donald W. Hamer Center for Maps and Geospatial Information, and Data Learning Center — supports a web linked contact person or an online scheduling tool. Students can make appointments for assistance directly through the web or via email.

For example, if a student wants to analyze the tweets related to Hurricane Harvey before, during, and after its landfall to understand how people reacted, he or she could work with Digital Humanities Services to capture relevant tweets and conduct quantitative text analysis of those social media messages with tools such as AntConc.

Then, the student could map the origins of those tweets using ArcGIS with the GIS team in the Hamer Center for Maps and Geospatial Information, and publish the data in Penn State's institutional repository, ScholarSphere, with Open Publishing Services.

"What drives our work is a genuine curiosity about the questions we receive and a commitment to student success," Vitale explained. "Technology and alternative modes of publishing have provided new ways of understanding our world and accessing information, and our department is propelled to support students as they learn and explore these areas."

Vitale hopes that the innovative expertise her team offers, which falls outside the traditional offerings of library services, will give students a competitive edge by introducing them to new technology and cutting-edge support.

Vitale and the Research Informatics and Publishing team may offer a dizzying array of diverse services and support, but as she pointed out, their vision couldn't be simpler. "Ripub is all about supporting the technology-enhanced learning and research happening on campus."

Several Ripub departments' digital scholarship services have been described collectively in an online portal known as Open at Penn State. An initiative recommended by an Open Access task force charged by Penn State Provost Nick Jones, Open at Penn State is found online at open.psu.edu.

The site includes Open Publishing Services; Open Research, encompassing the Data Learning Center, the Hamer Center for Maps and Geospatial Information, and Research Data Services; and ScholarSphere, the University's open-source digital repository for publications, data, and presentations, which is maintained by Libraries information technology staff on the Digital Scholarship and Repository Development team.

PennState University Libraries

Open at Penn State

OPEN AT PENN STATE

Penn State's open initiatives are crucial to the advancement of affordable, discoverable, and equitable access to information, scholarly research, educational resources, and research data within the University community. The University Libraries and its partners across Penn State collaborate to reduce barriers to the sharing, access, and use of knowledge and information to drive innovation, engage our students, enable affordable access to education, and generate equal opportunities for all.

Open Access	Open Educational Resources	Open Publishing
Open Access is a publishing model that makes works freely available, eliminating the cost associated with obtaining and using scholarly works. Open Access allows you to share your work with a broad audience free of restrictions.	Open Education at Penn State seeks to broaden access to learning and training traditionally offered by a formal education system through resources, tools, and practices that can be fully used, shared, and adapted in a digital environment.	University Libraries' Open Publishing program publishes open access materials such as full-featured electronic scholarly journals, bibliographies, monographs, topical web portals, and conference proceedings.
Read More	Read More	Read More

PSU Press Unlocked	Open Research	Open Source
Unlocked is the Press' open access initiative, aligned with the Press' mission to promote and advance scholarship and discourse through the promotion and dissemination of knowledge as widely as possible.	Open Research is conducted to support free and open-source software, making it accessible and reusable. Data from research is quickly available to anyone for investigation and reuse to promote the creation of new scholarly materials.	University Libraries has made several important contributions to open-source software, including our open repository, ScholarSphere, our public website platform, and a number of other collaborative research initiatives.
Read More	Read More	Read More

ASK A LIBRARIAN

Tech and Access Services

Using and providing tech hardware and software to improve student experiences

The Libraries' Access Services departments cover a wide range of operations and services, including adaptive technology and services, collection maintenance, course reserves, lending services, and interlibrary loan. All of these units use an array of technology to optimize their work and to assist students, directly or indirectly.

The Lending Services Department also distributes a wide array of digital devices, including laptops, iPads, and Chromebooks. Basic, business, scientific, and graphing calculators also are available for borrowing. Lending services are integrated with the Libraries' online catalog, so those searching for books or media can request a title via the popular "I Want It" service. No matter where the student is located or which Penn State library holds the title, it will be sent to the student's designated campus library for pickup. When the item arrives, the student will be notified via email or text.

Library collections held in off-site shelving facilities are made available through the same convenient service. The inventory management system used there was created by Libraries staff to track items by location and to maximize space. It, too, is integrated with the Libraries' catalog, enabling employees to rapidly locate, retrieve, and deliver materials.

The Course Reserves service also is integrated with the Libraries' catalog, so students can check out available textbooks for two-hour, in-library borrowing periods. Materials on reserve are searchable by their associated course number or instructor name, so students can view titles of required textbooks for their courses and their availability. Online content called e-reserves is integrated with Canvas, the University's course management system, where instructors post syllabi and course assignments and can request links to material available online via the Libraries' many licensed databases and purchased e-books in the catalog, to give students all-in-one access to course-related materials.

The same tools used to coordinate materials delivery for students are used internally to streamline and accelerate processes. Collection Maintenance, the stacks management department, employs wireless scanners to read barcodes and wireless laptops to update records in the stacks without having to move books off shelves.

On occasion, researchers may find that they need material not available in the Libraries' collection. The Libraries holds agreements with other academic libraries worldwide, and the Interlibrary Loan Department requests books, media, and articles for our researchers from those partner libraries via networks of reciprocal systems and services. Just like the "I Want It" service, books are delivered to the student's location, often within

Adaptive technology, such as this single-handed ergonomic keyboard, is available through the Marion MacKinnon Adaptive Technology and Services department.



days. Students are notified via email when requested items are available, and can elect to receive text message notifications. The department saves students' time and a trip to the library by delivering digital scans of articles or book chapters that are available in our collection directly to them, often within hours.

The affordability of education is enhanced when students find their reading materials available from the Libraries' general collections, Course Reserves and Interlibrary Loan.

One department that supports students and other researchers with specific needs has evolved its services significantly because of tech advancements. The Marion MacKinnon Adaptive Technology and Services department provides alternative formats of academic materials to individuals with disabilities. Specialized software and assistive equipment are available for use as well as assistive technology devices available for borrowing on a short-term basis.

Accessibility-related services in the University Libraries predate the federal Americans with Disabilities Act, enacted in 1990, by nearly a decade. Initially, available equipment included a Visual Tec machine, which magnifies print for the visually impaired, audio tape recorders for making recordings, and tapes with pre-recorded materials.

Today, students, faculty and other visitors have access to several software applications. Duxbury translates Microsoft Word documents into electronic Braille files. Jaws is a screen reader application for individuals with low vision, and Kurzweil 3000 is a screen reader application for individuals with neurologically based processing disorders causing difficulty with reading, writing, and math. Omni Page is a scanning application with optical character recognition (OCR) processing capabilities that makes text machine readable, and ZoomText is computer screen magnification software.

The department also offers adjustable-height desks to accommodate wheelchair access; a Braille, which is similar to a typewriter, for converting word processing into tactile Braille documents; and a tactile image enhancer that raises lines on a printed page to create an image to be studied by fingertip.

Omnicharge

The power of tech to benefit a library — and campus-wide infrastructure

Recently, Penn State has been turning to vendors to provide value-added amenities, offering on-campus conveniences including pay-per-use bike-sharing and car-sharing services. These third-party services typically operate via mobile app, with the user entering a credit card number to access the service. In summer 2017, the University Libraries discovered an opportunity to test a relatively new vendor service, Omnicharge, to help address a common student frustration — inadequate electrical outlets to power tech devices.

Originally called Oomf, the vendor provided 24-hour loans of Omnicharge portable power banks mighty enough to operate a laptop computer for several hours. Chris Holobar, manager of lending and reserve services, had discovered the service and decided to pilot its use in Pattee Library and Paterno Library. He had acquired Pattee Library and Paterno Library's first Kwikboost mobile device charging stations in 2014, adding to them in 2016 and 2018 to ensure at least one is now on every floor of Pattee/Paterno and at each University Park branch library.

This experiment in partnering with an unknown vendor had promise, as it relieved Libraries employees of most hands-on management and the Libraries' liability of the devices. Users download the app and create an account directly with the company, entering a credit card number to enable use of a power bank. However, its use remains free as long as the user returns and docks the device back into any of its charging stations before the 24-hour loan period expires. (The Libraries pays an annual subscription fee per power bank.)

Its greater benefit, however, was that it addressed a common frustration among students in the library — not enough electric outlets, especially in older parts of Pattee Library and Paterno Library, such as the stacks, to plug in their laptops and mobile devices. The power banks have built-in USB charging ports and adjustable-voltage DC output.

Holobar received three charging stations, each holding 10 power banks. After initial location testing, he placed two stations on the first floor of Paterno Library and one in the Fletcher L. Byrom Earth and Mineral Sciences Library. An online dashboard provided him with a year's worth of usage data and also helped identify devices missing past their loan period, not charging, or malfunctioning. His staff only had to look in on the stations regularly to make sure neither station was fully docked with excess chargers nearby but not docked.

During two years of working with the company, which changed its name to Omnicharge, the Pattee/Paterno power pilot did experience challenges. Pins in docking stations dropped, preventing chargers from docking properly; first-generation stations, which updated wirelessly, were served by a mobile carrier



Omnicharge power banks have plug-in options for many devices, expanding the Libraries' charging options from Kwikboost charging stations (right).

with low signal strength in the region, making connections even less reliable inside the library.

The third, current generation of devices are hard-wired with improved components and reliable service, so by the end of 2018, the power banks had gained enough traction that Holobar added a station in each of the other three University Park branch libraries and doubled the original two in Pattee Library and Paterno Library.

By coincidence, Penn State operations engineer Cyle Vogt discovered the library's use of Omnicharge and reached out to Holobar. An Office of Physical Plant utility services employee, Vogt was keenly aware that expanding University Park campus electrical infrastructure in hundreds of aging classroom and office buildings to meet current demands was unrealistic. Omnicharge provided a potential solution.

Vogt negotiated a favorable five-year contract for existing and new Omnicharge stations, including having Omnicharge hold users' overdue fees in escrow for the account holder's future use and a customized app to locate nearby charging stations and available power banks. The University Park Undergraduate Association also pledged \$15,000 toward the purchase of 10 to 15 more stations, to be installed in buildings across campus. The Student Fee Board, Information Technology, and the HUB-Robeson Center will cover the balance of the new stations' cost.

The University Libraries, via Holobar, has agreed to continue managing the service and act as the campus-wide primary account holder. It's a "powerful," cost-saving partnership to support student productivity and financial stewardship. For data about Omnicharge usage at University Park libraries, see "Facts and Figures," page 13.

Exhibits



The Secret Lives of Girls and Women

through Sept. 1, 2019

Special Collections Exhibition Gallery, 104 Paterno Library

Throughout history, various elements of the female experience have been unrecognized, held secret, or considered taboo. *The Secret Lives of Girls and Women* examines the spectrum of such “secrets” as found in archival materials from the Libraries’ Eberly Family Special Collections. Secrets of all sorts are unveiled: literary and bookish ones; those about beauty, health, and sexuality; funny secrets and serious ones; those imagined and those true. Depending on the time, place, and circumstances, there is great power in keeping secrets; in others, there is great power in revealing them. Visitors will discover diaries, letters, magazines, rare books, artists’ books, and more. See page 15 for details about curator-led tours this summer.



The Future is Now: Media Tech Services and Adaptive Technology

through Sept. 16, 2019

Diversity Studies Room, 203 Pattee Library

In the 21st century, the University Libraries is so much more than a collection of book repositories. *The Future is Now: Media Tech Services and Adaptive Technology* exhibit offers a glimpse of some of the remarkable resources available through the Libraries’ Media and Technology Support Services and the Marion MacKinnon Adaptive Technology and Services departments. On display are examples of state-of-the-art equipment available from MediaTech, also known as MTSS, which offers Penn State students free equipment loans and technology services year-round. The exhibit also showcases resources available through the Marion MacKinnon Adaptive Technology and Services Department, which offers tools and equipment designed to help individuals with a disability or impairment work around their limitations.

The Future is Now: Libraries in the Digital Age

Through September 16, 2019

Sidewater Commons, 102 Pattee Library

Concurrent with the *The Future is Now: Media Tech Services and Adaptive Technology* exhibit in the Diversity Studies Room, *The Future is Now: Libraries in the Digital Age* explores how libraries are changing and what to expect from the University Libraries in the future. Topics featured in the exhibit include future trends in space planning, accessibility, and virtual reality. All showcased book titles are part of the vast number of print volumes, online resources, films, maps, and archival materials in the University Libraries’ collections.

Coming in Fall 2019

Stonewall Riots, New York, N.Y., 1969

Diversity Studies Room, 203 Pattee Library

In 1969, a riot at Stonewall Inn — a dank, Mafia-run, overpriced bar in New York City’s Greenwich Village — put into motion the demand for gay rights in the United States. The exhibit examines the legal, social, and cultural ramifications of being a gay or lesbian in America prior to, then after, 1969, when, as a result of the Stonewall uprising, numerous organizations and publications were established with the sole purpose of supporting and improving LGBTQ life, dignity, and legal rights. Featured collection materials will include books, videos, newspapers, and periodicals from the Libraries’ collection.

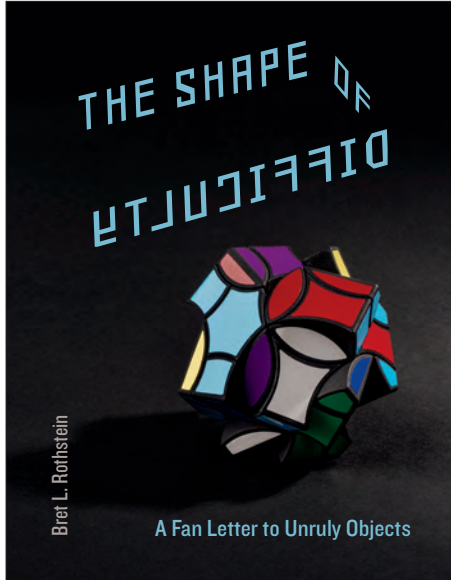
We are Stardust, We are Golden:

50 Years Back to the Garden

Sidewater Commons, 102 Pattee Library

In commemoration of the 50th anniversary of the Woodstock Music Festival, the Libraries is retelling the story of how a small dairy farm in Bethel, New York, became the site of a three-day rock festival that would come to epitomize the counterculture movement of the 1960s. Featuring a selection of groovy album cover art, far-out posters, and psychedelic books, the exhibit will revisit one of the music world’s most momentous and hallowed events.

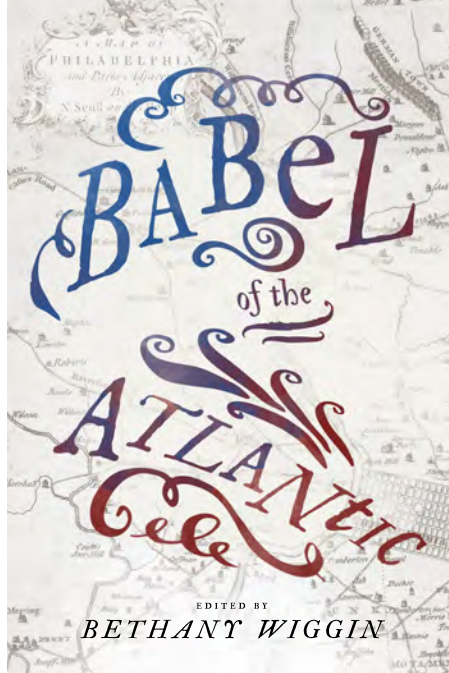
Penn State University Press, a division of the University Libraries and Scholarly Communications, is dedicated to serving the University, the citizens of Pennsylvania, and scholars worldwide by publishing books and journals of the highest quality



***The Shape of Difficulty:
A Fan Letter to Unruly Objects***
by Brett Rothstein

“Though Rothstein is getting unabashedly granular on the field of enigmatology — a field that attracts mathematicians, engineers, and literal rocket scientists more often than fine artists — he manages to present his findings and musings in highly accessible and even funny language. The sincere joy he takes in unraveling the philosophy behind difficult objects is not lost in his academic formatting.”

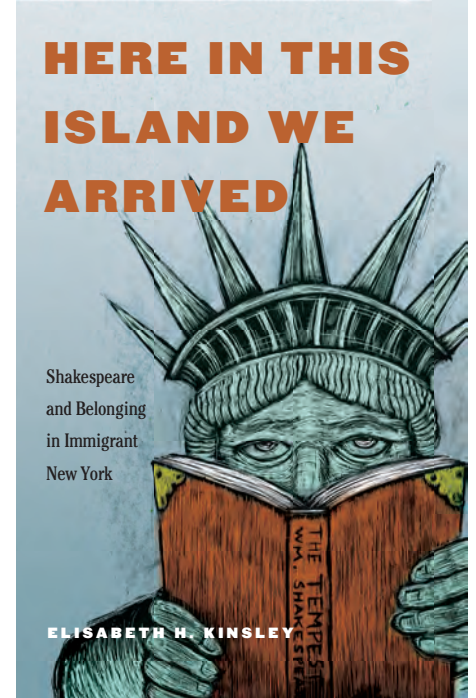
— Sarah Rose Sharp, *Hyperallergic*



Babel of the Atlantic
edited by Bethany Wiggin

Despite shifting trends in the study of Oceanic Atlantic history, the colonial Atlantic world as it is described by historians today continues to be a largely English-only space; even when other language communities are examined, they, too, are considered to be monolingual and discrete.

Babel of the Atlantic pushes back against this monolingual fallacy by documenting multilingualism, translation, and fluid movement across linguistic borders.



***Here in This Island We Arrived:
Shakespeare and Belonging in
Immigrant New York***
by Elisabeth H. Kinsley

Timely and immensely readable, this book explains how ideas about cultural belonging formed and transformed within a particular human community at a time of heightened demographic change.

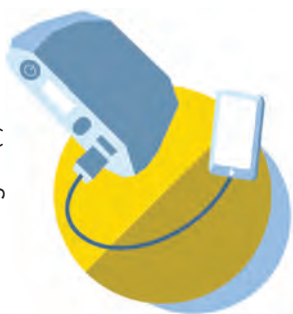
Kinsley's work will be welcomed by anyone interested in the formation of national identity, immigrant communities, and the history of the theatre scene in New York and the rest of the United States.

Penn State Alumni Association members: Use code "WeAre" when ordering online at psupress.org to secure a 30% discount. Shipping is free to addresses on Penn State's University Park campus.

Facts and Figures

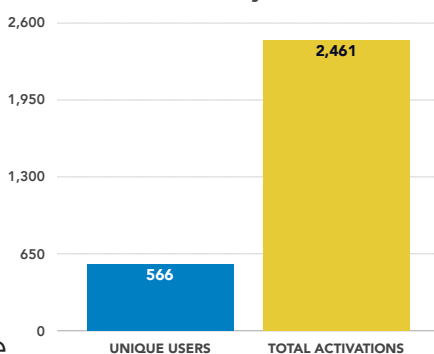
Omnicharge and Virtual Reality use, e-textbook numbers

illustrations: Colin Gallagher (4)

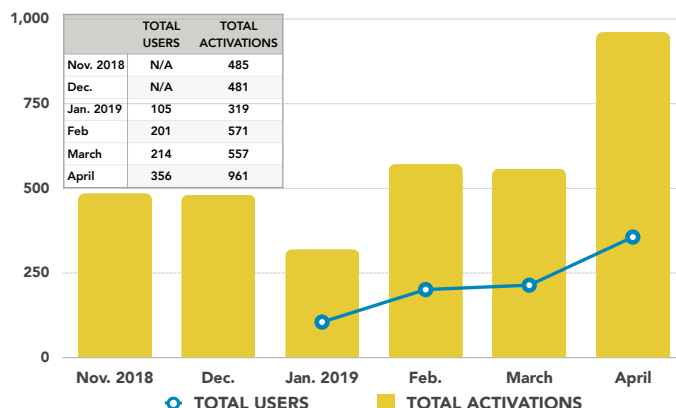


Omnicharge use

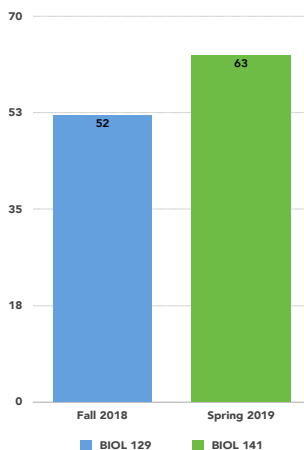
Omnicharge Station Usage History
Jan. 1–May 8, 2019



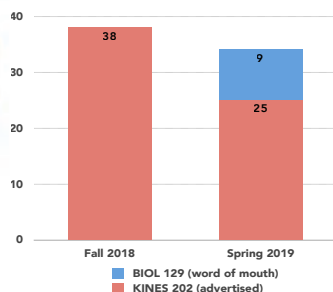
Use of Omnicharge Power Banks, University Park libraries



VR Station, Lofstrom Library
Penn State Hazleton



VR Center, Sidewater Commons
Pattee Library, University Park



basic user data for National Networks
of Libraries of Medicine Mid-Atlantic
Region Virtual Reality study
VR centers not actively advertised to
general student population



Virtual Reality use



e-book numbers, Spring 2019 semester

Spring 2019	College of IST Savings	College of Engineering Savings	World Campus Savings
Total courses	17	13	159
Total e-books	22	35	264
Class mean	Not available	62.5	25.7
Total spent	Not available	\$4,234.14	\$29,750.47
Total potential savings	Not available	\$266,562	\$475,953.72

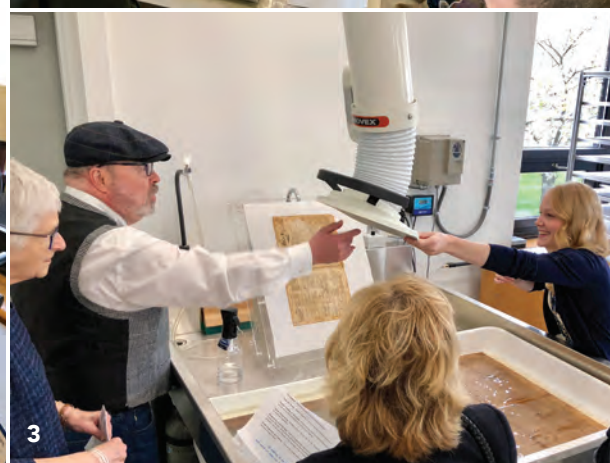


Recent and Upcoming Events

April 24–25: Conservation Centre Grand Opening

The Libraries celebrated the opening of the Conservation Centre with two days of events for Libraries employees, friends, and special guests. Preservation, Conservation, and Digitization staff hosted tours with stations to demonstrate conservation techniques and equipment:

1. Senior Book Conservator Bill Minter makes handmade paper using pulp and flower fibers.
2. Inactive Records Center Manager Karen Pipta examines a document using a Leica stereo microscope, which magnifies inks, stains, and other details the naked eye cannot detect.
3. Librarian Emeritus Steven Herb and Sara Willoughby-Herb check out a commercial ceiling-mounted exhaust extractor at a station for washing, drying, and mending paper, as demonstrated by Sarah Reese.
4. Sue Paterno, vice chair of the Library Development Board, learns a traditional bookbinding process from Information Resources and Services Support Specialist Jacque Quinn and Digital Preservation Librarian Nathan Tallman.
5. Sue Kellerman, Judith O. Sieg Chair for Preservation and head of the Preservation, Conservation, and Digitization Department, realized a 30-year dream in opening the University Libraries' Conservation Centre. At the Centre's April 25 event, she asked Penn State President Eric J. Barron to unveil a c. 1818 map of Bellefonte, Pennsylvania, newly conserved by Minter and Centre County Library and Historical Museum staff, under Minter's instruction. Bellefonte Area High School students researched the map's details to estimate its date of creation.



Through June 28: Behind the Tape Library Tours

You are invited to any our weekly behind-the-scenes construction tours of the new Collaboration Commons, West Pattee Terrace, and Central Atrium. These tours will occur every Friday 3–4 p.m. through June 28. Come often to see the progress, especially if you haven't viewed the space since our beam-signing event (at right) on Jan. 12!

Please RSVP to 814-865-2258 or ul-rsvplibraries@lists.psu.edu.



Curator Tours of *The Secret Lives of Girls and Women*

Throughout history, various elements of the female experience have been unrecognized, held secret or considered taboo. Sign up for one of Special Collections' curator tours of its current exhibition, *The Secret Lives of Girls and Women* (see description, page 11), and join Special Collections Curator and Exhibitions Coordinator Clara Drummond and Instruction and Outreach Archivist Julie Porterfield as they lead you through examination of such "secrets" found in archival materials from the Eberly Family Special Collections Library, 104 Paterno Library, on Penn State's University Park campus.

Tours are open to the public:

11 a.m. Tuesday, June 18
2 p.m. Thursday, July 18
10 a.m. Tuesday, Aug. 13

Visit the registration link under each date listed online at <https://libraries.psu.edu/about/news-and-events> to register for a tour. The exhibition is on display through Sept. 1.

Save the Date! Sept. 12: 2019 Donor Reception

The University Libraries' 2019 Donor Reception will be held Thursday, Sept. 12. Join us for a grand opening celebration of the new Central Atrium, Collaboration Commons, and West Pattee Terrace!



Library Development Board

Chair	Jodi Mayo Alessandri	Robyn Harris	Kerry W. Kissinger	Sally L. Schaad	Emeritus
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	Floyd J. Carl	Mark A. Hrinya	Albert L. Lord	William S. Shipley, III	Michael S. Kirschner
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University Libraries Development Staff | Questions or comments: 814-865-2258

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The last word

"My favorite part about working in the Search Bar is empowering other students throughout their research process. The goal is to get students to a place where they know what resources are available to them and, more important, they know how to use those resources. I think that learning experience is most impactful coming from a fellow student."

— Gina Gavazzi, peer research consultant in the Search Bar, Pattee Library. Gavazzi is a senior from Warriors Mark, Pa., majoring in human capital management and on track to graduate after the Fall 2019 semester.

The Search Bar is a peer-to-peer service offered by the University Libraries to students seeking customized consultations about course assignments and for tech applications. The collaborative space houses three resources: peer research consultants trained by Libraries staff, plus writing tutors and tech tutors trained by Penn State Learning. Last semester, the Search Bar helped more than 560 students.

