# UC Merced Library White Paper

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"Situated in California's Central Valley, located on the traditional homeland of the Yokuts and Miwuk, and part of the world's leading public research university system, the UC Merced Library empowers researchers, celebrates our region's diversity, expands access to information, and fosters student belonging. We provide valuable expertise, advance critical inquiry, invest in collections, preserve unique resources, forge collaborations, and create welcoming space and services."
https://library.ucmerced.edu/about/library/about-library

**UC Merced Library Mission Statement**

# Table of Contents

# LASC White Paper: Executive Summary

By 2031, UC Merced aspires to move into the Carnegie Classification R1 "very high research activity" from its current classification in R2, "doctoral universities – high research activity." Three key metrics contribute to R1 status attainment: 1) research and development expenditures; 2) number of doctoral graduates; and 3) number of post-doctoral research staff.

UC Merced can efficiently and economically grow these key R1 metrics through partnership with the UC Merced Library. **As multifaceted research infrastructure, the Library provides numerous activities and services that support and promote the UC Merced Strategic Planning Goals, which were designed to grow the three key R1 metrics.**

# Goal 1: Engage Our World and Region Through Discovery and the Advancement of Knowledge

**Goal 1.1 Library Collections: Expand the public and scholarly influence of the campus's research at regional, national, and international levels.** The Library develops and preserves research collections including: print and digital books; scholarly journals for disciplines in the science, engineering, social science, humanities and arts; other serials (e.g. newspapers); and hundreds of databases. **These scholarly journal and book collections provide cutting-edge research for UC Merced faculty and students to employ as scaffolding and inspiration for their research, thus facilitating the creation and advancement of knowledge**.

**Goal 1.2 Library Data Management for Faculty and the DMP Tool: Grow UC-quality research and creative activities by strengthening the infrastructure for, and levels of, extramural funding.** The Library's Data Management Consulting services **support effective grant development by providing access to and guidance on using the Data Management Plan Tool (DMPTool); feedback on draft DMPs**; and co-consulting on data management storage with colleagues in OIT. Data management plans are a crucial requirement of grant applications submitted to federal granting agencies.

**Goal 1.3 Library Geographic Information Systems (GIS) Center / Geospatial Consulting: Increase the contributions of students and staff to research and creative activities.** The Library's Geographic Information Systems (GIS) Center **furthers interdisciplinary research in the geospatial sciences through oversight and implementation of software for GIS research, classes, mentoring, and consultations offered to students (undergraduate and graduate), staff, and faculty**. Geospatial applications produce compelling information as multiple data points are brought into simple visualization to expose problems, communicate findings, perform analysis, and simplify complexity, thus fundamentally supporting UC Merced research in numerous fields.

# Goal 2: Develop Future Scholars & Leaders

**Goal 2.1 <u>Library Instruction for Information Literacy and Reference Consultations</u>: Grow and diversify UC-quality educational opportunities for undergraduate and graduate students and the public**. To develop students' information literacy competencies, that is their abilities to discover, understand, and use information ethically, **librarians provide instruction in UC Merced classes; create instructional objects (such as short videos), prepare instruction for high-impact practices (e.g. undergraduate research programs), and offer one-on-one reference consultations.** Investment in developing our students' information literacy competencies supports students' research and success.

**Goal 2.2 <u>Library Coding and Data Science Education for Graduate Students</u>: Broaden and deepen students' academic, personal, and career-related experience and preparation.** The UC Merced Library's Data Services offers graduate students Data Carpentry ([https://carpentries.org)](https://carpentries.org) **workshops on foundational coding and data science skills (**Programming in Python and Introduction to Unix Shell) **that are important for many graduate students' research, academic development** and future job competitiveness, as data science and coding skills are increasing desired in the workplace.

**Goal 2.3 <u>Library Zero Cost Course Materials (ZCCM)</u>: Increase degree completion rates, while maintaining equity in achievement.** The Library's Zero-Cost Course Materials (ZCCM) Grant was a mini-grant program run with CETL from 2018 to 2021 to reduce negative student outcomes associated with textbook costs. The $30,000 mini-grant program supported faculty and instructors' adoption of zero-cost course materials using open educational resources (OER) and/or available library collections, saving students almost $203,000. A renewed program is running from 2022 to 2025. **Pursuing OER and use of already available library resources ensures that our students are treated equitably and are not disadvantaged in their pursuit of a degree.**

# Goal 3: Cultivate a Culture of Dignity and Respect for All

**Goal 3.1** <u>**Library Student Employment, Library Student Internships, Library Student Fellowships**</u>**: Grow our academic and administrative staff demographic composition to be more representative of the state, as research shows that students succeed when they can see themselves in the institution.** UC Merced Library student employees **complete a training program that teaches: skills and tools to provide superior customer service, specialized technical systems, standard office practices, confidentiality training, and valuable research skills that apply directly to their studies and training as emerging researchers.** Numerous former Library student employees have been hired in library and information science, archives and museum services, and computer science technology companies, such as: UC Merced Library, other UC campuses, Stanford University, the Getty Center & Museum, Charles M. Schulz Museum, Google, Radion, John Deere, and the Federal Aviation Administration.

**Goal 3.2** <u>**Library Spaces**</u>**: Transform campus culture by ensuring that all members of the community thrive as their authentic selves through equitable and inclusive structures, policies, and practices.** Librarian and researcher Ted Chodock argues that **Library spaces: foster students' sense of belonging (SB) by offering spaces where students meet others in a non-threatening way (psychological SB), students develop emotional or personal connections (spatial SB), spaces where individuals like them work and study (cultural SB), and spaces with technology designed for collaboration (sociocultural belonging)** where students learn from and are motivated by each other.[1] Future growth of the student population will create significant increased demand for academic work spaces in Kolligian Library.

**Goal 3.3** <u>**Library's Open Access Transformative Agreements**</u>**: Build our collective capacity to remove structural barriers negatively impacting success through equity-informed administrative and educational decision-making.** To advance a transition from a subscription-based publishing to open access (OA) publishing, the UC Libraries have been negotiating transformative agreements with publishers and academic societies. **Open Access publishing increases the visibility and influence of a researcher's work and** improves access to scholarly publications for all readers whether advantaged or disadvantaged, both nationally and internationally.

**Goal 3.4** <u>**Library Archives, Special Collections, and Exhibitions**</u>**: Deepen our collective appreciation for diversity by developing a more robust international perspective.** The Library acquires and digitizes primary sources relevant to the Central Valley, preserving and making available these unique materials for researchers and the world. **These historical materials provide evidence with which to interrogate the past, comprehend the present, and prepare for the future, supporting UC Merced researchers' investigations.**

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[1] Ted Chodock, "Mapping Sense of Belonging in Library Spaces," Library Assessment Conference (September 2020): 1-15, esp. 12, https://www.libraryassessment.org/wp-content/uploads/2021/09/197-Chodock-Mapping-Sense-of-Belonging.pdf.

# **Budget**

The Library's $6.3 million budget sustains a wide range of expert talent, resources, spaces and activities that directly and indirectly support campus research and instruction. The budget is roughly divided into three main categories: salaries and benefits, information resources, and operations. Similar to many campus departments, salaries and benefits are by far the largest of these three areas at $4.34 million and covers the costs for 13 academic employees, 20 staff positions, and over 40 student employees. The budget for information resources is $1.43 million and covers the costs for consortial (UC-wide) purchases including databases and journal packages as well as locally purchased books/e-books, journals, and databases. **Information resources constitute the largest non-salary portion of the Library's budget and represent a key library contribution to the campus' strategic goals. By providing access to cutting-edge journals and books, the Library directly supports faculty research across all disciplines.** The operations budget (S&E) includes most other departmental costs including technology, space renovations and furniture, professional development and travel, and other general expenses. With additional financial support, the Library would be better situated to further the UC Merced Strategic Plan and to support the campus in attaining UC Merced's goal of R1 status. The Library's budget advances the research, teaching, and learning of the entire UC Merced campus.

# Recommendations

The UC Merced Library requires financial investment for collections, operations, space, and staff in order to:

- optimally serve the educational and research mission of the university;
- promote the UC Merced Strategic Planning Goals, and
- serve as a crucial partner in the university's aspirational goal of R1 status.

Please note that since this report does not address all Library activities, these recommendations represent some but not all Library needs.

**Reinstate and Grow Collections Funding:** Provide a reliable and sufficient collections funding allocation that considers enrollment growth, faculty needs, and inflation. Preserve existing collections and support new requests and needs.

**Monitor & Expand Capacity for Data Management Services:** Contribute to successful grant-getting and compliance through robust data management services. Increase capacity for this work via the hire in Carpentries Training itemized below.

**Increase the Availability of GIS Services & Expertise:** Hire a Geospatial Data Analyst to expand capacity for consultations, GIS education for undergraduates, and project consulting with faculty.

**Contribute to Student Learning:** Hire librarians with teaching pedagogy and subject area expertise to work closely with students and faculty.

**Increase Research Productivity via Carpentries Training:** Keep pace with the demand for coding and data science training and expand offerings to meet specialized needs, hire a Research Data Specialist in Data Services.

**Promote and Support Open Educational Resources (OER) Use & Creation:** Create a librarian position focused on no-cost and low-cost course material initiatives and collaborations. Ensure the library can support OER adoption, adaptation, creation, and publication through this personnel addition and adequate operations funding.

**Invest in Students' Development:** Acquire fundings to support students' employment, internships, and fellowships to provide them with valuable work experience and experiential learning opportunities.

**Make Spaces Available for Library Operations & Student Access:** Allocate spaces in the Kolligian Library for library operations and public services. Priorities include increasing student study spaces, establishing spaces for Archives processing, ensuring on-site staff have suitable work areas.

**Dedicate Resources to Transform the Publishing Landscape:** As part of the collection budget, allocate funding to Transformative Agreements in support of Open Access publishing.

**Establish a Sierra Nevada-Central Valley Archive:** Funding is required to acquire, process and preserve unique collections reflecting the history of region. These activities require expert staff, suitable spaces, technology, and outreach resources and uniquely contribute to the Strategic Plan's Goal 3 (interweaving equity, justice and inclusive excellence in our work).

# Conclusion

As the discussion above demonstrates, the Library supports the entire research life-cycle across all fields of knowledge on campus by serving as a repository of knowledge; providing access to cutting-edge journals and books; assisting researchers in discovering knowledge; teaching students how to assess knowledge and information they have found; curating information; teaching; and preserving data and archival resources.

The UC Merced Library fundamentally contributes to the three key metrics that influence R1 status attainment: 1) research and development expenditures; 2) number of doctoral graduates; and 3) number of post-doctoral research staff, through **its support of the research enterprise from student learning, to research discovery and inspiration, grant proposal development, and research project development and publication**. The UC Merced Library, as multifaceted research infrastructure, fundamentally facilitates the creation and advancement of knowledge, and is a crucial partner in UC Merced's aspirational goal of attaining R1 status, while supporting UC Merced's long-term strategic plan goals to advance scholarship, teaching and inclusive excellence.

# LASC White Paper: Synopsis

The mission of the UC Merced Library is to empower researchers, celebrate the region's diversity, expand access to information, and foster student belonging through providing valuable expertise, advancing critical inquiry, investing in collections, preserving unique resources, forging collaborations, and creating welcoming space and services. ([https://library.ucmerced.edu/about/library/about-library](https://library.ucmerced.edu/about/library/about-library)) The UC Merced Library's mission sustains and promotes UC Merced's mission of research, teaching, learning, public service, and celebration of diversity. ([https://www.ucmerced.edu/ucmerced-mission)](https://www.ucmerced.edu/ucmerced-mission)

In February 2022, the UC Merced Academic Senate Committee on Library and Scholarly Communication (LASC) was asked to write a White Paper explaining how the UC Merced Library is an important resource for the UC Merced's missions of research, teaching, learning, and service (https://www.ucmerced.edu/ucmerced-mission) which the Library supports through its myriad services. Further, LASC was requested to explicate: the Library's services, impact, patrons, resources, space, finances, and contributions to the campus strategic planning goals. LASC agreed to work on this project during the 2022-2023 academic year (See Appendix A).

In answer to this charge, LASC issues this White Paper, which has three sections.

- Part I articulates the UC Merced Library's current activities and services that sustain and promote UC Merced's missions of research, teaching, learning, and service in association with the UC Merced Strategic Planning Goals that the Library's activities support and further ([https://strategicplan.ucmerced.edu](https://strategicplan.ucmerced.edu)). As multifaceted research infrastructure, many of the Library's various activities fulfill multiple UC Merced Strategic Planning Goals; however, only one activity was selected for each goal for clarity. This White Paper also discusses potential service enhancements that, with additional, sustainable long-term funding, the Library could provide to further sustain and promote UC Merced Strategic Planning Goals. (See Appendix B for a Table mapping Library Services to UC Merced Strategic Planning Goals.)

- Part II articulates the current state of the UC Merced Library's budget.

- Part III suggests recommendations. With financial investment in collections, operations, space, and staff, the UC Merced Library could optimally serve the research and educational missions of the university, promote the UC Merced Strategic Planning Goals, and further the university's aspirational goal of R1 status.

# Goal 1: Engage Our World and Region Through Discovery and the Advancement of Knowledge

## 1.1 Expand the public and scholarly influence of the campus's research at regional, national, and international levels

## Library Collections: Fulfilling and Promoting Goal 1.1

The UC Merced Library is a rich repository of knowledge for UC Merced researchers and the campus community, providing access to: 2.8 million books (print and digital), ~328,000 serials (newspapers, journals, transactions etc.), and hundreds of databases. The diversity and breadth of this collection has been powered by strong UC Libraries' collaboration across the UC system. The Library benefits from systemwide licenses and purchases negotiated by California Digital Library (CDL) staff for the ten UC campuses (called Tier 1 resources) which result in *significant cost-savings* for research and learning resources. In AY 2022–2023 the Library expects to spend $1.33 million for the base collection budget; approximately 85% of this collections budget is allocated to these Tier 1 systemwide agreements. **Collections facilitate the university goal of creating and advancing knowledge, as faculty and students require access to cutting-edge research in order to propel their research forward.**

Minding the deficit created in the collections budget by the campus budget cuts is one issue. However, three other factors should be considered in a reliable, ongoing funding model for collections: 1) inflation, 2) student growth, and 3) faculty needs and faculty FTE. These all contribute to increasing collection costs year-to-year. A collections funding allocation from the campus based on a reliable and thoughtful model created in partnership with the Library, Budget Office, and the Office of the Provost that considers the faculty and student ratio and the proportional costs of different disciplines is essential. With such a model and allocation, the UC Merced Library will be able to retain existing subscriptions (especially Tier 1 resources), support anticipated resources needs for forthcoming campus growth, and advance knowledge creation.

## 1.2 Grow UC-quality research and creative activities by strengthening the infrastructure for, and levels of, extramural funding

## Library Data Management Consultations for Faculty and Assistance With the Data Management Planning (DMP) Tool: Fulfilling and Promoting Goal 1.2

The Library's Data Management Consulting services provide: access to and guidance on using the Data Management Plan Tool ([DMPTool](DMPTool)), feedback on draft DMPs, and co-consulting on data management storage (both pre and post award in data management repositories such as Dryad) in collaboration with colleagues in Cyber-Infrastructure & Research Technologies (CIRT) in the Office of Information Technology (OIT). **Data management planning is a crucial requirement of federal granting agencies so preparing feasible data management plans are essential for obtaining grants.**

Increased demand for data management consultation and support is expected to increase. First, grant proposals from campus faculty will grow as faculty are hired and the campus focuses on acquiring more research dollars. Second the National Institutes of Health (NIH) recently put into effect (January 25, 2023) its enhanced requirements for Data Management Sharing (DMS) Plans for all grant submissions. Commitments to data management planning and implementation are important part of supporting the research enterprise and ultimately R1 status. Currently, one individual allocates 30% of their time to this area. As demand increases for data management services, the Library will likely need to allocate additional expertise and time from the existing staff member in order to support UC Merced's goal of reaching R1 status.

## 1.3 Increase the contributions of students and staff to research and creative activities

## Library Geographic Information Systems (GIS) Center/ Geospatial Consultations: Fulfilling and Promoting Goal 1.3

The Library's Geographic Information Systems (GIS) Center furthers interdisciplinary research in the geospatial sciences through oversight and implementation of software for GIS research, classes, mentoring, and consultations offered to students (undergraduate and graduate), staff, and faculty. Staff in the GIS Center have also been instrumental in coordinating licenses and training of geospatial software ensuring that products like ArcGIS Online and ArcGIS Pro (desktop software) are readily available to UC Merced users as they create, store, and share data visualizations. ArcGIS Online is cloud-based software with mapping capabilities, analysis tools, and data sets. Overall, usage of ArcGIS Online has been trending upward in the last decade; in a full five-year period (AY 17-18 to AY 21-22), UC Merced's ArcGIS Online users increased by 511%.

The highest users of GIS services at UC Merced have been faculty from the following disciplines: public health, environmental studies, anthropology, history, economics, political science, and sociology. The new data science curriculum will also intersect with geospatial data, so greater demands for GIS expertise from faculty and students are expected to emerge as these new majors are launched. Increasing GIS personnel will ensure that the GIS Center can continue to dedicate time to project consulting, provide consultations to a range of users, develop students' GIS competencies with GIS-related employment and internships, and consistently offer GIS-focused workshop for undergraduate and graduate student audiences. **Geospatial expertise in combination with GIS applications has produced compelling information as multiple data points are brought into a simple visualization to expose problems, communicate findings, perform analysis, or simplify complexity leading to knowledge creation, resulting in book publications, articles, dashboards, and media attention.**

# Goal 2: Develop Future Scholars & Leaders

## 2.1 Grow and diversify UC-quality educational opportunities for undergraduate and graduate students and the public

## Library Instruction for Information Literacy and Research Consultations: Fulfilling and Promoting Goal 2.1

Librarians employ a number of strategies to develop students' information literacy competencies. To deepen students' abilities to discover, understand, and use information ethically, librarians provide instruction in existing classes; create instructional objects (such as short videos), prepare instruction for high-impact practices (e.g. undergraduate research programs), and offer one-on-one reference consultations. From July 2013 through June 2022 librarians taught 1,981 sessions with 43,509 participants. In the Graduating Senior Survey from 2019 to 2022, 89% of undergraduate student respondents reported receiving instruction from library staff in one or more classes during their time at UC Merced and 90% responded *Always* (64%) or *Usually* (26%) when asked if Library research instruction helped them find suitable information resources for their papers and projects. Librarians have created instructional objects (recorded tutorials and videos), such as the *Starting Your Research* 8-module series available via a library guide or in the Canvas Commons for import into any UC Merced CatCourses site. The 12 modules in the Canvas Commons have been downloaded 462 times since 2019 into UC Merced courses. Librarians support undergraduate research by coordinating with Undergraduate Research Opportunities Center (UROC) program staff to provide multiple workshops for students participating in the Summer Undergraduate Research Institute (SURI), a program where students engage in research projects guided by faculty and supported with graduate student mentors.

Both national research findings (PIL) and local students' self-reporting (UCUES) point to the need for deliberate information literacy education for college students. **Investment in developing our students' information literacy competencies supports student success.** With an expanding student population, new academic majors, continued emphasis on undergraduate research opportunities, and the anticipated honors program, librarians expect more opportunities to support students in their academic endeavors. Doing so will require capacity-building by hiring librarians with teaching pedagogy and subject area expertise to work closely with our students and faculty.

## 2.2 Broaden and deepen students' academic, personal, and career-related experience and preparation Library

## Library Coding and Data Science Education for Graduate Students: Fulfilling and Promoting Goal 2.2

The UC Merced Library's Data Services, currently led by one FTE staff member, offers graduate students Data Carpentry workshops to increase their foundational coding and data science skills (e.g. Programming in Python and Introduction to Unix Shell). These educational opportunities are facilitated by the Library's membership in The Carpentries (https://carpentries.org) which provides: access to guest instructors, Carpentries curriculum (including Data Carpentry, Library Carpentry, and Software Carpentry), and training for local instructors. **These extensive workshops are important for increasing graduate students' research skills and productivity and increasing their competitiveness for future job as data science and coding skills are increasingly desired in the workplace.**

At UC Merced, interest in data science education has been strong since Carpentries trainings were first offered in 2017; that interest continues to expand. In fall 2023, the Library's Data Services Director led, organized, prepared, and taught 33.5 hours of curriculum and recorded 53 attendees from a range of graduate programs. Demand for these sessions is expected to increase due to graduate student and faculty interest, ongoing campus growth, the launch of a self-supporting Masters in Data Science and Analytics (MDSA), and the introduction of two data science undergraduate majors. To provide this mentorship, expand offerings, and provide more advanced and specialized topics, the Library will require additional personnel. This is an exciting area of expansion in direct support of graduate students and their research productivity.

## 2.3 Increase degree completion rates, while maintaining equity in achievement.

## Library Zero Cost Course Materials (ZCCM): Fulfilling and Promoting Goal 2.3

The Zero-Cost Course Materials (ZCCM) Grant is a mini-grant program launched in 2018-2019 to reduce negative student outcomes associated with textbook costs which "increased by 190% from January 2006 to 2018," a rate higher than increases to college tuition and fees.[2] A collaboration between the UC Merced Library and the Center for Engaged Teaching and Learning (CETL) designated funding ($30,000) for mini-grants offered to faculty and instructors to support their adoption of zero-cost course materials in new or existing courses by using open educational resources (OER) and/or use of available Library collections. Between fall 2018 and fall 2021, the ZCCM committee awarded grants for 15 courses that impacted over 2,500 students representing all three schools. Costs savings for students equaled almost $203,000 and cost savings continue. Recently, the Library acquired $25,000 in Scholar Transformational Impact Funding to renew the grant program; calls for applications resumed in fall 2022 and are expected to continue through 2025.

**Pursuing OER and use of already available library resources ensures that our students are treated equitably and are not disadvantaged in their pursuit of a degree.** The UC Merced California Public Interest Group (CALPIRG) survey on college students and the costs of higher education found that 11% of UC Merced students are "more likely than the national average to decide against buying or renting textbooks because they were too expensive. [And] 73% ... indicated that they have either missed paying a bill, skipped a meal, worked extra hours, chosen between classes due to their relative costs, or dropped a class because they could not afford the materials. This is higher than the national average of 58%."[3] With funding, the Library could dedicate an Assistant/Associate Librarian position to focus on open access & digital publishing initiatives. The Library wants to fully participate in any upcoming OER or low-cost systemwide efforts in support of UC Merced students' success.

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[2] Quoted from the Bureau of Labor Statistics 2018; See Shanna Smith Jaggars, Marcos D Rivera, and Briana Akani, "College Textbook Affordability: Landscape, Evidence, and Policy Directions" MidWestern Higher Education Compact Policy Report (March 2019): 1-15, esp. 2. https://files.eric.ed.gov/fulltext/ED598412.pdf.

[3] UC Merced California Public Interest Group (CALPIRG) letter of support (June 2022) for the ZCCM grant program.

# Goal 3: Cultivate a Culture of Dignity and Respect for All

> **3.1 Grow our academic and administrative staff demographic composition to be more representative of the state, as research shows that students succeed when they can see themselves in the institution**

## Library Student Employment, Library Student Internships, and Library Student Fellowships: Fulfilling and Promoting Goal 3.1

UC Merced Library student employees gain valuable life and professional experience while working in the Library. To ensure that our customers (students, staff and faculty) received the best customer service possible, an intensive student training program has been developed which includes: customer service training provided by outside consultants, training on specialized technical systems, standard office practices, confidentiality training, and valuable research skills that apply directly to their studies and training as emerging researchers. This model also ensured that **~99% of the time, our undergraduate student customers are guaranteed to have a peer-to-peer interaction at our service points, minimizing any institutional intimidation factor dramatically and allowing them to see themselves in the institution of the UC Merced Library.**

The Library serves as an incubator for future library and information professionals. Numerous former Library student employees have developed careers in library and information science, archives and museum services working at other universities such as other UC campuses, Stanford University, and several private institutions including the Getty Center & Museum, Charles M. Schulz Museum, and Paramount Pictures. Several former student employees have been hired with big tech companies like Google, Radion, and John Deere, and even the Federal Aviation Administration. Several former student employees have become permanent Library career staff with several pursuing MLIS degrees and one of them becoming a librarian at UC Merced.

## 3.2   Transform campus culture by ensuring that all members of the community thrive as their authentic selves through equitable and inclusive structures, policies, and practices

## Library Spaces: Fulfilling and Promoting Goal 3.2

Librarian and researcher Ted Chodock notes that library spaces can fulfill a number of important roles for students. They can **foster students' sense of belonging (SB) by offering spaces where students meet others in a non-threatening way (psychological SB), varied spaces where students develop emotional or personal connections (spatial SB), spaces where individuals like them work and study (cultural SB), and spaces with technology designed for collaboration (sociocultural belonging) where students learn from and are motivated by each other.**[4] During the UC Merced Library's semester-end Coffee and Cookies events for students studying for finals, students expressed three important services the Library provides. The largest number of students (70) referred to the Library as a safe and welcoming place to study. Secondly, students noted that the Library was a place for focus time and rest (23). A similar number of student (20) called out the Library as a great resource for their research with databases, books, and "amazing help."

Future growth of the student population will create significant increased demand for academic work spaces in Kolligian Library. Adding significant amounts of specialized public spaces is challenging since there are few remaining large open spaces and many building spaces lack adjacency to other Library public spaces, making them more challenging to manage and support.

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[4] Ted Chodock, "Mapping Sense of Belonging in Library Spaces," Library Assessment Conference (September 2020): 1-15, esp. 12, https://www.libraryassessment.org/wp-content/uploads/2021/09/197-Chodock-Mapping-Sense-of-Belonging.pdf.

## 3.3 Build our collective capacity to remove structural barriers negatively impacting success through equity-informed administrative and educational decision-making

## Library's Open Access Transformative Agreements: Fulfilling and Promoting Goal 3.3

The UC Academic Senate and UC Libraries, especially the California Digital Library (CDL) have collaborated for more than a decade to increase open access to scholarly research. To advance a transition from a subscription-based publishing to open access publishing, the UC Libraries have been negotiating transformative agreements with publishers and academic societies. These transformative agreements rely on a multi-payer model that asks UC authors to contribute research funds for the article processing charge (APC, also called Open Access fees); however; if research funds are not available, UC Libraries pay the full APC except in limited cases. When the UC Merced Library contributes to systemwide licenses for collections, it contributes to transformative agreements and this transition to OA publishing. Ensuring open access to information, serves UC's distinctive mission to transmit advanced knowledge and aligns with the UC Merced's commitment to advance knowledge, serve the public, and promote diversity.

**Open Access publishing increases the visibility and influence of a researcher's work.** UC Libraries, including the UC Merced Library have an opportunity to increase open access publishing options for faculty and graduate students at a reasonable cost. UC Libraries simultaneously improve access to scholarly publications for all readers whether advantaged or disadvantaged, both nationally and internationally. With a sustainable budgetary model and allocation, the UC Merced Library will be able to fully participate in this important transition to open access publishing through transformative agreements, making UC Merced research widely available to scholars and the public.

## 3.4 Deepen our collective appreciation for diversity by developing a more robust international perspective

## Library Archives, Special Collections, and Exhibitions: Fulfilling and Promoting Goal 3.4

The UC Merced Library acquires and digitizes significant primary sources, ranging from photographs of farm worker strikes to agricultural trials, actively making this body of unique materials accessible and available not only to researchers but to the broader world. Archives are valued for their preservation of materials that might otherwise be lost or forgotten, ensuring that they are accessible for future generations whether for formal and informal inquiry. These materials include those that speak to the incredibly rich mix of ethnic cultures and bio-diversity of our region. **The historical evidence contained in archives is essential not simply for interrogating the past, but also for comprehending the present, and preparing for the future.** The UC Merced Library is on an exciting growth trajectory to expand its archival collections with a detailed plan to establish a Sierra Nevada-Central Valley Archive. With support from almost 150 UC Merced faculty and in collaboration with Center for Humanities, the UC Merced Library was recently awarded (2022) a National Endowment for the Humanities (NEH) Infrastructure and Capacity Building Challenge Grant of $750,000 matched with funding from UC Merced's Chancellor. This $1.5 million capital project will increase and enhance space for archival purposes through renovations in the Kolligian Library building.

Building a thriving regional archive requires substantial and sustained resources for space, collections, technology, and staffing. Though the NEH Challenge Grant will expand secure storage space for archival collections, the calculation of both existing and anticipated collections means that this space will reach capacity by 2026. Professional staffing is also essential for archival work and needs to be expanded. Currently, there is no allocation for the acquisition of archival collections. Investing in Archives & Special Collections and the plan to firmly establish a Sierra Nevada-Central Valley Archive will contribute to our campus's commitment to the advancement of knowledge, the development our scholars, and deepening our appreciation for diversity. UC Merced and the UC Merced Library have the opportunity to preserve valuable materials that surface the diverse social, cultural, and environmental histories of this region and make them broadly available for research, reflection, and imagining a better future.

# Budget

The Library's $6.3 million budget sustains a wide range of expert talent, resources, spaces, and activities that directly and indirectly support campus research and instruction. The budget is roughly divided into three main categories: salaries and benefits, information resources, and operations. Similar to many campus departments, salaries and benefits are by far the largest of these three areas at $4.34 million and covers the costs for 13 academic employees, 20 staff positions, and over 40 student employees. The budget for information resources is $1.43 million and covers the costs for consortial (UC-wide) purchases including databases and journal packages as well as locally purchased books/e-books, journals, and databases. **Information resources constitute the largest non-salary portion of the Library's budget and represent a crucial library contribution to the campus' strategic goals. By providing access to cutting-edge journals and books, the Library directly advances faculty research across all disciplines.** The operations budget (S&E) includes most other departmental costs including technology, space renovations and furniture, professional development and travel, and other general expenses. With additional financial support, the Library would be better situated to further the UC Merced Strategic Plan and to support the campus in attaining UC Merced's goal of R1 status. The Library's budget advances the research, teaching, and learning of the entire UC Merced campus.

# Recommendations

**Reinstate and Grow Collections Funding**: The Library requires a collections funding allocation from the campus based on a reliable and thoughtful model created in partnership with the Library, Budget Office, and the Office of the Provost that considers: past budget cuts, inflation; student enrollment growth; faculty needs; the faculty and student ratio and the proportional costs of different disciplines. With such a model and allocation, the UC Merced Library will be able to retain existing subscriptions (especially Tier 1 resources), support anticipated resources needs for forthcoming campus growth, and advance knowledge creation.

**Monitor and Expand Capacity for Data Management Services**: Currently, one individual is allocating 30% of their time to Data Management. As demand grows, the Library will likely need to allocate additional expertise and time from the existing staff member to data management services.

**Increase the Availability of GIS Services and Expertise**: Increase GIS personnel to ensure that the GIS Center can continue to dedicate time to project consulting, provide consultations to a range of users, develop students' GIS competencies with GIS-related employment and internships, and consistently offer GIS-focused workshops for undergraduate and graduate student audiences.

**Contribute to Student Learning**: With an expanding student population, new academic majors, continued emphasis on undergraduate research opportunities, and the anticipated honors program, supporting students will require capacity-building by hiring librarians with teaching pedagogy and subject area expertise to work closely with our students and faculty.

**Increase Research Productivity via Carpentries Training**: Directly support graduate students and research productivity through Data Carpentries services such as mentorship of students and expanded content offerings to address advanced and specialized topics; the Library will require additional personnel.

**Promote and Support Open Educational Resources (OER) Use and Creation**: Fund an Assistant/Associate Librarian position dedicated to open access & digital publishing initiatives that increase access to and availability of Open Education Resources (OER) and scholarly outputs; increase to operations funding that allows for resources in support of this position including technology, professional development, publishing tools (such as Pressbooks), and funding for membership in the Open Education Network.

**Invest in Students' Development**: Acquire funding to support students' employment, internships, and fellowships to provide them with valuable work experience and experiential learning opportunities.

**Make Spaces Available for Library Operations & Student Access**: Allocate spaces in the Kolligian Library for Library operations and public services. Priorities include increasing student study spaces, establishing spaces for Archives processing, ensuring on-site staff have suitable work areas.

**Dedicate Resources to Transform the Publishing Landscape**: The UC Merced Library will be able to fully participate in the important transition to open access publishing through transformative agreements, with a collections funding allocation from the campus based on a reliable and thoughtful model created in partnership with the Library, Budget Office, and Office of the Executive Vice Chancellor and Provost.

**Establish a Sierra Nevada-Central Valley Archive**: Establish and grow a regional archive through campus funding, an endowment, and grants/contracts. A thriving regional archive requires substantial and sustained resources: additional space either in Kolligian Library or funding for ongoing leases for archival storage; allocations for the acquisition of archival collections; funding for technology to make archival materials available digitally; and support for expanded professional staffing.

# Conclusion

As the discussion above demonstrates, the Library supports the entire research life-cycle across all fields of knowledge on campus by serving as a repository of knowledge; providing access to cutting-edge journals; assisting researchers in discovering knowledge; teaching students how to assess knowledge they have found; curating information; teaching and preserving data and archival resources.

The UC Merced Library fundamentally contributes to the three key metrics contribute to R1 status attainment: 1) research and development expenditures; 2) number of doctoral graduates; and 3) number of post-doctoral research staff, through **its support of the research enterprise from student learning, to research discovery and inspiration, grant proposal development, and research project development and publication.** The UC Merced Library, as a multifaceted research infrastructure fundamentally facilitates the creation and advancement of knowledge, and is a crucial partner in UC Merced's aspirational goal of attaining R1 status.

# LASC White Paper: Full Report

The UC Merced Library unfailing delivers innovative and professional support of UC Merced's missions of research, teaching, learning, and service. It functions as a crucial element of the UC Merced research infrastructure supporting the entire research life-cycle across all fields of knowledge on campus by: serving as a repository of knowledge, providing access to cutting-edge journals; assisting researchers in discovering knowledge; curating information; and preserving data and archival resources. The UC Merced Library also partners with campus faculty members and instructors to support and further the university's teaching enterprise and the university's outreach to our community in the Central Valley, the state of California, our nation, and our international partners.

This LASC White Paper has three sections.

- Part I articulates the following: 1) the UC Merced Library's current activities that sustain and promote UC Merced missions of research, teaching, and service and that further the UC Merced Strategic Plan; 2) Library opportunities and plans going forward that could further promote the Strategic Plan; 3) necessary resource allocations for the UC Merced Library to support and promote UC Merced's growth and Strategic Plan goal attainment. This Paper is organized and discussed in alignment with the UC Merced Strategic goals. As multifaceted research infrastructure, many Library activities fulfill diverse UC Merced Strategic Planning Goals. In the interest of clarity, only one Library activity is detailed for each Strategic Plan Goal even when Library activities support multiple UC Merced Strategic Planning Goals.[5]

- Part II articulates the current state of the UC Merced Library's budget.

- Part III suggests recommendations for increased funding in collections, operations, space, and staff that could further UC Merced Library support of the research and educational missions of the university.

The Library is a crucial part of the campus' research infrastructure and with financial investment the Library could accelerate its contributions to strategic plan outcomes. The UC Merced Library is a necessary partner in the university's advancement toward R1 certification.

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[5] The authors extend many thanks to Dr. Christiane Spitzmueller, Vice Provost for Academic Affairs and Strategy, for her assistance.

# **<u>Part I: UC Merced Library Activities That Support and Further Campus Strategic Planning Goals</u>**

The following sections detail UC Merced Library activities that sustain and expand faculty research, teaching, student learning, engagement with diversity, and the university's mission. These Library activities are discussed in association with the UC Merced Strategic goals. **The UC Merced Library is a crucial and complex form of research infrastructure**. As multifaceted research infrastructure, many Library activities fulfill diverse UC Merced Strategic Planning Goals. However, as stated above, in the interest of clarity only one library activity will be discussed for each Strategic Plan Goal in the following section.

In the discussion below, each Strategic Planning Goal is addressed in terms of an UC Merced Library activity that furthers and promotes that goal. Each discussion begins with a logic model table which itemizes current activities, short and mid-term outcomes achievable in a three- to five-year timeframe with adequate budget-model funding, and potential long-term opportunities that could be achieved with the commitment of additional resources. The narrative following the logic model explains the values, challenges, opportunities and resource needs of the Library activity and its importance for the university's missions of research, teaching, learning and / or service.

# Goal 1: Engage our world and region through discovery and the advancement of knowledge

## 1.1 Library Collections

### *Fulfilling and Promoting Strategic Plan Goal 1 Advance Knowledge*

> **1.1 Expand the public and scholarly influence of the campus's research at regional, national, and international levels**

### 1.1.1 Library Collections: About

The UC Merced Library is a rich repository of knowledge for UC Merced researchers and the campus community, providing access to: 2.8 million books (print and digital), ~328,000 serials (newspapers, journals, transactions etc.), and hundreds of databases.[6] (Access to archives and special collections are discussed below.) The diversity and breadth of this collection has been powered by strong UC Libraries' collaboration across the UC system, close attention and responsiveness to UC Merced needs, and a significant budgetary allocation. In AY 2022-2023, the Library expects to spend $1.43 million for the base collection budget.

The Library benefits from a long-standing ten campus UC Library practice of pursuing *significant cost-savings* for research and learning resources through systemwide licenses and purchases negotiated by California Digital Library (CDL) staff for the ten UC campus. (These are called Tier 1 resources.) Through this collective effort, all researchers and students across the UC system have access to extensive resources including large journal packages from academic publishers. Approximately 85% of our $1.43 million collections budget is allocated to these systemwide agreements.

The remainder of the Library's collections budget is used to acquire additional materials requested by UC Merced researchers, instructors, and students, demand driven acquisitions (DDA) of e-books,[7] and a print book approval plan aligned with campus course offerings.[8]

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[6] UC Library Annual Statistics (2021-2022) https://libraries.universityofcalifornia.edu/about/facts-and-figures/

[7] Demand Driven Acquisition (DDA) are also known as Patron Drive Acquisitions (PDA). At the UC Merced Library any ebook title available from the ProQuest eBook Central platform is purchased once the title has been checked out three times.

[8] Though the Library relies heavily on systemwide resources for collections, the management and discovery of these collections takes local personnel and expertise and participation in systemwide committees and initiatives. This unit is currently staffed with three permanent employees and one student who ensure that materials are licensed and made accessible. The work of these staff members also relies on vital contributions from colleagues in Library Technology and Library Administrative Services in supportive tasks such a computer/software updates and vendor payment.

Collections facilitate the university goal of creating and advancing knowledge, as faculty and students require access to cutting-edge research in order to propel their research forward. UC Merced researchers utilize journals and other research resources required by their research, as evidenced by the extensive use of citations in academic scholarship – building on and referencing the work of others. To illustrate, in 9,914 publications authored by UC Merced faculty from 2008-2022, they cited 180,653 research outputs suggesting how important access to scholarship is for their own research production. Those UC Merced faculty articles have since been cited over 238,000 times for an average of 24 citations per item published. Access to collections is integral to expanding the public and scholarly influence of the campus' research.[9]

Faculty's survey responses in the Ithaka S+R US Faculty Survey, which tracks faculty practices in higher education, confirm the importance of library collections for their work. In the 2021 results, 80% of respondents regarded the library collections to be *highly important* for their research and teaching. Their academic library collections were also considered faculty's "most important source for these scholarly materials" (19). When asked about the library's role, "buyer of scholarly information" surfaced as the its most important function though certainly not its only one (59). A snapshot of journal usage at UC Merced suggests that our own faculty and students also value and use library collections. This chart only indicates usage from three publishers (Elsevier, SpringerNature, and Wiley).

**Table 1. Usage of Selected Journals Per Year (2019-2021)[10]**

| Year | Total Item Requests | Number of Uses Per UC Merced Faculty[11] | Number of Uses Per UC Merced Student[12] (Grad & Undergrad) | Number of Uses Per UC Merced (Faculty & Students) |
|---|---|---|---|---|
| 2021 | 360,050 | 748.5 | 39.6 | 37.6 |
| 2020 | 310,397 | 656.2 | 34.4 | 32.7 |
| 2019 | 461,938 | 1,099.9 | 52.2 | 49.8 |

Note: Elsevier, SpringerNature, and Wiley journals only; this represents approximately 65% of the journals available to UC Merced researchers[13]

[9] Web of Science Citation Report. 2008-2021 for University of California, Merced affiliation. Note: This publication extract from WofSc does not represent all scholarly output generated by UC Merced faculty.
[10] Provided by California Digital Library (CDL)
[11] Center for Institutional Effectiveness, UC Merced. Faculty Headcount. https://cie.ucmerced.edu/faculty-and-staff-interactive-data
[12] Center for Institutional Effectiveness, UC Merced. Student Headcount. https://cie.ucmerced.edu/overall-enrollment-totals
[13] Headcounts for fall 2019: 8,847 students and 420 faculty for a total of 9,267; fall 2020: 9,018 students and 473 faculty for a total of 9,491; fall 2021: 9,093 students and 481 faculty for a total of 9,574.

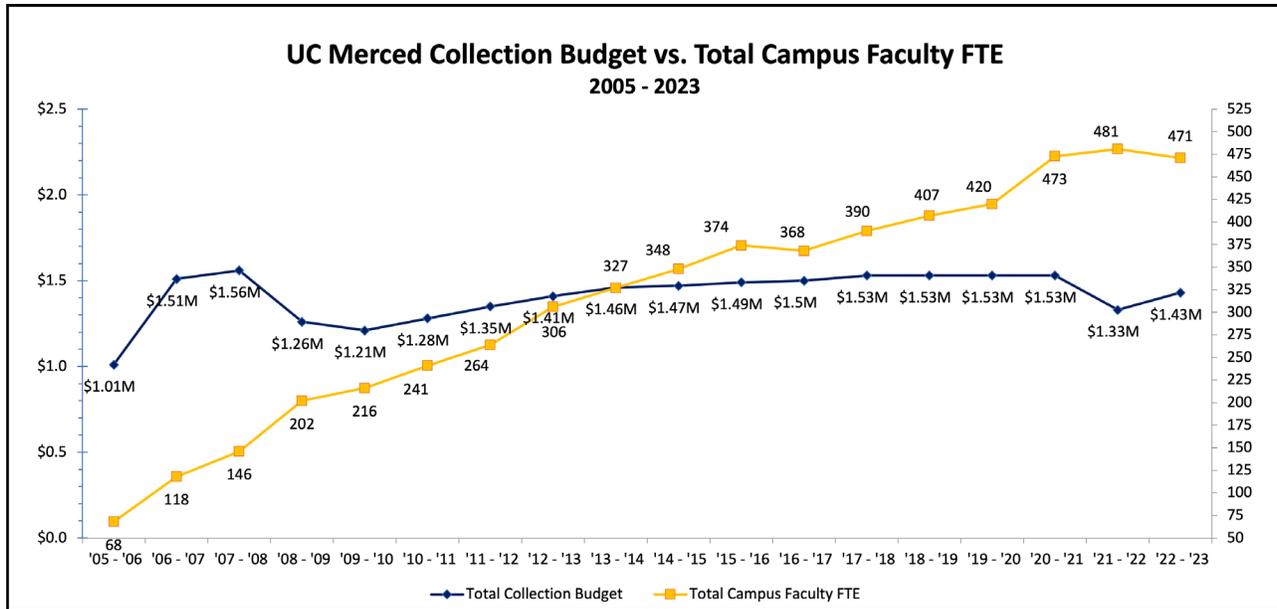### 1.1.2 Library Collections: Challenges and Opportunities

As the campus faculty and student population has grown, the Library budget has not grown in proportion. Furthermore, as new undergraduate majors, minors, and graduate programs and new fields of study are added to the UC Merced catalogue, new resources also need to be added to the Library's collection, which requires additional collections budget funding. This additional funding to cover increased faculty and student population and additional fields of study has not been forthcoming, as the two graphs further below demonstrate.

The campus administration has worked responsibly and creatively to address the overall campus budget deficit. Spreading the budget cuts across campus has meant that everyone has contributed to rectifying the campus budget deficit. The collections budget allocation is currently insufficient to meet collection development priorities without cancellations or funding augmentation. The 13% (~$286,000+) budget cut to the Library two years ago led the Library to identify potential areas of savings. To close the remaining gap between the budget allocation and collections costs, the EVC/Provost augmented the budget with ~$214,000 in funding so that additional cuts did not need to be made. Now in AY22-23 a similar scenario is at play, with an anticipated $327,000 deficit in the Library collections budget. The UC Merced Library is unable to pay for its share of the Tier 1 research and teaching resources (e.g. journal subscriptions and ebooks) negotiated by the California Digital Library (CDL). Without restoration of the base budget cut or similar supplementation of one-time funds, our ability to contribute fully to systemwide purchases (Tier 1 resources) and / or continue local acquisitions is jeopardized.
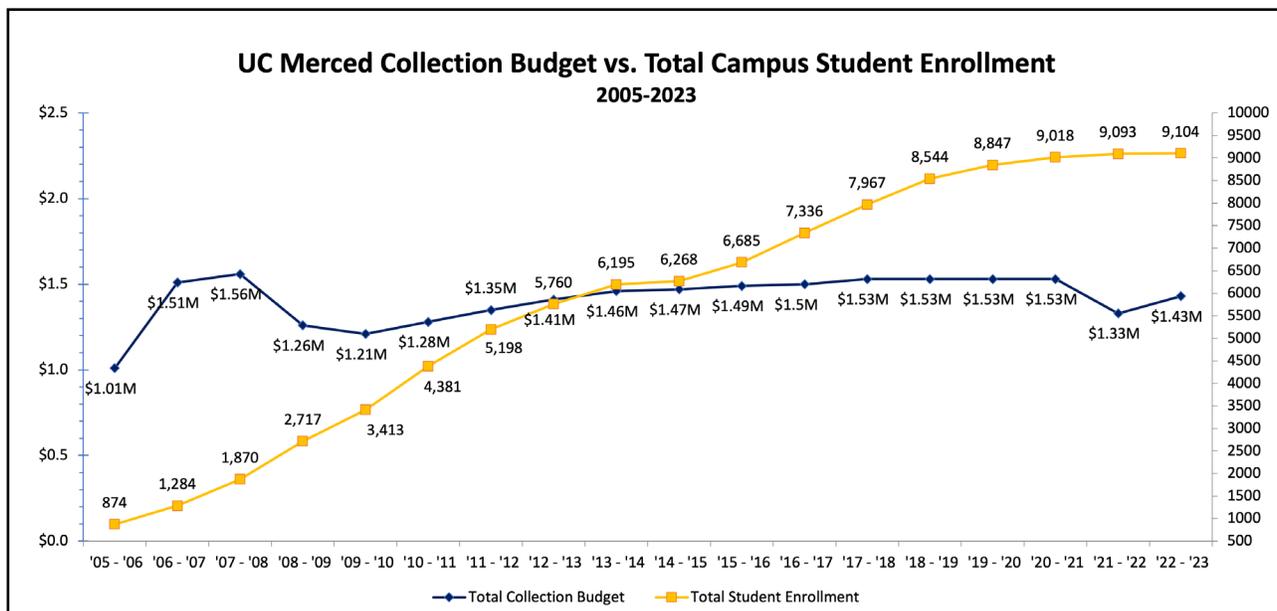
Minding the deficit created in the collections budget by the campus budget cuts is one issue. However, three other factors should be considered in a reliable, ongoing funding model for collections: 1) inflation, 2) student growth, and 3) faculty needs. These all contribute to increasing collection costs year-to-year.

Unfortunately, inflation rates ensure that collections costs increase even if no new information resources are acquired. In addition, the cost share the UC Merced Library pays for consortial licensing and purchases (Tier 1 resources) increases in keeping with our student growth as each campus' contribution percentage is based on student FTE. Lastly, the Library expects ongoing faculty requests. Though many incoming faculty may be served well with existing information sources, others may find that current collections do not sufficiently cover their disciplinary focus. In recognition of this potential gap, the EVC/Provost has been providing the Library with a one-time $3,000 allocation for each new faculty hire since 2018-2019. With these funds, faculty can request the addition of desired materials to be added to the Library's collection. However, please note that since these funds are restricted to expenditures on resources with one-time costs versus journal subscriptions, they do not accommodate all new faculty needs. The Library also expects faculty to make ongoing collection requests as they discover new resources from publishers/vendors that will inform their own evolving research and teaching endeavors. Overall, the collections budget is not keeping pace with faculty and student growth.

## Figure 1. UC Merced Library Collection Budget vs. Total Faculty (headcount)



**UC Merced Collection Budget vs. Total Campus Faculty FTE**
**2005 - 2023**

Data points (Total Collection Budget): $1.01M, $1.51M, $1.56M, $1.26M, $1.21M, $1.28M, $1.35M, $1.41M, $1.46M, $1.47M, $1.49M, $1.5M, $1.53M, $1.53M, $1.53M, $1.53M, $1.33M, $1.43M

Data points (Total Campus Faculty FTE): 68, 118, 146, 202, 216, 241, 264, 306, 327, 348, 374, 368, 390, 407, 420, 473, 481, 471

Legend: Total Collection Budget — Total Campus Faculty FTE

## Figure 2. UC Merced Library Collections Budget vs Total Student Enrollment (undergraduate and graduate)



**UC Merced Collection Budget vs. Total Campus Student Enrollment**
**2005-2023**

Data points (Total Collection Budget): $1.01M, $1.51M, $1.56M, $1.26M, $1.21M, $1.28M, $1.35M, $1.41M, $1.46M, $1.47M, $1.49M, $1.5M, $1.53M, $1.53M, $1.53M, $1.53M, $1.33M, $1.43M

Data points (Total Student Enrollment): 874, 1,284, 1,870, 2,717, 3,413, 4,381, 5,198, 5,760, 6,195, 6,268, 6,685, 7,336, 7,967, 8,544, 8,847, 9,018, 9,093, 9,104

Legend: Total Collection Budget — Total Student Enrollment

The Library requires a collections funding allocation from the campus based on a reliable and thoughtful model created in partnership with the Library, Budget Office, and the Office of the Executive Vice Chancellor & Provost that considers: past budget cuts, inflation, student enrollment; faculty research needs, the faculty and student ratio and the proportional costs of different disciplines. With such a model and allocation, the UC Merced Library will be able to retain existing subscriptions (especially Tier 1 resources), support anticipated resources needs for forthcoming campus growth, and advance knowledge creation.

With appropriate funding tied to campus faculty and student populations, the Library's collections can meet and promote faculty's research and teaching needs, thus furthering our campus' advancement of knowledge. Additionally, it will support the increasing curricular and academic needs of students as new programs, schools, and fields of study are added to our curriculum and faculty's research programs.

## Logic Model Collections: Fulfilling and Promoting Strategic Plan Goal 1
Engage Our World and Region Through Discovery and the Advancement of Knowledge

### 1.1 Expand the public and scholarly influence of the campus's research at regional, national, and international levels.

| Activities Titles | Current Implementation | Short/Mid Outcomes | Long-Term Outcomes |
|---|---|---|---|
| Collection Development | Identify, acquire, and process resources to meet research and teaching needs (e.g. journals, databases)<br><br>UC Merced faculty & students have access to the information sources to plan, conduct, and publish their research and implement new program offerings.<br><br>In some cases, students and faculty wait for resource materials to arrive via Interlibrary Loan (ILL). | UC Merced faculty and studies have access to more information resources to support new programs in order to plan, conduct, and publish their research and implement new program offerings. | UC Merced faculty and students could have access to more information sources needed for as new schools, programs, fields of study (e.g. Medical Education) are added to the campus. |

# 1.2 Library Data Management Consulting for Faculty and DMP Tool

## *Fulfilling and Promoting Strategic Plan Goal 1: Advance Knowledge*

> **1.2 Grow UC-Quality research and creative activities by strengthening the infrastructure for, and levels of, extramural funding**

### 1.2.1 Library Data Management Consulting for Faculty and the DMP Tool: About

The Library's Data Services provides faculty support for data management planning, a crucial requirement of federal granting agencies. More specifically this support includes access to and guidance on using the Data Management Plan Tool (DMPTool), feedback on draft DMPs, and co-consulting on data management storage (both pre and post award) in collaboration with colleagues in OIT's Research Computing.

The DMPTool is an open-source online application that facilitates data management creation with templates aligned with granting agencies' requirements. UC Merced researchers have access to this tool provided by the California Digital Library (CDL) and continually improved by a larger group of participating institutions. At faculty request, a Library staff member provides feedback on data management plans whether or not they are created within the DMPTool.

Since the complexity and size of data generated and used during a research project, can be extensive, the Library collaborates with the Cyber-Infrastructure & Research Technologies (CIRT) in Office of Information Technology (OIT) to provide consultations for researchers who have advanced research computing techniques or storage needs.[14] Library and OIT staff have written letters of support for faculty grant proposals indicating that they will commit resources to ongoing data management assistance once a grant is awarded.

### 1.2.2 Data Management Consulting for Faculty and the DMP Tool: Challenges and Opportunities

Thoughtful and feasible data management plans are essential for obtaining grants. Federal funding agencies were first instructed 10 years ago (Feb. 2013), by the Office of Science and Technology Policy (OSTP) to "increase access to federally funded published research and digital scientific data".[15] Compliance with this requirement is visible in Dryad, one platform where faculty can share their research data. Currently there are 123 UC Merced users and 91 unique data-set deposits since 2014.

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[14] UC Merced ServiceHub, "Research Consultation (OIT) Description and Form," https://ucmerced.service-now.com/servicehub?id=public_kb_article&sys_id=3c3ee9ff1b67a0543a003112cd4bcb13&form_id=06da3f8edbfc-08103c4d56f3ce9619f4
[15] John P. Holdren, "Increasing Access to the Results of Federally Funded Scientific Research," Office of Science and Technology Policy (OSTP), (February 22, 2013), https://obamawhitehouse.archives.gov/sites/default/files/micro-sites/ostp/ostp_public_access_memo_2013.pdf.

Though gauging the *exact* demand for data management plan guidance and ongoing support is not predictable, further demand for data management consultation and support is certainly expected for two key reasons. First of all, grant proposals from campus faculty will grow as faculty are hired and the campus is focused on acquiring more research dollars. Based on the campus' Research Proposals and Awards Dashboard (Beta), the number of distinct proposals submitted by UC Merced faculty per fiscal year has been trending upwards, although 2022 submissions were lower than 2021 submissions.

Secondly, the National Institutes of Health (NIH) recently put into effect (January 25, 2023) its requirement for Data Management Sharing (DMS) Plans for all grant submissions. Prior NIH requirements were less robust and only applied to grants with funding agreements of $500,000 or more. Now the agency requires that submitters consider how sharing their scientific data might be maximized.16 Government granting agencies can be expected to continue, if not enhance, data management plan requirements and compliance going forward. The greatest number of proposals from UC Merced faculty are submitted to US Federal Government Agencies. From 2019 through 2022, they have accounted for 40 to 48% of all UC Merced submitted grant proposals representing anywhere from 175 to 246 proposals per year.

### Table 2. Grant Proposals Submitted by Faculty

|  | FY 2019 | FY 2020 | FY 2021 | FY 2022 |
|---|---|---|---|---|
| # of distinct proposals submitted | 402 | 445 | 516 | 484 |
| # of proposals submitted to US Federal Government Agency | 175 | 182 | 246 | 206 |
| % of proposals submitted to US Federal Government Agency | 43.5% | 40.9% | 47.7% | 42.6% |

Based on data from "Proposal Overview" available at Research Proposal and Awards Dashboard (Beta), UC Merced[17]

Due to federal grant requirements, UC Merced faculty have been or will be required to write accompanying data management plans for their grants. As part of their grant submission preparation, faculty may consult with Library staff or use tools like DMP as part of this process.

As noted, compliance in data management plans often involves sharing research data. Library data services also provides and points to options where faculty can make their data available. Though Dryad has been a useful and available option for many researchers, it does not meet all use cases. In the future, the Library may need to invest in other data storage/sharing services.

[16] National Institute of Health (NIH), "Writing a Data Management & Sharing Plan," accessed January 31, 2023, https://sharing.nih.gov/data-management-and-sharing-policy/planning-and-budgeting-for-data-management-and-sharing/writing-a-data-management-and-sharing-plan.

[17] UC Merced, "Research Proposals and Awards Dashboard (Beta)," https://visualizedata.ucop.edu/t/UCMerced/views/ResearchProposalsandAwards/ResearchProposalsandAwards/5b1c8d39-56ff-4a72-b1a6-60b22eeb296f/cf489105-ff50-4535-8722-09d59889c7d6?%3Adisplay_count=n&%3AshowVizHome=n&%3Aorigin=viz_share_link&%3Aembed=y#1

The Library expects to meet the demand for data management with a multi-pronged approach.

- Provide library-specific services e.g. feedback on data management plans, outreach and education of data plan and data sharing resources [current]

- Collaborate with campus partners e.g. Cyber-Infrastructure & Research Technologies (CIRT) in the Office of Information Technology (OIT) [current]

- Monitor and meet researchers' need related to archiving, managing, and publishing data through dedicating local Library resources and/or investing in UC Libraries' initiatives [current & anticipated]

- Contribute to larger initiatives that advance the campus' research infrastructure e.g. projects emerging from campus Strategic Planning groups [anticipated]

Commitments to data management planning and implementation are an important part of supporting the research enterprise and ultimately R1 status. Currently, one individual is allocating 30% of their time to this area which includes coordination with campus units and participation on committees addressing data management topics. As demand grows, the Library will likely need to allocate additional expertise and time from the existing staff member to data management services.

**Logic Model: UC Merced Library's Contributions to Strategic Planning Goal 1 –** Engage Our World and Region Through Discovery and the Advancement of Knowledge

**1.2 Grow UC-Quality research and creative activities by strengthening the infrastructure for, and levels of, extramural funding.**

| Activities | Current | Short/Mid Outcomes | Long-Term Outcomes |
|---|---|---|---|
| Data Management Consulting<br><br>Research Data Storage<br><br>Collaboration & coordination with campus partners | Provide feedback to faculty on their data management plans for grant applications; provided consulting to four individuals per year.<br><br>Promote availability and use of the DMPTool for data management plan creation.<br><br>Promote availability and use of Dryad for the open publication of research data.<br><br>Offer research data management consultations (Library +OIT) with faculty. 12 faculty assisted per year.<br><br>Participate in the campus' Research Data Management Working Group to advance coordination between the Library and Cyber-Infrastructure & Research Technologies (CIRT) in order to meet faculty's research data management needs.<br><br>Commit to providing data management assistance via letters of support for grant applications. | The Library can support data management feedback requests from all first-time grant writers at UC Merced.<br><br>Researchers receive feedback on data management plans and/or research storage within a 1-week time frame.<br><br>All campus researchers are aware of research data management consultation services offered through the Library or Library/OIT staff.<br><br>The Library offers researchers additional resources/options for data storage needs.<br><br>Library staff support faculty's grant outcomes related to data management, e.g. collaboration with data coordinators hired by grants. | The Library provides data management expertise that supports both pre and post award needs.<br><br>Researchers' data management plans are accepted by granting agencies versus rejected due to insufficient data management plans.<br><br>Researchers are supported in their efforts to use, manage, and share research data post-award through a series of visible services offered by the Library and campus partners. |

# 1.3 Library Geographic Information Systems (GIS) Center / Geospatial Consulting

*Fulfilling and Promoting Strategic Plan Goal 1: Advance Knowledge*

## 1.3 Increase the contributions of students and staff to research and creative activities

### 1.3.1 Library Geographic Information Systems (GIS) Center / Geospatial Consulting: About

The Geographic Information Systems (GIS) Center furthers interdisciplinary research in the geospatial sciences through a variety of services offered to students (undergraduate and graduate), staff, and faculty. Staff in the GIS Center have also been instrumental in coordinating license management and training of geospatial software ensuring that products like ArcGIS Online and ArcGIS Pro (desktop software) are readily available to UC Merced users as they create, store, and share data visualizations.[18] ArcGIS Online is cloud-based software with mapping capabilities, analysis tools, and data sets. Overall, usage of ArcGIS Online has been trending upward in the last decade; in a full five-year period (AY 17-18 to AY 21-22) UC Merced's ArcGIS Online users increased by 511%.

### Table 3. Number of yearly users of ArcGIS Online

| Academic Year | Total | Comments |
|:---:|:---:|:---:|
| AY 22-23 | 259 | users as of 1/26/23; only represents a partial year |
| AY 21-22 | 361 | |
| AY 20-21 | 314 | |
| AY 19-20 | 563 | moving to a single sign-on access of ArcGIS Online in 2019 facilitated increased access to this software |
| AY 18-19 | 120 | |
| AY 17-18 | 59 | |
| AY 16-17 | 11 | |
| AY 15-16 | 8 | |
| AY 14-15 | 3 | |
| AY 13-14 | 3 | |
| **Total** | **1701** | |

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[18] ArGIS Online and ArcGIS Pro are software programs provided by Esri. https://www.esri.com/en-us/about/about-esri/overview

**Table 4. ArcGIS Online User Roles**

| User Roles | # of Users | Percentage of Users |
|---|---|---|
| Undergrad | 1081 | 63.6 |
| Alumni & Inactive Staff | 271 | 15.9 |
| Grad Student / Post Doc | 163 | 9.6 |
| Faculty | 80 | 4.7 |
| Staff (Acad/Research) | 64 | 3.8 |
| Admin Staff | 42 | 2.5 |
| **Grand Total** | **1701** | **100.0** |

Note: Snapshot Feb. 1, 2023

Faculty, graduate students/post-docs, undergraduates, and staff in research units account for over 80% of users.

The user roles point to the use of GIS for a variety of purposes including education and research. Approximately 18% of UC Merced's graduate students & post-doc population access ArcGIS Online suggesting that this is necessary resource for our researchers.[19]

Both student learning and research endeavors are advanced through GIS services. GIS Center

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[19] To roughly calculate the percentage of UC Merced grad students/post docs using ArcGIS Online as of Feb. 1, 2023, we added graduate student and academic employee numbers. Note: Academic employees includes the post-doc population. The most recent data is 760 graduate students and 147 academic employees in fall 2022 for a total of 97. One hundred and sixty-three users (grad & post-doc) is 17.97% of 907.

staff teach workshops for students at request of faculty and Engineering Service Learning. In the past three academic years, GIS staff offered 12 to 19 workshops per semester reaching a total of 94 to 165 attendees each semester.[20] Undergraduate and graduate students completing course assignments or working with faculty on research projects also receive expert assistance for their GIS-related questions. GIS staff have also been involved in mentoring undergraduate and graduate students in GIS tools and methods through offering student employment and providing guidance and mentoring in student success internships.

Though the work of the GIS Center includes a strong level of support for a range of users, the focus of this section will be on the GIS Center's consultations and project consulting services with UC Merced faculty. Via consultations, GIS staff provide valuable assistance and knowledge to meet geospatial needs. They work with individuals and groups to locate data sources, support map-making, overcome technical hurdles, provide project guidance, outline training recommendations (e.g. faculty member engaging undergraduates in GIS work), and collect/create data.

**Table 5. GIS Consultations Summary**

| Year | # of researchers | Total Hours (est) |
|------|------------------|-------------------|
| 2022 | 35 | 360 |
| 2021 | 45 | 520 |
| 2020 | 41 | 560 |
| 2019 | 40 | 400 |
| 2018 | 20 | 260 |
| 2017 | 35 | 300 |

When faculty require more intensive time and expertise from GIS staff than is feasible via consultation services, then the service shifts to project consulting under a recharge model. In project consulting, one or more deliverables are produced by GIS staff. The time required for a single project may vary significantly (20 to 1000 hours) but on average GIS consulting projects involve 200 hours of GIS staff time and may extend over a prolonged period of time. In these projects, sample deliverables might include producing a series of maps or visualizations, processing extensive data sets, analyzing data through a geostatistical process such as geo-coding, and applying data automation to geo-reference hundreds of maps. These projects contribute to knowledge creation and have resulted in book publications, articles, dashboards, and media attention. For example, project consulting support for Professor T. Golash-Boza's work on mapping gentrification in Washington DC resulted in 18 Story Maps, two of which have over 10K views and 91 webmaps each averaging 500-1000 views.

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[20] This is based on data for the following AYs: 2019-2020; 2020-2021; 2021-2022.

## 1.3.2 Library Geographic Information Systems (GIS) Center / Geospatial Consulting: Challenges and Opportunities

Geospatial expertise in combination with GIS applications can produce compelling information as multiple data points are brought into a single visualization to expose problems, communicate findings, perform analysis, or simplify complexity. These visualizations and analyses can have practical and powerful outcomes. A case is point is the mobile mapping application that GIS Center Director Erin Mutch created in 2015; it served as a valuable and current information source about the Butte Fire in Calaveras County.[21] The map filled an information gap for the public by bringing together data that clearly indicated not only fire locations but also where to find an evacuation centers or leave donations. The communicative power of maps has been amplified during the COVID-19 pandemic. Faculty at the Johns Hopkins Center for Systems Science and Engineering produced the John Hopkins Coronavirus Resource Center with visualizations to convey important information about virus numbers and spread.[22] Locally, faculty member Dr. C. Naughton and her team of undergraduate students summarized and displayed Global SARS-CoV-2 Wastewater Monitoring Efforts through a project titled COVID Poops. The map is powered by ArcGIS Online.[23]

To date, demand for GIS services at UC Merced has been strong. The Library expects continued growth as GIS staff are written into grants as partners[24] and approached for their expertise. New data science curriculum will also intersect with geospatial data, so greater demands for GIS expertise from faculty and students are expected to emerge as these new majors are launched.

Use of GIS can lend itself to almost any, if not all, fields of study including agriculture, marketing, environmental conservation, and disaster management to name a few. Currently, the highest users of GIS services at UC Merced have been faculty from the following disciplines: public health, environmental studies, anthropology, economics, political science, and sociology. GIS staff are aware of additional faculty and staff other disciplines or ORU's/Centers also using GIS tools but with a greater level of independence.

To researchers who want to use geospatial data, the GIS Center's services are invaluable. The consultations provide students and faculty access to GIS expertise while consulting and project work of GIS Center staff directly supports faculty's research endeavors including grant submissions and research publications. Increasing GIS personnel will ensure that the GIS Center can continue to dedicate time to project consulting, provide consultations to a range of users, develop students' GIS competencies with GIS-related employment and internships, and consistently offer GIS-focused workshops for undergraduate and graduate student audiences.

[21] Thaddeus Miller, "UC Merced Map a Tool for Watching Butte Fire," Merced Sun-Star, The: Web Edition Articles (CA) (September 21, 2015), https://infoweb.newsbank.com/apps/news/openurl?ctx_ver=z39.88-2004&rft_id=info%3Asid/infoweb.newsbank.com&svc_dat=AWNB&req_dat=ED7E6DEF119D4A348FDEFF4CD5CD88F9&rft_val_format=info%3Aofi/fmt%3Akev%3Amtx%3Actx&rft_dat=document_id%3Anews%252F158B257DA0D526C0

[22] Center for Systems Science and Engineering (CSSE), "COVID-19 Map," Johns Hopkins Coronavirus Resource Center, accessed February 20, 2023, https://coronavirus.jhu.edu/map.html; Rob Stein, "As the Pandemic Ebbs, an Influential COVID Tracker Shuts Down," NPR, February 10, 2023, sec. Shots - Health News, https://www.npr.org/sections/health-shots/2023/02/10/1155790201/as-the-pandemic-ebbs-an-influential-covid-tracker-shuts-down.

[23] Dr. Colleen Naughton and UC Merced Students, "COVIDPoops19," https://ucmerced.maps.arcgis.com/apps/dashboards/c778145ea5bb4daeb58d31afee389082.

[24] The GIS Center is listed as a partner in a UC Merced faculty member's proposal that will advance to the UCOP Climate Action 2023 Seed Awards.

**Logic Model: UC Merced Library's Contributions to Strategic Planning Goal 1** – Engage Our World and Region Through Discovery and the Advancement of Knowledge

**1.3 Increase the contributions of students and staff to research and creative activities.**

| Activity Title | Current Implemen-tation | Short/Mid Out-comes | Long-Term Outcomes |
|---|---|---|---|
| GIS / Geospatial Consultations<br><br>GIS / Geospatial Project Consulting<br><br>GIS / Geospatial education for undergraduate students<br><br>GIS / Geospatial employment or internship opportunities<br><br>Provide support for administrative units e.g. campus planning and facilities<br><br>Oversight and implementation of Esri software for GIS work | Provide ~35 consultations (or 360 hours of capacity) to the campus community (students, staff, faculty) per AY. Based on calendar year 2022.<br><br>Work with six faculty on seven projects in AY 2022 at approximately 400 hours.<br><br>Teach 6 workshops/classes per AY on topics relate to geospatial skills or tools.<br><br>Provided six internships / employment opportunities in past 5 years (2017-2018 through 2021-2022).<br><br>Pro-active & technical support and licensing for geospatial software including liaison work with Esri. | Provide 60 consultations (or 675 hours of consultations / capacity) to the campus community (students, staff, faculty) per AY.<br><br>Allocate 540 hours for project consulting, an increase of 50% amount.<br><br>Teach 16-20 workshops/classes per AY on topic related to geospatial skills or tool but increase offerings on open course and programming languages to support map-making.<br><br>~500 individuals per AY use GIS principles and software to create public projects in one or more Esri products. | Researchers, who use project consulting, refer to the support they received from GIS Center staff in their research publications.<br><br>Annually a minimum of two UC Merced researchers produce visualizations that receive public attention.<br><br>5% of campus students & researchers use Esri tools to create a geospatial project in any given year.<br><br>The number of disciplines (represented by faculty) using geospatial data expands.<br><br>First-time users of Esri products (e.g. ArcGIS Online) trends upwards yearly.<br><br>Graduates of UC Merced will view the Library as an essential contributor to their education, preparing them for careers and/or graduate work in the GIS field. |

# Goal 2: Develop Future Scholars and Leaders

## 2.1 Library Instruction for Information Literacy and Reference Consultations

*Fulfilling and Promoting Strategic Plan Goal 2 Develop Future Scholars and Leaders*

> **2.1  Grow and diversify UC-quality educational opportunities for undergraduate and graduate students and the public**

### 2.1.1 Library Instruction for Information Literacy and Reference Consultations: About

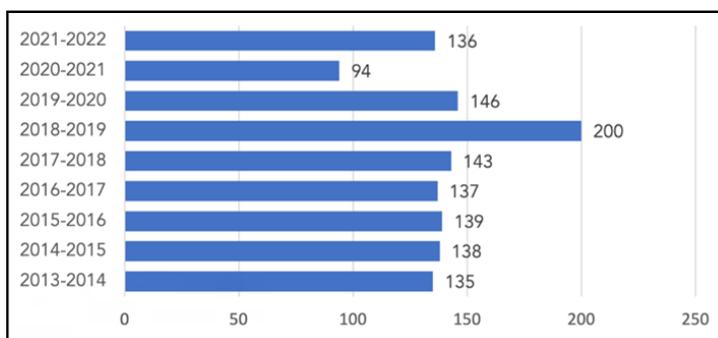### A. Developing Student's Information Literacy Competencies

Life at the university requires students to discover, understand, and use information ethically.[25] To develop these information literacy competencies in students, librarians employ a number of strategies including, but not limited to, providing instruction in existing classes; creating instructional objects (such as short videos), preparing instruction for high-impact practices (e.g. undergraduate research programs), and offering one-on-one reference consultations.

### B. Instruction for Existing Classes

At faculty request, librarians prepare and teach instruction sessions to equip students with the knowledge and skills needed to initiate and complete research projects or assignments. Most sessions are requested by faculty teaching Spark classes (first-year seminars), Writing 10, upper-division Writing, or courses originating from the School of Social Sciences, Humanities and Arts (SSHA). Within any given semester, librarians with instruction as a significant part of their portfolio may each teach 20-25 library sessions for courses. The graph below represents 1,981 sessions from July 2013 through June 2022 with 43,509 participants. The instruction team taught the greatest number of course instruction sessions in spring 2019 with 97 offerings.[26]

**Figure 3. Total Library Instruction Sessions for Courses per Academic Year**

| Academic Year | Sessions |
| --- | --- |
| 2021-2022 | 136 |
| 2020-2021 | 94 |
| 2019-2020 | 146 |
| 2018-2019 | 200 |
| 2017-2018 | 143 |
| 2016-2017 | 137 |
| 2015-2016 | 139 |
| 2014-2015 | 138 |
| 2013-2014 | 135 |

Librarians have been able to reach a large percentage of the undergraduate student population with its instruction services and contribute to their information-finding. In the campus' Graduating Senior Survey, 89% of undergraduate student

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[25] For a full definition of information literacy see: Association of College & Research Libraries (ACRL), "Framework for Information Literacy for Higher Education," (February 9, 2015): 1-34, esp. 8, https://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/infolit/framework1.pdf.

[26] The core instruction team normally consists of four librarians in the Library's Research & Learning services unit. Instruction is one of their responsibilities.

respondents reported receiving instruction from library staff in one or more classes during their time at UC Merced and when asked if Library research instruction helped them find suitable information resources for their papers and projects, 90% responded *Always* (64%) or *Usually* (26%).[27]

Faculty recipients of library instruction for their classes have been asked to provide feedback on these sessions and any noticeable impacts on their students' work. Respondents have reported benefits of library instruction with positive changes in student work, behaviors, and knowledge including increased proficiency in database use, improved bibliographies/ research papers, a better understanding of scholarly sources, and feeling more comfortable in asking librarians for research help.[28]

## C. Instructional Objects (Tutorials, Videos)

To offer faculty and students educational resources that allow for greater flexibility in use (e.g. anytime access), librarians have created instructional objects, updated them regularly, and promoted their use. In addition, librarians have used these materials as part of flipped classroom experiences in which students complete pre-activities prior to their session with a librarian. The *Starting Your Research* 8-module series is available for faculty who want to use the content with their students. Tutorial content is accessible via a library guide[29] or in the Canvas Commons for import into any UC Merced CatCourses site.[30] Content continues to be renewed and expanded. The 12 modules in the Canvas Commons have been downloaded 462 times since 2019 into UC Merced courses.[31] The highest usage of *Starting Your Research* series was fall 2022 with 14 faculty assigning students modules and 150 students taking one or more modules. Ninety-three percent of those students were in first-year writing classes (Writing 1 or Writing 10).

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[27] Graduating Senior Survey Longitudinal Tableau Dashboard (2019-2022) Results. https://visualizedata.ucop.edu/t/UCMerced/views/GSSLongitudinalTableauDashboardpwb/GraduatingSenior-SurveyStory/722fc136-4572-48c2-9d67-9bd32f3bc479/d845a7d0-04a4-41cb-96df-14bbaf55f857?:display_count=n&:showVizHome=n&:origin=viz_share_link

[28] These benefits are extracted from the "Faculty Feedback on Library Instruction (Fall 2021)" survey in response to the following question: "In what ways, if any, has library instruction impacted your students' work?"

[29] UC Merced Library, "Starting Your Research," https://libguides.ucmerced.edu/starting-your-research

[30] CatCourses Library Modules. About & Import Instructions. https://libguides.ucmerced.edu/library-modules-cat-courses

[31] Please note that some modules in CatCourses were more recently produced and therefore were not available in fall 2019.

## D. Instruction for High-Impact Practices (Summer Undergraduate Research Institute)

Librarians support undergraduate research by coordinating with Undergraduate Research Opportunities Center (UROC) program staff to provide multiple workshops for students participating in the Summer Undergraduate Research Institute (SURI), a program where students engage in research projects guided by faculty and supported with graduate student mentors.[32]

The instruction team provides numerous session offerings for SURI students during their initial week of training.[33] To enhance support for humanities students, additional sessions have been developed on topics including archival research, a research methods database, and file management. Librarians have also met with graduate student mentors to share instructional materials on these topics: reading scholarly sources and publishing. Graduate students take these materials to develop their own workshops for the SURI students they mentor.

As can be seen below, in surveys of SURI participants, students reported that library orientations increased their level of preparedness to find and use library resources for their summer research at UC Merced as approximately 39% of respondents did not feel prepared beforehand and this dropped to ~3% post-sessions.

**Figure 4. Think about your level of agreement level both prior to and following Library Orientation: *I am well prepared to find and use library resources for my summer research* at UC Merced.**
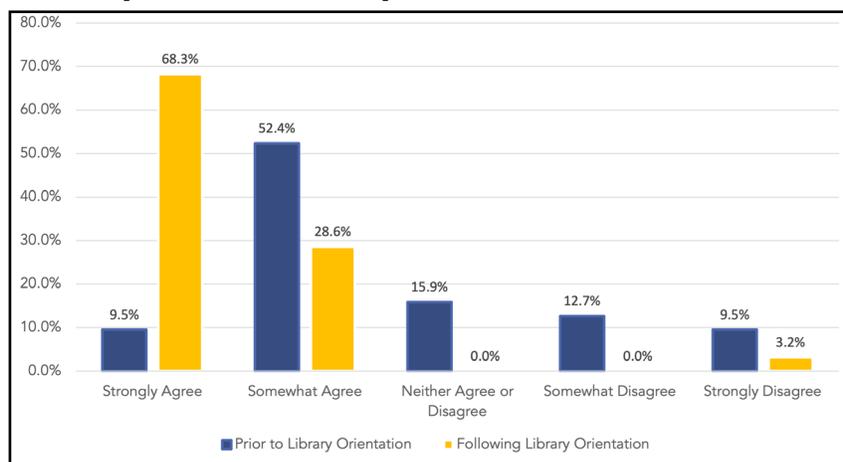


In UROC's program assessment at the end of the summer, student participants were asked if library training was beneficial to their development and 91% of attendees who responded agreed.[34]

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[32] American Association of Colleges & Universities (AAC&U), "High-Impact Practices," January 16, 2022, https://www.aacu.org/trending-topics/high-impact. High-Impact Practices (HIPs) are educational opportunities of high benefit to students who participate in them and even more so for under-served students. Undergraduate research experiences are one example of high-impact practice (HIP). Other high impact practices where librarians have been involved include capstone courses, first-seminars (SPARK courses), internships, and learning communities.
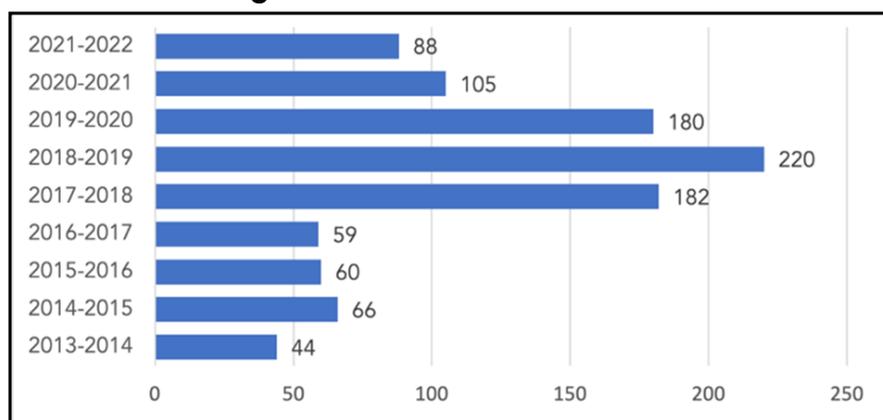
[33] Sara Davidson Squibb and Elizabeth Salmon, "Pick and Choose: Offering Options to Expand Library Sessions for Undergraduate Researchers," College & Research Libraries News, (May 6, 2022): 206-210, doi:https://doi.org/10.5860/crln.83.5.206.

[34] Based on a 2022 survey distributed by UROC to SURI participants at the end of the summer program.

## E. Reference Consults: One-On-One

Reference consultations with students are a form of teaching. Any member of the campus community can immediately *Make an Appointment* with a librarian via our scheduling system.[35] Those librarians teaching library's instruction sessions are also the ones most likely to meet with students individually or in small groups. Students who request research consultations reach out via their own initiative or are strongly encouraged to schedule a reference consult by their faculty instructor or mentor. Reference consults provide an opportunity for students to receive more in-depth instruction and guidance on their specific research questions that surface from course assignments and undergraduate research with faculty. In post-appointment feedback, all participants *agreed* that the assistance from the librarian helped them find the information they needed and, if applicable, helped them better understand how to approach their research questions. In post-appointment survey responses, all rated the service as *excellent* and responded that they were *extremely likely* to recommend this service to someone else.[36]

**Figure 5. Total Reference Consults Undergraduate and Graduate students**

| Year | Value |
|------|-------|
| 2021-2022 | 88 |
| 2020-2021 | 105 |
| 2019-2020 | 180 |
| 2018-2019 | 220 |
| 2017-2018 | 182 |
| 2016-2017 | 59 |
| 2015-2016 | 60 |
| 2014-2015 | 66 |
| 2013-2014 | 44 |

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[35] UC Merced Library, "Make an Appointment," https://libcal.ucmerced.edu/appointments/.
[36] Based on all post-appointment survey responses (15) from fall 2021 through spring 2023.
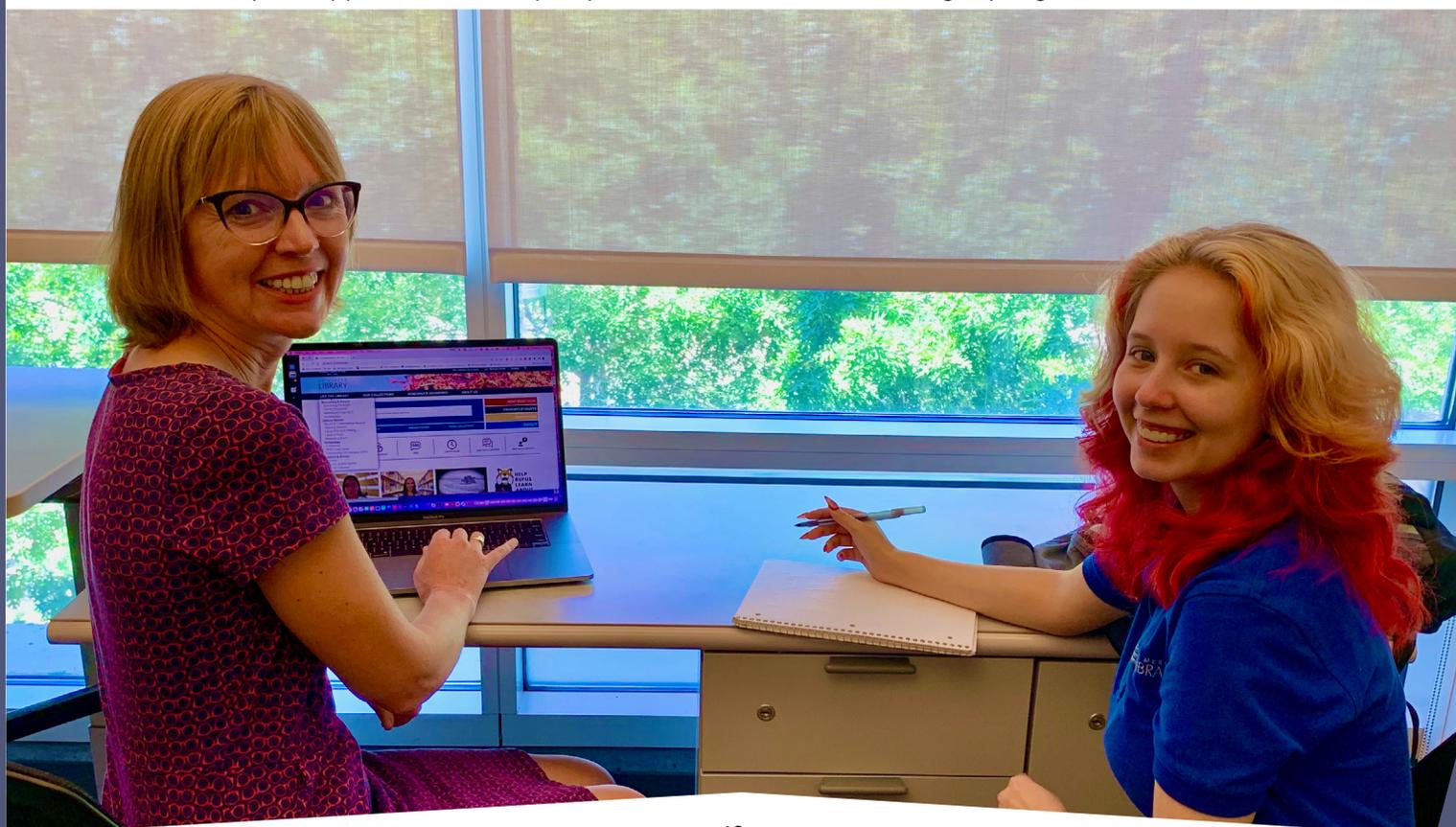
## 2.1.2 Library Instruction for Information Literacy and Reference Consultations: Challenges and Opportunities

The UC Merced Library focuses on preparing students to successfully navigate information for academic, work, and personal information needs. The challenges students face in effectively and ethically using information is well-documented in *Project Information Literacy* (PIL) findings, an extensive set of research studies (2008-2022) focused on how students find, use and create information.[37] By their own admission, UC Merced students do not enter the university with a fully developed slate of information literacy competencies. When asked to report on their library and online information research skills when they started at our campus, 59% UC Merced students reported that their skills in these areas were *very poor, poor,* or *fair* (59%).[38] Both national research findings (PIL) and local students' self-reporting (UCUES) point to the need for deliberate information literacy education for college students.

This investment in developing our students' information literacy competencies supports their student success. As librarians provide students with guidance and instruction on topics such as effective search strategies, information access, knowledge creation in Wikipedia, scholarly article dissection, and research question development, students learn how to locate, evaluate, and manage information more competently.[39] This instructional support provides them necessary knowledge for academic success and increased confidence of their place at the university.

When UC Merced students have provided immediate feedback on library sessions, they report learning something new that will help them succeed in classes (95%, *strongly agree* or *agree*), anticipate applying this knowledge to their studies (95%), feel more confident in their ability to complete an assignment (94%), and have an increased awareness of the resources and services available to them from the library (93%).[40] More formal investigations of the positive correlation between library instruction and student success include a recent study at the University of North Texas. Students who received library instruction (treatment group) were more likely to have a higher GPA, pass the course, and re-enroll at the university the following semester than those who did not (control group).[41]

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[37] Project Information Literacy (PIL), "Publications," https://projectinfolit.org/publications/.

[38] University of California Undergraduate Experience Survey (UCUES) Data Tables, 2022. Academic Development tab.
https://visualizedata.ucop.edu/t/Public/views/UCUESdatatables22/AcademicDevelopment?:embed_code_version=3&:embed=y&:loadOrderID=0&:display_spinner=no&:showAppBanner=false&:display_count=n&:showVizHome=n&:origin=viz_share_link

[39] In fall 2021, librarians provided instruction on Wikipedia use. With this background, students in Catherine Koehler's Writing 10 classes created a Wikipedia page on the Merced Assembly Center to highlight the history of Japanese-American interned during World War II. This was done in collaboration with librarians who taught students how to use Wikipedia. "Merced Assembly Center," Wikipedia, February 25, 2023, https://en.wikipedia.org/w/index.php?title=Merced_Assembly_Center&oldid=1141559456.

[40] This data is based on AY 2021-2022 Exit Slips post library instruction from 948 student responses (predominantly undergraduate).

[41] Jennifer Rowe et al., "The Impact of Library Instruction on Undergraduate Student Success: A Four-Year Study," College & Research Libraries, (January 4, 2021): 7-18, doi:https://doi.org/10.5860/crl.82.1.7. Librarians at the University of North Texas found a correlation between library instruction and student success through comparing the outcomes of students in a treatment group (student receiving library instruction ~3,000 students) with a control group (students who did not receive library instruction in the same course ~6,000 students). The authors chose to examine GPA, course pass/not pass, and re-enrollment the following semester (retention) as measures of student success.

Beyond their application to academic work, information literacy competencies are also important for both personal and work-related inquiries. For example, critical evaluation of information is vital in a complex information landscape where almost anyone can be a creator and distributor of information. The events associated with the 2016 election and beyond amplified the dire need to apply critical evaluation to (mis)information available in varied formats (news, Tweets, videos etc.) and distributed or pushed through a variety of channels including social media platforms.[42] Information inaccuracies and disputes around COVID-19 topics[43] continue to highlight the importance of information literacy skills. Employers also consider this level of analysis to be important as critical thinking is one of eight career readiness competencies identified by the National Association of Colleges and Employers.[44]

UC Merced librarians have been most focused on teaching students how to search information sources (including a whole new realm of academic sources previously unavailable to them) and how to engage in the research process. These efforts align with *Searching as Strategic Exploration and Research as Inquiry* themes developed locally from the Association of College & Research Libraries' (ACRL's) Information Literacy Framework.[45] Supporting students in these beginning research practices is valuable. Yet, there is opportunity in developing additional information literacy competencies centered around the themes of Information Creation & Value, Information has Value, and Scholarship as Conversation. A sample of this work that involved students in information creation and knowledge production involved preparing students to contribute to Wikipedia with primary and secondary sources.[46]

Moving forward, librarians would like to expand their capacity to teach and meet with students, create relevant learning objects, and develop deeper collaborations with faculty to scaffold information literacy learning experiences into program curriculum including general education. This will require willing partners. A prior project between Merritt Writing Program (MWP) and librarians is a successful example. Together, librarians and lecturers co-developed curriculum that emphasized selected information literacy competencies and the research process with first-year students.[47] With an expanding student population, new academic majors, continued emphasis on undergraduate research opportunities, and the anticipated honors program, librarians expect more opportunities to support students in their academic endeavors. Doing so will require capacity-building by hiring librarians with teaching pedagogy and subject area expertise to work closely with our students and faculty.

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[42] Hunt Allcott and Matthew Gentzkow, "Social Media and Fake News in the 2016 Election," The Journal of Economic Perspectives 31, no. 2 (2017): 211–235, http://www.jstor.org/stable/44235006.

[43] Frank Otto, "COVID-19 Misinformation: The Flip Side of 'Knowledge Is Power,'" Penn Medicine News, October 25, 2022, https://www.pennmedicine.org/news/news-blog/2022/october/covid-misinformation-the-flip-side-of-knowledge-is-power.

[44] National Association of Colleges and Employers (NAC), "What Is Career Readiness?," accessed February 15, 2023, https://www.naceweb.org/career-readiness/competencies/career-readiness-defined/.

[45] "Information Literacy (IL) Outcomes," UC Merced Library, https://library.ucmerced.edu/research/instructors/library-instruction-services/infolit-outcomes. Librarians in Research & Learning Services developed Information Literacy Outcomes based on the ACRL's Information and Literacy Framework.

[46] Sara Davidson Squibb, Catherine Koehler, and Jerrold Shiroma, "Engaging Neglected Histories: First-Year Students, Archives, and Wikipedia," College & Research Libraries News 84, no. 3 (March 6, 2023), doi:https://doi.org/10.5860/crln.84.3.103.

[47] UC Merced Library, "Think Like a Researcher," https://libguides.ucmerced.edu/think_like_a_researcher/background. Lecturers taught most of the materials directly with students and librarians provided a cumulative in-person session. Those students in classes using this embedded curriculum model titled "Think Like a Researcher (TRAIL)" demonstrated greater learning gains than their peers who only received a single library session or no library session in their Writing class; TRAIL students were more likely to use suitable sources and present arguments and multiple viewpoints with evidence.

**Logic Model: UC Merced Library's Contributions to Strategic Planning Goal 2** – Develop Future Scholars and Leaders

**2.1 Grow and diversify UC-quality educational opportunities for undergraduate and graduate students and the public.**

| Activities | Current | Short/Mid Outcomes | Long-Term Outcomes |
|---|---|---|---|
| Information literacy competency instruction (e.g. in faculty classes, in training for research programs, via instructional materials)<br><br>Reference consultations | Teach information-literacy sessions in courses, at faculty invite, focused on supporting class assignments. (136 sessions in AY21-22)<br><br>Provide sessions on a minimum of six topic areas for undergraduates participating in UROC's Summer Undergraduate Research Institute (SURI).<br><br>Create and make available instructional learning objects (tutorials, videos) for faculty to use with students and/or librarians use in flipped instruction. Currently offer 12 modules in Canvas Commons (downloaded 462 times since 2019) and the Starting Your Research Series (8 modules) via a Library Guides. Sample usage of 150 students assigned by 14 faculty in fall 2022.<br><br>Integrate information literacy into curriculum e.g. TRAIL (Teaching Research And Information Literacy)<br><br>Meet with students to share strategies and resources for their research questions. In 2021-2022 librarians recorded 88 consultations. | Teach a minimum of 160 information literacy sessions per AY in courses at faculty invite. Student feedback indicates high value from the sessions for 95% of participants.<br><br>Increase topic offerings, to a minimum of eight, for UROC's SURI participants.<br><br>Increase usage of existing instructional learning objects by 20% in two years through promoting these materials to faculty for use with students and leveraging them in flipped classroom environments.<br><br>Revise, retire, and create new instructional learning objects in keeping with known instruction needs.<br><br>Seek out and engage in deeper collaboration with faculty and programs to embed & scaffold information literacy into curriculum.<br><br>Meet anticipated research consultation requests e.g. honors program participants. Engage in 120+ research consultations per AY with students. | Students meet information competencies standards outlined and evaluated by their academic program(s).<br><br>Students navigate their information environment with a greater level of confidence and competency to successfully complete their academic work and meet personal information needs.<br><br>Students will achieve greater levels of information literacy. See UC Merced Library IL Outcomes.<br><br>Graduates of UC Merced will be credible consumers and creators of information who strategically navigate, critically evaluate, and ethically use information to make decisions and solve problems in a changing and complex information environment. |

# 2.2 Library Coding and Data Science Education for Graduate Students

## *Fulfilling and Promoting Strategic Plan Goal 2 Develop Future Scholars and Leaders*

## 2.2 Broaden and deepen students' academic, personal, and career-related experience and preparation

### 2.2.1 Library Coding and Data Science Education for Graduate Students: About

The UC Merced Library offers workshops targeted at graduate students to teach foundational coding and data science skills. Providing these educational opportunities is part of the Library's Data Services and is currently lead by one FTE staff member who prepares and teaches workshops that build students' data and computational skills. The beginnings of this educational emphasis started with the Library's membership in The Carpentries ([https://carpentries.org](https://carpentries.org)) which has provided access to guest instructors, Carpentries curriculum (including Data Carpentry, Library Carpentry, and Software Carpentry), and allocated slots to train local instructors.

In addition to this local focus on providing Carpentries curriculum, there is extensive collaboration with UC Libraries' colleagues to offer workshops open to all UC community members during Love Data Week (spring) and UC Carpentries (fall).[48] Together, these local and systemwide offerings provide graduate students with access to a robust set of data science trainings.

**Table 6. Systemwide and Local Attendance (2022)**

| Love Data Week | UC Carpentries |
|---|---|
| Total Attendees: 1064 | Total Attendees: 328 |
| Total UC Merced Attendees: 60 | Total UC Merced Attendees: 87 |

Most local data education offerings are advertised to all graduate students, though specific trainings are prepared and taught for graduate and research groups at the request of Grad Group chairs or graduate students. There is interest from a broad range of disciplines in coding and data science skills. To date, graduate students from 13 programs have participated in Carpentry workshops. While graduate students are the primary audience, additional attendees have included UC Merced staff, post-docs, and faculty members.

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[48] UC Love Data Week 2023, [https://uc-love-data-week.github.io/uc-love-data-week.github.io/,](https://uc-love-data-week.github.io/uc-love-data-week.github.io/) offered over 20 sessions to the UC community on topics ranging from data visualization to building a data science portfolio.

**Table 7. Graduate Programs Participating in Carpentries Based on Student Attendance**

| Engineering | Natural Sciences | Social Sciences |
|---|---|---|
| Electrical Engineering and Computer Sciences<br><br>Materials and Biomaterials Sciences and Engineering<br><br>Mechanical Engineering | Applied Math<br><br>Chemistry and Biochemistry<br><br>Environmental Systems<br><br>Quantitative and Systems Biology | Cognitive and Information Sciences<br><br>Economics<br><br>Political Sciences<br><br>Psychological Sciences<br><br>Public Health<br><br>Sociology |

## 2.2.2 Library Coding and Data Science Education for Graduate Students: Challenges and Opportunities
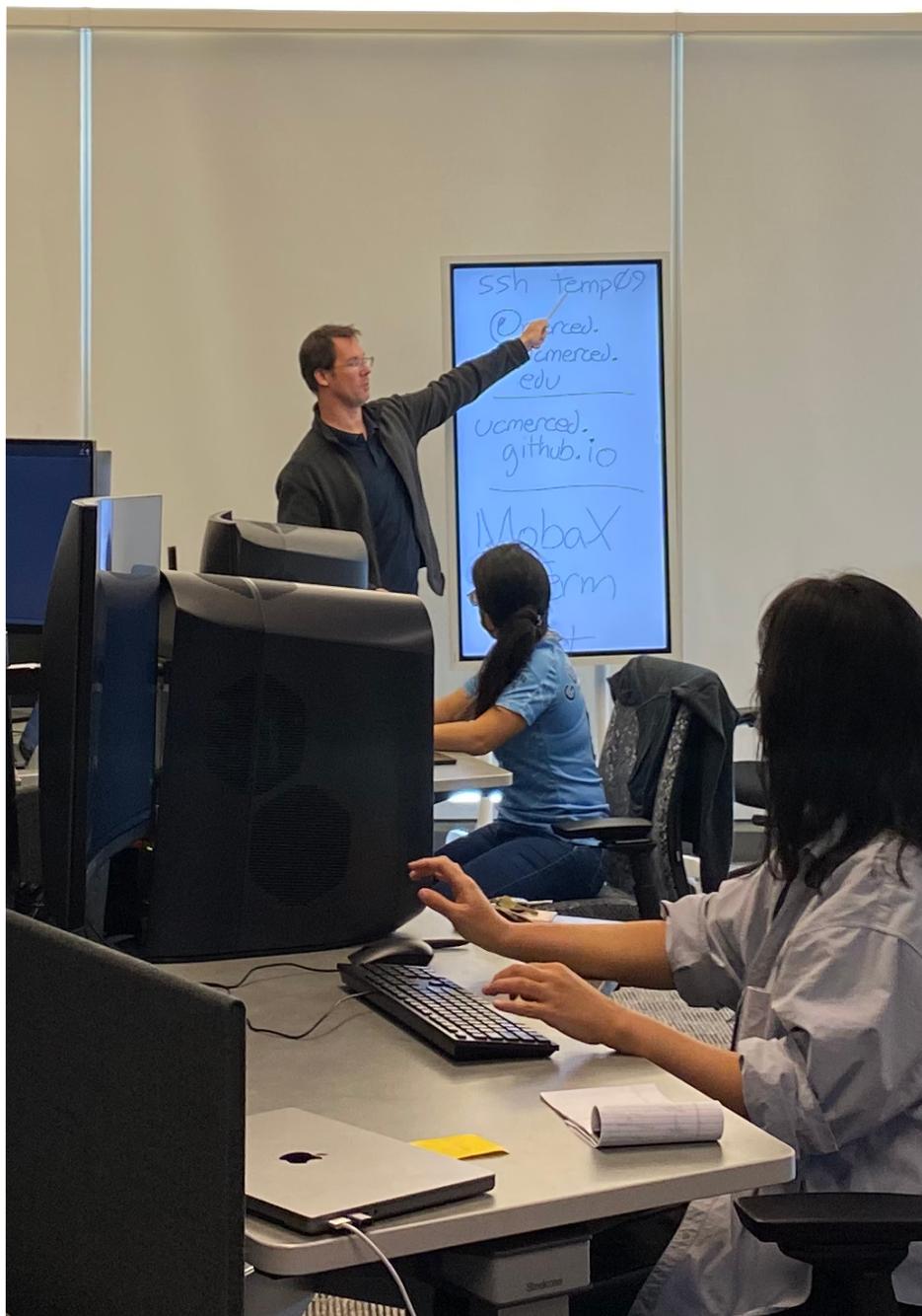
These extensive workshops teach foundational coding and data science skills that are important for many graduate students' current academic development and future professional aspirations. By gaining research computing skills, they can apply efficient and reproducible workflows in personal and group research practices. To date, faculty in the social sciences are particularly keen on having their students participate, and students in those disciplines appear to be the least likely to already have strong coding competencies. For planning purposes, the Library anticipates that up to 80% of social sciences graduate students, 50% from the natural sciences, and 20% from engineering will be the main audience for these workshops going forward.

Data science and coding skills are also in-demand in the workplace. Graduate students have sought out these training due to the coding competencies they see listed on job postings. Interestingly in the latest S&R Ithaka report (2021), the percentage of faculty who found *writing software or code* to be an important methodology increased over prior survey years (2015 & 2018) suggesting that these competencies may be increasingly important to a portion of academic researchers.[49] These educational offerings for graduate students are intended to increase their research productivity and competitiveness in the job market.

At UC Merced, interest in data science education has been strong since the first Carpentries trainings were first offered in 2017; that interest continues to expand. This growth is largely driven by increased faculty awareness of available programming, the value of the curriculum for research productivity, and the ability to return to in-person offerings. In AY 2022-2023, the Library's lead for Data Carpentries organized, prepared, and taught 33.5 hours of curriculum with a total of 53 attendees. Session offerings included *Fundamentals of R* and *Data and SQL for Data Scientists.* There is an opportunity to further support graduate students' research and academic success through increasing research automation and data science trainings.

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[49] Ithaka S+R, "Ithaka S+R US Faculty Survey 2021," accessed January 19, 2023, https://sr.ithaka.org/publications/ithaka-sr-us-faculty-survey-2021/.

Demand for these sessions is expected to increase due to graduate student and faculty interest, ongoing campus growth, the launch of a self-supporting Masters in Data Science and Analytics (MDSA), and the introduction of two data science undergraduate majors.[50] The Library, in conversation with MDSA leads, committed to preparing a Data Bootcamp for incoming Masters' students this program.[51] As per the proposal, accepted students will not be required to come with prior coding or technical experience so support from the Library will be essential for these students. For the new undergraduate majors, Teaching Assistants (TAs) for data courses would ideally be tapped as potential instructors or helpers for future sessions, building out their coding experience and increasing their competitiveness in the workplace. Library staff will have a growing role in coordinating and mentoring graduate students who are involved in Carpentries trainings. Adjacent to the curriculum are additional research-focused initiatives that are seeking Carpentries education including faculty who want to prepare their undergraduates for summer research projects and those spearheading the UC Merced Farms Food Future Innovation initiative which is bringing in multiple graduate student researchers.

To provide mentorship, expand offerings, and provide more advanced and specialized topics, the Library will require additional personnel.[52] This is an exciting area of expansion in direct support of students' research productivity with additional benefits to their peers and advisors.

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[50] Currently, there are two proposals for undergraduate degrees focused on data science: Data Science and Analytics (B.S. Degree) with an anticipated 200 declared majors within five years of launching and Data Science and Computing (B.S. Degree or Minor) expected to enroll 465-888 students by 2030.

[51] Within five years of launch, the MSDA program expects to move from an enrollment of 10 students to 100.

[52] For example, there has been faculty interest in a Carpentries series on research computing and genomic data.

**Logic Model: UC Merced Library's Contributions to Strategic Planning Goal 2** – Develop Future Scholars & Leaders

**2.2 Broaden and deepen students' academic, personal, and career-related experience and preparation.**

| Activities | Current | Short/Mid Outcomes | Long-Term Outcomes |
|---|---|---|---|
| Coding and Data Science Education (grad student focus) | Prepare and teach Carpentry workshops for graduate students (e.g. Programming in Python, Versions Control with Git and GitHub)<br><br>Plan and teach sessions in UC systemwide initiatives: Love Data Week and UC Carpentries.<br><br>Consult with graduate students post-Carpentries to trouble-shoot research automation challenges<br><br>Further Carpentries participation through identifying campus partners and targeted communications (e.g. to graduate group chairs). | Provide Carpentry offerings that will accommodate the potential graduate student demand: 80% of graduate students in the Social Sciences; 50% from Natural Sciences; 20% from Engineering. (e.g. Accommodate 320 graduate students based on an analysis of AY 2022-2023 data.)<br><br>Create and offer Carpentries workshops that address specialized topics requested by faculty & graduate groups.<br><br>Increase capacity to mentor Teaching Assistants (TAs) and fold them into Carpentries offerings as instructors and/or helpers. | Graduate students attending Carpentries view the Library as a vital contributor to their development as a researcher.<br><br>Graduate students are highly productive due to research automation and reproducibility training. Beyond personal benefits, their computing abilities increase the productivity of their labs and advisors.<br><br>Graduate students are highly competitive for the job market as they demonstrate the ability to produce excellent work (e.g. publications, sustainable code) and solve difficult problems.<br><br>Faculty, whose students participate in the Carpentries, consider the Library's offerings to be essential to the education and success of their graduate students and by extension their own research success (e.g. obtaining grants).<br><br>A minimum of four graduate students train to become Carpentries instructors and/or help deliver Carpentries curriculum to other students each AY. |

# 2.3 Library Zero Cost Course Materials (ZCCM)

***Fulfilling and Promoting Strategic Plan Goal 2 Develop Future Scholars and Leaders***

**2.3 Increase degree completion rates, while maintaining equity in achievement**



### 2.3.1 Library Zero Cost Course Materials (ZCCM): About

The Zero-Cost Course Materials (ZCCM)[53] Grant program launched in 2018-2019, as a collaboration between the UC Merced Library and the Center for Engaged Teaching and Learning (CETL). Together the Library and CETL designated funding ($30,000) for mini-grants offered to faculty and instructors to support their adoption of zero-cost course materials in new or existing courses. Grant submitters proposed to eliminate textbook costs for students in their classes through the use of open educational resources (OER) and/or use of available library collections. Between 2019 and 2021, the ZCCM committee awarded grants for 15 courses that impacted over 1,870 students representing all three schools. Costs savings for students equaled almost $203,000 or $108 dollars per student enrolled in those courses. These savings were calculated by taking the price of the previously used commercial materials in the course and multiplying it by the number of students enrolled in the ZCCM course. Based on information gathered in spring 2023, from original ZCCM awardees who continue to use no-cost course materials, this initiative has generated another $224,000 in cost savings for students. The ZCCM grant program paused when funding was expended. However, the Library acquired $25,000 in Scholar Transformational Impact Funding to continue the grant; calls for applications resumed in fall 2022 and are expected to continue through 2025.

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[53] At UC Merced we refer to Zero Cost Course Materials (ZCCM), but other campuses refer to them as Open Educational Materials (OEM) or Affordable Course Materials (ACM)

The Library and CETL engaged in this mini-grant program to reduce negative student outcomes associated with textbook costs – costs that "increased by 190% from January 2006 to 2018" and at a higher rate than increases to college tuition and fees.[54] Though textbook costs have started to decline more recently, the latest "Student Textbook and Instruction Materials Survey" (2022) from the Florida Virtual Campus found that students still report textbook costs as a "substantial problem".[55]

Via surveys, researchers, organizations, and institutions have asked students to report on the behaviors they engage in to avoid textbook costs. These behaviors include limiting their access to texts (sharing texts or delaying purchases), not obtaining some or all required course materials, and influencing course enrollment decisions (# of units, courses selected).[56] Students have also reported dropping or failing classes due to high textbook costs.[57] Historically underserved students may experience these negative impacts at a higher rate than their White peers as per the findings of researchers at HSI in southern California.[58]

Locally, UC Merced students have also reported negative outcomes as a result of textbook costs. In their letter of support (June 2022) for the ZCCM grant program, UC Merced California Public Interest Group (CALPIRG) student representatives called attention to its research on college students and the costs of higher education including textbook costs. CALPIRG's survey found that 11% of UC Merced students are "more likely than the national average to decide against buying or renting textbooks because they were too expensive. [And] 73% … indicated that they have either missed paying a bill, skipped a meal, worked extra hours, chosen between classes due to their relative costs, or dropped a class because they could not afford the materials. This is higher than the national average of 58%."

[54] Quoted from the Bureau of Labor Statistics 2018; See Shanna Smith Jaggars, Marcos D Rivera, and Briana Akani, "College Textbook Affordability: Landscape, Evidence, and Policy Directions" MidWestern Higher Education Compact Policy Report, (March 2019): 1-15, esp. 2. https://files.eric.ed.gov/fulltext/ED598412.pdf.

[55] Distance Learning & Student Services Florida Virtual Campus, "Student Textbook and Instructional Materials Survey," (September 2022): 1-57, esp. 4, https://dlss.flvc.org/documents/210036/1314923/FLVC+Textbook+Survey+Report+-+2022.pdf/818e20cb-1daa-3565-a948-192f5287917c.

[56] J. Jacob Jenkins et al., "Textbook Broke: Textbook Affordability as a Social Justice Issue," Journal of Interactive Media in Education 2020, no. 1 (May 11, 2020): 1-13, doi:10.5334/jime.549; Julie Nemec, "NACS Report: Student Spending on Course Materials Continues to Decline," National Association of College Stores (June 25, 2020), https://www.nacs.org/student-spending-on-course-materials-continues-to-decline; Office of Distance Learning & Student Services Florida Virtual Campus, "2018 Student Textbook and Course Materials Survey: Results and Findings" (March 8, 2019): 1-35, https://dlss.flvc.org/documents/210036/1314923/2018+Student+Textbook+and+Course+-Materials+Survey+Report+-+FINAL+VERSION+-+20190308.pdf/07478d85-89c2-3742-209a-9cc5df8cd7ea; Ethan Senack, "Fixing the Broken Textbook Market: How Students Respond to High Textbook Costs and Demand Alternatives" (Center for Public Interest Research, January 2014): 1-18, https://publicinterestnetwork.org/wp-content/uploads/2014/01/NATIONAL-Fixing-Broken-Textbooks-Report1.pdf.

[57] J. Jacob Jenkins et al., "Textbook Broke: Textbook Affordability as a Social Justice Issue," Journal of Interactive Media in Education 2020, no. 1 (May 11, 2020): 1-13, doi:10.5334/jime.549; Office of Distance Learning & Student Services Florida Virtual Campus, "2018 Student Textbook and Course Materials Survey" (March 8, 2019): 1-35, https://dlss.flvc.org/documents/210036/1314923/2018+Student+Textbook+and+Course+Materials+Survey+Report+-+FINAL+VERSION+-+20190308.pdf/07478d85-89c2-3742-209a-9cc5df8cd7ea

[58] J. Jacob Jenkins et al., "Textbook Broke: Textbook Affordability as a Social Justice Issue," Journal of Interactive Media in Education 2020, no. 1 (May 11, 2020): 1-13, doi:10.5334/jime.549

The Library's own survey asked students in ZCCM classes to report on the impact of course texts. Respondents' (n=419) most frequent cost mitigation strategy involved sharing texts with classmates; approximately 37% reported doing this *often* or *very often*. And, ~20% of students reported not purchasing texts *often* or *very often*. Students were less likely to let course text costs influence their decisions around course selection, number of units to enroll in, or drop/withdraw decisions. However, over 22% reported that they *sometimes*, *often*, or *very often* earned a poor grade due to not purchasing required texts. Pursuing OER and use of already available library resources is part of ensuring that our students are treated equitably and are not disadvantaged in their pursuit of a degree.

**Figure 6. ZCCM Class Students' Perspectives on Course Text Impact**
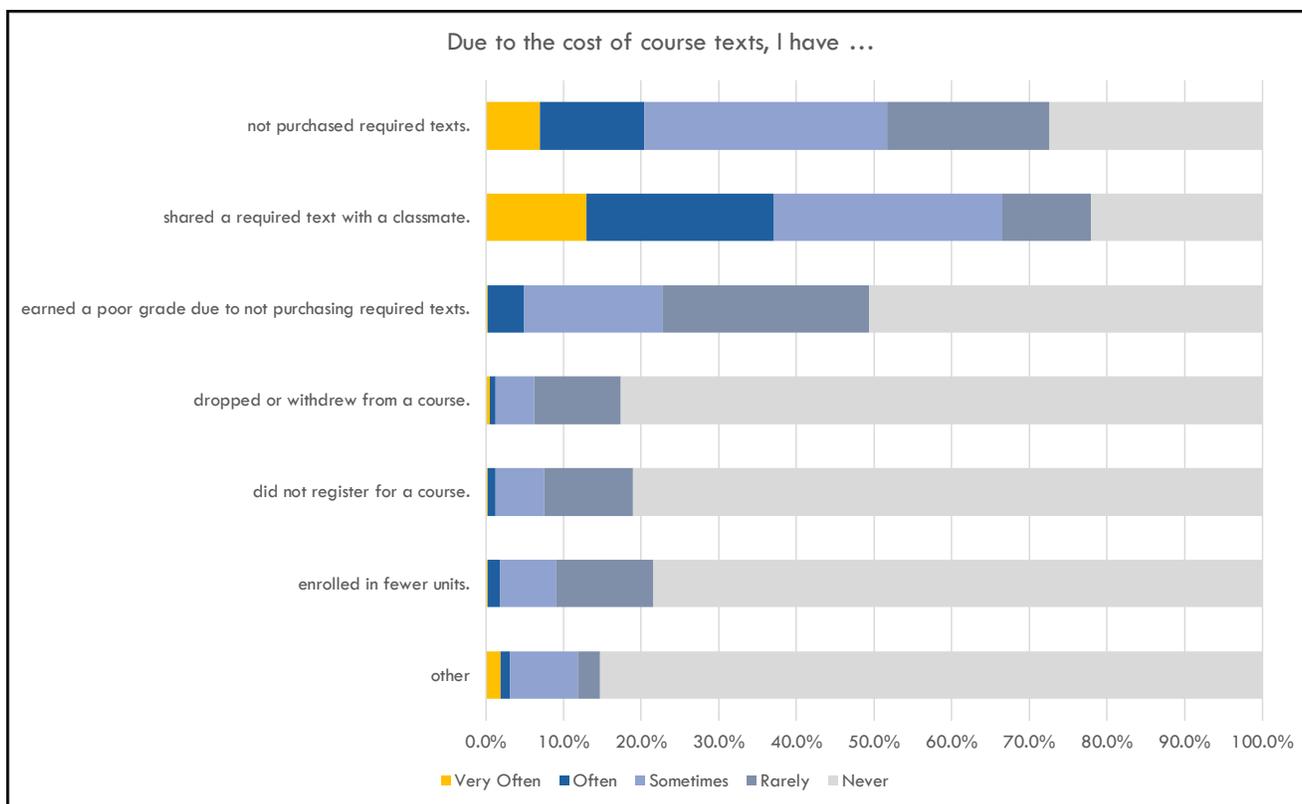


These findings coupled with the CALPIRG reporting suggest that many of our students are not unlike those surveyed by other organizations and researchers. Textbook costs can trigger negative academic and personal outcomes for students.

## 2.3.2 Library Zero Cost Course Materials (ZCCM): Challenges and Opportunities

Eliminating textbooks costs in a greater number of UC Merced courses requires a coordinated and collaborative campus effort with dedicated staff time, technology infrastructure, and a culture/system that values and rewards faculty for contributions to OER use and creation. Currently, one librarian oversees the ZCCM grant program but has limited capacity to expand OER efforts. This individual brings together a committee with members from the Library, CETL, and Academic & Emerging Technologies (AET) to review applications, assists faculty in identifying OER or library materials, and assesses program impact.

The Library's current emphasis is on eliminating course costs but would also like to incentivize changes that drastically reduces course costs even if those reductions do not reach zero. Increasing the number of courses with low or no-costs to our students will require a multi-pronged approach that includes encouraging a campus-wide standard for low-cost course designation (which may pressure publishers to drop prices), communicating course costs to students in a consistent manner, tracking cost savings over time, and offering publishing support for both texts and ancillary materials such as test banks.[59]

There is opportunity to increase course-cost savings for our students and simultaneously minimize negative academic impacts associated with textbook costs. The UC Merced Library can "remove structural barriers that negative impact success" (Goal 3.3) and contribute to "degree completion rates, while maintaining equity in achievement" (Goal 2.3).[60] With dedicated personnel, the Library could increase its capacity to support faculty in adoption, adaption, or creation of open education OER *and* those who want to significantly reduce course costs for students even if those costs cannot be fully eliminated. The UC system is taking steps that signal a future with an increased focus on OER adoption and affordability initiatives. The UC Executive Vice Chancellor and Provosts charged a systemwide OER Task Force in fall 2022. The Task Force has been presenting its report with recommendations for increasing OER usage to various audiences, including the EVC/Provosts.

In the long-term, the Library could allocate funding for an Assistant/Associate Librarian position dedicated to open access & digital publishing initiatives that increase access to and availability of Open Education Resources (OER) and scholarly outputs. This individual would also collaborate with campus partners such as the Center for Engaged Teaching & Learning (CETL), Academic & Emerging Technologies (AET), Undergraduate Education, Registrar, and the Campus Bookstore. Along with librarian expertise, operations funding would be needed for technology, professional development, publishing tools (such as Pressbooks), and membership in the Open Education Network. Due to its investment in supporting and advocating for zero-cost course materials in support of our students' success, the UC Merced Library wants to fully participate in campus collaborations and OER/low-cost systemwide efforts that advance faculty use of OER or low-cost materials in their courses.

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[59] A prior conversation with UC Merced Assistant and Associate School Deans highlighted that ancillary materials (e.g. practice problems, test bank sets etc.) are often highly valued by faculty for use with their students. Yet, OER materials rarely include them.

[60] UC Merced, "UC Merced Strategic Plan 2021-2031," https://strategicplan.ucmerced.edu/.

**Logic Model: UC Merced Library's Contributions to Strategic Planning Goal 2** – Develop Future Scholars & Leaders

**2.3 Increase degree completion rates, while maintaining equity in achievement.**

| Activity Title | Current Implementation | Short/Mid Outcomes | Long-Term Outcomes |
|---|---|---|---|
| Zero-Cost Course Materials (ZCCM) Grant Program | Provide mini-grants to instructors to encourage the adoption of zero-cost course materials. Coordinate a review committee & distribution of funds to recipients.<br><br>Promote the value of OER & library materials & increase awareness of the ZCCM grants.<br><br>Provide resources that faculty can explore for locating ZCCM and/or library materials to use in course curriculum.<br><br>Awarded & distributed $30,000 in grants (2019-2021) for 15 courses that impacted over 1,870 students and resulted in $203,000 in cost savings for students.<br><br>Based on a spring 2023 query, the majority of the ZCCM awardees continue to use ZCCM course materials which have produced another $224,000 in textbook cost savings for students. | Students save money on textbook costs as more courses provide low-cost or zero-cost course materials.<br><br>Behaviors that negatively impact students' ability to succeed in a course are eliminated e.g. textbook sharing that limits access to course content.<br><br>Funding spent on grants for faculty is a worthwhile investment that results in cost-savings for students. E.g. In the original grant cycle, every dollar of grant funding saved students 6.8 dollars.<br><br>Current grant funding of $25,000 will generate 250,000 in costs savings for students by fall 2025.<br><br>Eight to ten courses will transition to use zero-cost or low-cost course materials by fall 2025. | The UC Merced Library improves the affordability of college for students by supporting use of OA and/or library resources in curriculum, thus promoting equity in achievement.<br><br>Students pay no more than $40.00 for course materials in any single course.<br><br>Faculty view the UC Merced Library as a valued resource in their efforts to produce OER and/or to reduce course costs for their students.<br><br>The UC Merced Library offers publishing support for faculty who want to produce OER.<br><br>The UC Merced Library is a key member of a larger campus initiative that proactively promotes and supports use of OER, low-cost resources, and/or library resources in campus curriculum. |

# Goal 3: Cultivate a Culture of Dignity and Respect for All

## 3.1 Library Student Employment, Library Student Internships, and Library Student Fellowships

*Fulfilling and Promoting Strategic Planning Goal 3: Cultivate a Culture of Dignity and Respect for All*

> **3.1 Grow our academic and administrative staff demographic composition to be more representative of the state, as research shows that students succeed when they can see themselves in the institution**

### 3.1.1 Library Student Employment, Library Student Internships, and Library Student Fellowships: About

**A. Employment**

In 2005, when the founding Library leaders were designing programs and services, there was a great deal of attention and discussion around how UC Merced students would differ from students at other UC campuses. Many of those founding students, as with current UC Merced students, were from low-income backgrounds and were first-generation college attendees, if not the first person in their family to attend college or university. Additionally, many of these students, while from all over California, were from rural areas where large institutional buildings are the exception rather than the norm, making the massive concrete and steel Kolligian Library building somewhat intimidating in its very nature.

Furthermore, traditional academic library staffing models at the time involved career staff typically providing the bulk of public service point staffing with student employees only serving a secondary or back-up role. The UC Merced Library flipped this model entirely. While significant operation cost savings were a factor in this decision-making, a much more important goal was to ensure that the student employees gained valuable life and professional experience during their time spent working in the Library and that Library users saw individuals at the Library's service points who were representative of the student population. To ensure that the Library's customers (students, staff and faculty) received the best customer service possible, Library staff developed a student training program to ensure that student workers had the skills and tools to provide superior customer service. This was achieved with intensive training including customer service training provided by outside consultants—a practice that continues today. This model also ensured that ~99% of the time, undergraduate student customers were guaranteed to have a peer-to-peer interaction at the Library's service points, thus minimizing the institutional intimidation factor dramatically. As with many UC Merced Library practices, this staffing model has become the standard across the UC system and is becoming much more prevalent in academic libraries across the country.

In addition to customer service training, public-facing Library student employees receive training on specialized technical systems, standard office practices, as well as confidentiality because they deal with patron records. They also learn valuable research skills that apply directly to their studies and training as emerging researchers. Some student employees achieve higher skill capabilities and begin handling basic-level reference. While all Library student employees required customer services skills, not all are working at the Library's public service points. For instance, within Access Services a number of students contribute to fulfilling Interlibrary Loan requests. Students are also employed in the following Library Units:  Administrative Services, Technology Services, Technical Services, and Digital Curation & Scholarship. Their contributions are vital to the Library's ongoing operations, and they learn specialized skills including event support, management of catalog records, systems-troubleshooting, and best practices for digitization.



The Library also serves as an incubator for future library and information professionals. Numerous former Library student employees have gone on to careers in library and information science, archives and museum services working at other universities such as other UC campuses, Stanford University, and several private institutions including the Getty Center & Museum, Charles M. Schulz Museum, and Paramount Pictures. Several former student employees found work in computer sciences roles with big tech companies like Google, Radion, and John Deere, and even the Federal Aviation Administration. Additionally a number of former student employees have become permanent Library career staff with several pursuing MLIS degrees and one of them becoming a librarian at UC Merced.

Library student employment continues to be very rewarding work for our student employees across Library units. Throughout the Library's existence, the student employee retention rates have fluctuated between 80% and over 90% for students who are hired as freshman and are still working in the Library when they graduate. Some students have moved into work leader positions within Access Services, or moved on to more specialized work in another Library units.

## B. Library Student Internships & Library Student Fellowships

Library staff has sponsored several student internships and fellowships. These provide both undergraduate, and more recently a graduate student, opportunities to explore new intellectual areas of scholarship, hone their academic and research skills, or pursue other skill development of interest. Regardless of name, these designed experiences are a form of "learning by doing" and they classify as a high-impact practice (HIP). While HIPS increase learning for all participants, they are even more beneficial to students who have been historically under-served.[61] Through internships, students have the opportunity to take initiative, produce an outcome, and reflect on their learning guided by the mentorship of a facilitator. To offer internships, the Library has proposed projects to the campus' Student Success Intern (SSI) program. When funded, Library staff have guided students through the successful completion of a project. To illustrate, Library staff sponsored a SSI intern to create content for the Columbian Mammoth permanent exhibit in the Library's main 2nd floor lobby. In this project, the student demonstrated writing, research, and communication skills to produce a video with valuable exhibit information, highlighting the importance of these fossils to the natural history of the San Joaquin Valley. Library SSI interns have also worked on projects with Library staff e.g. to increase undergraduate Instagram followers, visualize Library space in GIS format etc.. In addition to the SSI program, a librarian has been a project sponsor for students taking Software Engineering (CSE 120) and more recently the Library hosted a graduate student fellowship to increase their knowledge of archives research and to support their research using a local archival collection.

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[61] American Association of Colleges & Universities (AAC&U), "High-Impact Practices," January 16, 2022, https://www.aacu.org/trending-topics/high-impact.

### 3.1.2 Library Student Employment, Library Student Internships, and Library Student Fellowships: Opportunities & Challenges

**A. Library Student Employment**

Library student employees are an essential part of Library operations. As the campus grows and Library expands service offerings, like Data Labs, the need for student employees also increases. Currently there are more requests for student employees from Library staff than there is funding available. This shortage of fundings has also been exacerbated by the state's minimum wage increases. Though the campus funded the bump to reach minimum wages, it did not cover range adjustments to differentiate between students who are not at the same job classification e.g. SA II versus SA III. To ensure equity in student employment, the Library has had to cover those range adjustments so that students in positions with a higher level of specialization or a greater level of responsibility are fairly compensated. More recently, the Library has also received fewer Federal Work Study (FWS) positions which also decreases the funding available for student employment. These factors have eroded the Library's student employee budget at a time when there is a need to increase those opportunities rather than reduce them.

Investing in student employees will continue to be an important part of the UC Merced Library's fabric due to its philosophy regarding the importance of students providing services to their peers, its commitment to providing meaningful work that serves students well in their personal and academic aspirations, and the valuable contributions that students make to the Library's operations. Through student employment, the Library offers students a community with practical benefits for their own personal, academic and career success.

**B. Library Student Internships & Library Student Fellowships:**

Expanding the Library's ability to engage in and offer internships and fellowships will require a combination of sufficient staffing and funding allocations. Internships and fellowships require not only motivated learners but also Library facilitators/sponsors with the capacity to dedicate time for planning, guidance, supervision and assessment. To date, most of these internship experiences have been funded by campus (SSI interns) or were required in students' coursework. Hence, there has not been an operational expense. However, offering graduate student fellowships will require funding. The Library is piloting a single graduate student fellowship with an award of $2,000 (spring 2023). To offer more opportunities per year, an allocation of funding will be required. Time for mentorship coupled with funding will allow the Library to increase the number of fellowship opportunities for graduate students, especially for those in the humanities. These experiences could contribute to their competitiveness in the job market post-graduation.

**Logic Model: UC Merced Library's Contributions to Strategic Planning Goal 3** – Cultivate a Culture of Dignity and Respect for All

3.1 Grow our academic and administrative staff demographic composition to be more representative of the state, as research shows that students succeed when they can see themselves in the institution

| Activities | Current | Short/Mid Outcomes | Long-Term Outcomes |
|---|---|---|---|
| Student Employment<br><br>Student Internships/ Fellowships | Hire, onboard, and mentor students in library employment.<br><br>Provide opportunities for student employees to develop skills (e.g. GIS, archival description, digitization, administration, technology support, library systems).<br><br>Sponsor student projects in courses (e.g. computer science).<br><br>Mentor students in Student Success Internships (SSI).<br><br>Pilot graduate student fellowship. | Student employees develop valuable work skills e.g. customer services.<br><br>Student employees belong to a campus community.<br><br>Student Library users see themselves represented in the Library's student employees.<br><br>A minimum of three students receive mentorship from one or more Library staff (e.g. via SSI program, graduate student fellowships etc.).<br><br>Students complete projects that advance their research interests and/ or competitiveness in the workplace.<br><br>The Library retains 80%+ of its first-year hires through graduation.<br><br>Students consider libraries & archives as places of potential career employment. | Former UC Merced student employees obtain positions post-graduation due to their work and internship/fellowship experience.<br><br>The UC Merced Library contributes to greater diversity in the information science field.<br><br>A minimum of six students receive mentorship from one or more Library staff.<br><br>The Library's fellowship program is highly sought after by graduate students in the humanities.<br><br>5% of graduates participating in library employment, internships, and/or in-depth educational experiences will be employed in the fields of data science, GIS, or information science within 10 years of graduation. |

# 3.2 Library Spaces

*Fulfilling and Promoting Strategic Planning Goal 3 – Cultivate a Culture of Dignity and Respect for All*

**3.2 Transform campus culture by ensuring that all members of the community thrive as their authentic selves through equitable and inclusive structures, policies, and practices**

### 3.2.1 Library Spaces: About

The UC Merced Library is situated within the Leo and Dottie Kolligian Library building, an academic building. The building contains approximately 135,000 assignable square feet (ASF) and the University Library currently controls about 85,000 ASF of the building total. The remaining space is occupied by numerous other campus departments, including Student Affairs (student services), Office of Information Technology (labs), Registrar's Office (classroom space), Academic Senate offices, the Writing Center (Office of Undergraduate Education) as well as several other departments. The majority of Library public spaces are configured as open study and meeting spaces with approximately 20,000 square feet occupied by book stacks.

Currently, the maximum seating capacity in public areas is approximately 1,200 seats. This includes 10 collaborative rooms that each seat 6, plus 12 4-seat collaborative pods and several conference rooms that seat 12-24 depending on the furniture configuration. The remaining seating is mostly open seating, with over 200 seats consisting of individual carrel-style seating or open seating in rooms that are naturally quiet. Most seating provides power receptacles at the table-top or nearby and the collaborative rooms are equipped with robust, well-maintained technology and other equipment to support group work.

Library spaces are equipped with Wi-Fi service throughout, while some areas are still equipped with additional legacy ethernet access. In 2023, the Library opened a fifteen-seat lab space, The Gonella Discovery Room, that is intended to serve as a workshop and workspace for specialized Library computing services such as GIS and geospatial research, research data processing and management, etc. In the near future, the existing GIS Services Lab will be moved from Social Sciences and Management Building to the Kolligian Library Building. Additionally, a new Data Services Lab will open, adjacent to the GIS Services Lab co-located with Center for Engaged Teaching and Learning (CETL) and Academic & Emerging Technologies (AET) on the 3rd floor of the west wing of the building. While CETL, AET, Data Services and GIS Services facilities on the 3rd floor are intended to primarily support faculty and graduate research and teaching, they will also support undergraduate research particularly through the Gonella Discovery Room. These labs represent a combined 2,500 square feet of educational space in addition to the existing Library Classrooms which total just under ~950 square feet.[62]

Contemporary space benchmarking for academic libraries is very difficult to find and is typically limited

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[62] https://files.eric.ed.gov/fulltext/EJ1273656.pdf

by institution type or a specific geographic region. Space data and comparisons are not tracked the University of California in annual library statistics.  In addition to the challenge of simply finding data, numerous factors can influence library space on any North American college or university campus. Many institutions, even relatively young institutions like UC Merced, have inherited library spaces and buildings from legacy institutions. One 2006 survey of twenty higher education institutions in Virginia found a range of library space per student from 4.45 square feet per student to 44.47 square feet per student. The methodology of that report was simply comparing gross square feet of library space to the student headcount. That calculation for UC Merced results in 9.33 square feet of space per student using fall 2022 student enrollment figures. As the student population continues to grow, that number will shrink rapidly if more of the Kolligian Library building is not made available to the Library for expanding programs and services, let alone additional study space.

### 3.2.2 Library Spaces: Challenges and Opportunities

The value of space for academic work was reinforced during the pandemic when most students returned home. In this situation, UC Merced students reported lack of appropriate study space as one of two main obstacles they faced during remote learning. Even outside of a pandemic experience, space can be incredibly important to students. Librarian and researcher Ted Chodock notes that library spaces can foster students' sense of belonging (SB) by offering spaces where students meet others in a non-threatening way (psychological SB), varied spaces where students develop emotional or personal connections (spatial SB), spaces where individuals like them work and study (cultural SB), and spaces with technology designed for collaboration (sociocultural belonging) where students learn from and are motivated by each other.[63] During the UC Merced Library's semester-end Coffee and Cookies events for students studying for finals, Library staff has asked students to reflect on what the Library provided them during the semester. In coding the comments, three strong themes emerged illustrating three varied reasons for both visiting library space and using its resources. The largest number of students (70) referred to the library as a safe and welcoming place to study. One student specifically called the Library "home". Secondly, students noted that the library was a place for focus time and rest (23). "A quiet place to study and take naps!" A similar number of student (20) called out the library as a great resource for their research with databases, books, and "amazing help". The remainder of the responses referred to the library as a place to meet people, a place to meet with clubs and organizations, a place to eat and drink, and a place for access to technology including internet and printing services.[64]

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[63]  Ted Chodock, "Mapping Sense of Belonging in Library Spaces," Library Assessment Conference (September 2020): 1-15, esp. 12, https://www.libraryassessment.org/wp-content/uploads/2021/09/197-Chodock-Mapping-Sense-of-Belonging.pdf.

[64] These findings are based on responses gathered from students at spring and  fall 2022 Coffee and Cookies events. Students were asked to response to the prompt "This semester, the Library has provided me with … ".

On the Graduating Student Survey, students have been asked about their ability to find group study space in the Library and quiet study space in the Library.[65] Sixty-nine percent of respondents (spring 2022) indicated that they were always or usually able to find group study spaces in the Library while 83% of respondents indicated that they were always or usually able to find quiet study space in the Library. For this student population, 17% (sometime, rarely, never) could find a quiet study space while a larger percentage (31%) had difficulty finding group study spaces. This is concerning and suggests that the future growth of the student population will only create significant increased demand for library-like spaces. The Library will continue to monitor students' perceptions and head count data to determine building use trends. While graduating students are expressing a need for more group study space, Library staff have noticed Library usage patterns lower than pre-pandemic numbers. This may be a result of factors including post-pandemic behaviors and campus spread due to the 2020 project launch.

The Library has struggled to gain control of spaces in the Kolligian Library Building to create desperately needed staff and processing space. Adding significant amounts of specialized public spaces is even more challenging since there are few remaining large open spaces and many building spaces lack adjacency to other Library public spaces, making them more challenging to manage and support. For both current and future spaces, the Library will also require funding to secure or refresh furniture and technology to truly make the spaces both functional and inviting.

The Library's current efforts to obtain additional space in the Kolligian Library building have been focused on increasing the footprint for archival storage and processing. More details to follow in the Archives section.

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[65] Graduating Student Survey https://vi-sualizedata.ucop.edu/t/UCMerced/views/GSSLongitudinalTableauDashboardpwb/GraduatingSeniorSurveyStory?%3Adis-play_count=n&%3Aembed=y&%3Ais-GuestRedirectFromVizportal=y&%3A-origin=viz_share_link&%3AshowAppBan-ner=false&%3AshowVizHome=n

**Logic Model: UC Merced Library's Contributions to Strategic Planning Goal #3** – Cultivate a Culture of Dignity and Respect for All

**3.2 Transform campus culture by ensuring that all members of the community thrive as their authentic selves through equitable and inclusive structures, policies, and practices.**

| Activities | Current | Short/Mid Outcomes | Long-Term Outcomes |
|---|---|---|---|
| Library Space | Provide a safe, welcoming, and vibrant environment<br><br>Provide spaces to support diverse audiences and varied work (e.g. collaborative work rooms, data lab, instruction room, open seating, Writing Center, archival storage)<br><br>Provide technology for communication (digital signage), digitization (scanners), and research purposes (stand-up stations; data lab machines, monitors in collaborative work rooms, microfilm readers)<br><br>Use library space to showcase archival materials, researchers' work, and exhibits on a variety of topics; host associated events in library space | Regularly refresh library spaces including furniture, technology, and rooms on rotation to ensure spaces are desirable for use and fully functional<br><br>Add labs on 3rd floor Kolligian Library West to support data education and research (GIS, research automation)<br><br>Students, faculty, and staff view the library as a valuable and inviting space that supports individual study, collaboration, or specific research needs.<br><br>Assess student needs to determine additions to library space. | Library space meet changing student and researcher needs.<br><br>The Library is a hub for students, faculty, and staff to access resources and collaborate with others.<br><br>The Library is viewed as an essential environment for formal and informal learning.<br><br>Library spaces support the work of a diverse campus community. |

# 3.3 Library's Open Access Transformative Agreements

***Fulfilling and Promoting Strategic Planning Goal 3: Cultivate a Culture of Dignity and Respect for All***

## 3.3 Build our collective capacity to remove structural barriers negatively impacting success through equity-informed administrative and educational decision-making

### 3.3.1 Library's Open Access Transformative Agreements: About

The UC Academic Senate and UC Libraries, especially the California Digital Library (CDL) have collaborated for more than a decade to increase the openness of scholarly research, making it both "freely and widely available" to all.[66] To advance a transition from a subscription-based publishing to open access publishing, the UC Libraries have been negotiating transformative agreements with publishers and academic societies "to make it easier and more affordable for UC authors to publish open access by reducing the amount that authors are responsible for paying when publishing open."[67] These transformative agreements rely on a multi-payer model that asks UC authors to contribute research funds for the article processing charge (APC; also called an Open Access fee); however; if research funds are not available, UC Libraries pay the full APC except in limited cases. When the UC Merced Library contributes to systemwide licenses for collections, it is contributing to transformative agreements and the transition to OA publishing.

Increasing the openness of faculty research has potential benefits for both readers and researchers. By eliminating access restrictions to publications, anyone with an internet connection can access an OA publication. This serves the UC's distinctive mission to transmit advanced knowledge[68] and aligns with our own campus's commitment to both advance knowledge and "dismantle long-standing exclusionary practices in higher education."[69] As producers of almost 10% of the nation's research publications,[70] the UCs can significantly contribute to an increasing open access information environment for the public good.

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[66] Office of Scholarly Communication, University of California, "UC Academic Senate Committee on Library and Scholarly Communication – Statement regarding Open Access Publishing," accessed Feb. 16, 2022.

[67] Office of Scholarly Communication, University of California. "Publisher OA Agreements and Discounts." https://osc.universityofcalifornia.edu/for-authors/publishing-discounts/

[68] Office of the President, University of California, UC's Mission, https://www.ucop.edu/uc-mission/. University of California Office of the President, University of California, "Chapter 9: Research," UC Accountability Report 2022, https://accountability.universityofcalifornia.edu/2022/chapters/chapter-9.html.

[69] Goal 3: Cultivate a Culture of Dignity and Respect for All. University of California Merced, UC Merced, Strategic Plan 2021–2031, https://strategicplan.ucmerced.edu/goals-and-objectives/goal-3.

[70] Office of the President, University of California, "Chapter 9: Research," UC Accountability Report 2020, https://accountability.universityofcalifornia.edu/2020/chapters/chapter-9.html.

Additionally, OA can increase the visibility and influence of a researcher's work. Lynch et al.'s study of the impact of OA publication on readership and citations rates in the lumbar spine literature found that OA status *did* contribute to significantly higher public attention scores in new stories, Twitter and Facebook posts, and Wikipedia citations. However, it did not impact citation rates.[71] Linkages between OA publishing and a citation advantage continue to be researched. A recent systematic review (2022), found that almost 48% of the papers confirmed an open access citation advantage while ~24% had mixed results or found no advantage (~28%).[72]

**Figure 7. Percent of Articles Published Open Access (2012-2022) by UC Merced Authors, Based on Web of Science Data**



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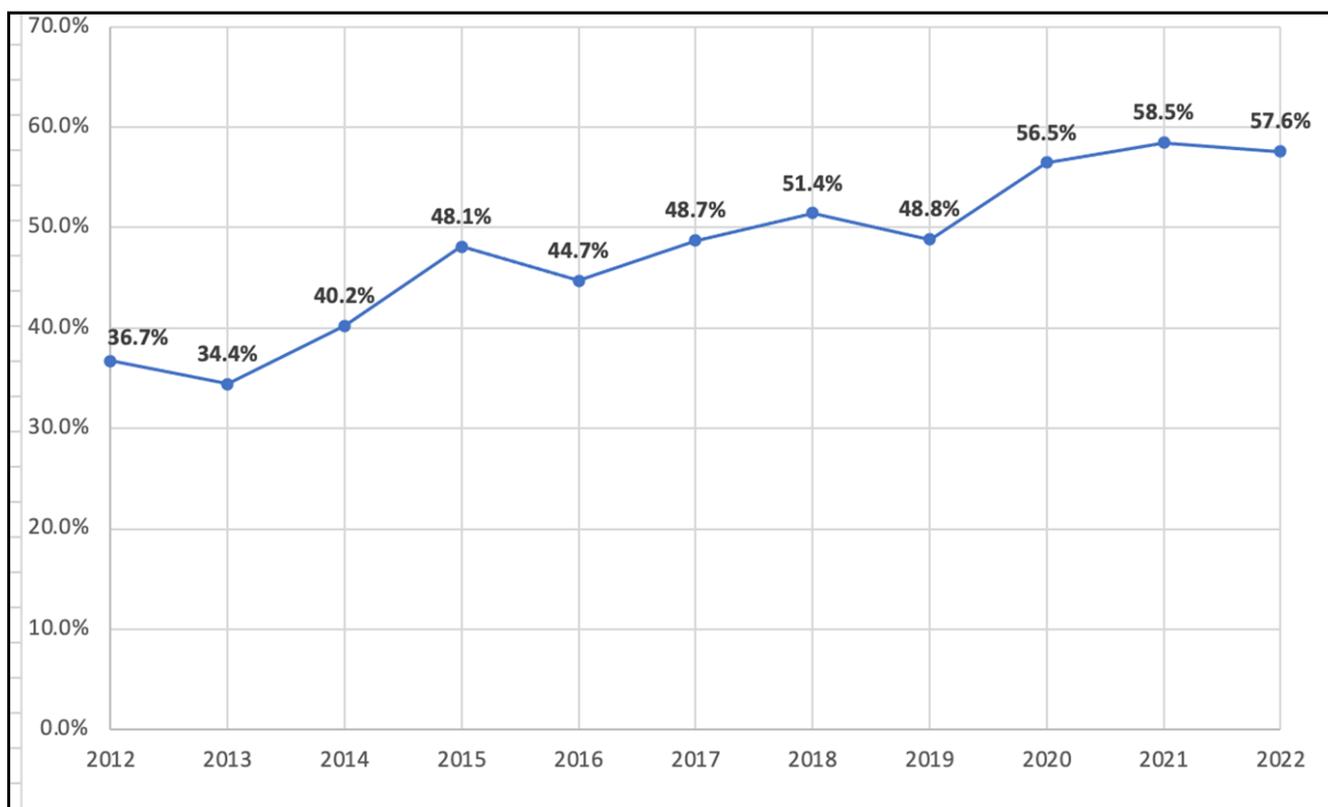
[71] Conor P. Lynch,  Elliot D.K. Cha, Madhav R. Patel, Kevin C. Jacob, Michael C. Prabhu, Hanna Pawlowski, Nisheka N. Vanjani, and Kern Singh, "How Does Open Access Publication Impact Readership and Citation Rates of Lumbar Spine Literature?," Clinical Spine Surgery 35, no. 6 (July 20, 2022): E558–65. doi:10.1097/BSD.0000000000001303.

[72] Allison Langham-Putrow, Caitlin Bakker, and Amy Riegelman, "Is the Open Access Citation Advantage Real? A Systematic Review of the Citation of Open Access and Subscription-Based Articles," PLOS ONE 16, no. 6 (June 23, 2021): e0253129, doi:10.1371/journal.pone.0253129. Also see: Philip M. Davis, "Open access, readership, citations: a randomized controlled trial of scientific journal publishing," The FASEB Journal, 25 (7) (2011): 2129-2134. Philip M. Davis, Bruce V. Lewenstein, Daniel H. Simon, James G. Booth, and Mathew J. L. Connolly. "Open access publishing, article downloads, and citations: randomised controlled trial," British Medical Journal 337 (7665) (2008): 343-345.

### 3.3.2 Library's Open Access Transformative Agreements: Challenges and Opportunities

A successful transition to OA publication requires funding from both UC Libraries and researchers' funds. Sustaining a multi-payer model will be important. In addition, UC Libraries will have to locate and apply new funding for transformative agreements that involve new expenditures. For example, since the Public Library of Science (PLoS) was born OA, UC Libraries never had subscription costs to access its content. However, in order to help faculty pay for APCs to publish in PLoS, the transformative agreement with this journal involves a new cost for UC Libraries.

The California Digital Library (CDL) Project Transform Working Group and Negotiating Team work diligently and have negotiated transformative agreements promoting Open Access with fifteen publishers, making approximately 50% of UC-authored articles eligible for Open Access publishing. However, many smaller publishers and society journals are not covered by Open Access transformative agreements. In order to publish Open Access with these journals, UC Merced researchers must use their research funds, incidental funds, or their own personal funds to pay the Article Processing Charges (APCs) or Open Access fees. Currently these agreements impact article publishing rather than monographs.

As per the initial recommendation under Collections, the Library would significantly benefit from a collections funding allocation from the campus based on a reliable and thoughtful model created in partnership with the Library, Budget Office, Office of the Provost. With such a model and allocation, the UC Merced Library will be able to fully participate in this important transition to open access publishing through transformative agreements.

UC Libraries have an opportunity to increase open access publishing options for faculty and graduate students at a reasonable cost and to improve access to scholarly publications for all readers whether advantaged or disadvantaged, both nationally and internationally. This is not only an opportunity to share our knowledge production with the world, but also an opportunity to increase researchers' impact and visibility and to promote diversity and inclusion in scholarly research globally.
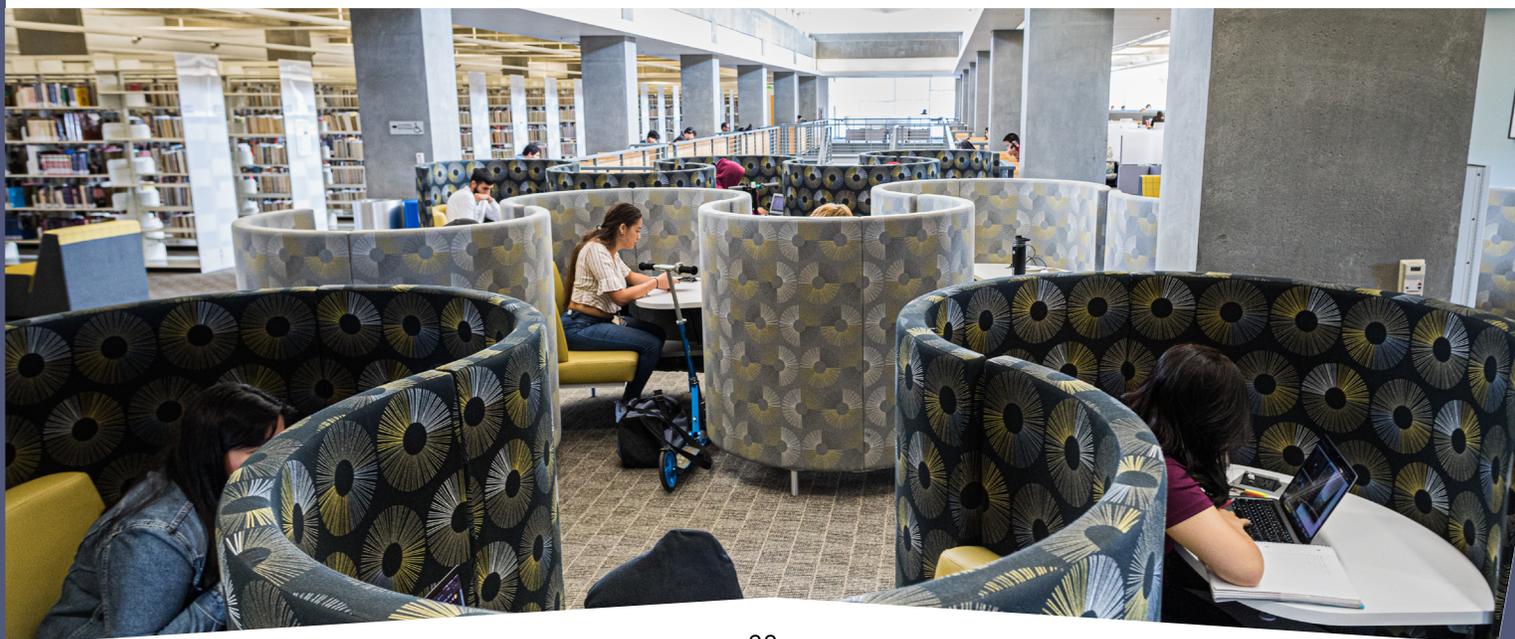
**Logic Model: UC Merced Library's Contributions to Strategic Planning Goal 3** – Cultivate a Culture of Dignity and Respect for All

3.3 Build our collective capacity to remove structural barriers negatively impacting success through equity-informed administrative and educational decision-making.

| Activities | Current | Short/Mid Outcomes | Long-Term Outcomes |
|---|---|---|---|
| Contribute to all UC Libraries' Transformative Agreements (TAs). by facilitating and encouraging UC authors to publish scholarly materials Open Access (OA). | Allocate existing and new funding for Transformative Agreements.<br><br>Communicate OA publishing options to UC Merced researchers in order to encourage OA publishing made available via Transformative Agreements.<br><br>With the UC Libraries, 50% of UC articles are eligible for OA publishing.<br><br>UC Merced faculty & students publish 56-58% of their articles OA (based on Web of Science data). | UC Merced researchers request funding for OA publishing in their grants.<br><br>An increasing number of UC Merced researchers publish their research OA; (track via Web of Science data).<br><br>With the UC Libraries, 70% of UC articles are eligible for OA publishing.<br><br>Access to UC Merced research is made available to those without information privilege. | With the UC Libraries, 90% of UC articles are eligible for OA publishing.<br><br>UC Merced research is disseminated more broadly, read more widely, and cited more often.<br><br>OA publishing options support UC Merced faculty publishing monographs. |

# 3.4 Library Archives, Special Collections, and Exhibitions

## *Fulfilling and Promoting Strategic Plan Goal 3: Cultivate a Culture of Dignity and Respect for All*

### 3.4 Deepen Our Collective Appreciation for Diversity

**3.4.1 Library Archives, Special Collections, and Exhibitions: About**

The UC Merced Library has both acquired and digitized significant primary sources from its inception and continues to actively make a body of unique materials accessible and available not only to researchers but to the broader world. These unique resources range from documents outlining varietal tomato trials in this rich agricultural region to photographs showcasing the diverse farmworkers collectively organizing for better wages. The Library's dedication to Archives & Special Collections started with the digitization of the Clark Center of Japanese Art and Culture collection, originally located in Hanford, and more recently has included the processing and digitization of records from multiple University of California Cooperative Extension (UCCE) offices.

Archives & Special Collections has five major collecting areas to which current and future archival collection acquisitions align.

**The San Joaquin Valley**

Collections connected to the Central Valley documenting the peoples who flourished in the Valley and the Sierra Nevada before colonial settlers arrived, the diverse ethnic groups who have since make the Valley their home, and the history of the most technology-advanced and productive farming region in the world.

**The Sierra Nevada**

Collections of the Sierra Nevada tracing the history and impact of human settlement on the mountains, their climate, geology, and natural resources; the government and non-government institutions that have shaped the region's land, water, ecosystems, policies, and public perceptions; and the mountains' representations in the creative arts.

**University Archives**

Documentation about the history of the University of California's tenth campus including the selection and development of the campus site, construction, academic history, and materials related to campus events and cultural history. See UC Merced Library and Special Collections at [Calisphere](#).

**Faculty Papers**

Materials related to the academic and research activities of its faculty, especially those with a significant impact on the world outside academia or papers of faculty who have established new areas of study that have had a significant impact on academia itself. Example: See Dunya Ramicova Costume Design Collection in [Calisphere](#).

**[UC Cooperative Extension Archive](#)**

Historical records held in county Cooperative Extension offices or about UC Cooperative Extension that document topics including agricultural trials, animal husbandry, water management, fire management, integrated pest management, rural food and nutrition programs, and youth development programs.

Archives & Special Collections at the UC Merced Library employs professional staff and student employees. Core operations of the archives involve securing high value collections, arranging new acquisitions (including the creation of finding aids), processing and digitizing materials for online access, preservation of physical materials, and the development and provision of public services, instruction, and programming. These operations require individuals with expertise in numerous areas including, but not limited to, donor stewardship, intellectual property, metadata best practices, and information technology.

Archives are valued for their preservation of unique materials that might otherwise be lost or forgotten. They ensure that materials are accessible for future generations whether for formal and informal inquiry. These materials include those that speak to the incredibly rich mix of ethnic cultures and bio-diversity of our region. The historical evidence contained in the archives is essential not simply for interrogating the past, but also for comprehending the present, and preparing for the future.

The UC Merced Library is on an exciting growth trajectory to expand its archival collections with a detailed plan to establish a Sierra Nevada-Central Valley Archive. With support from almost 150 UC Merced faculty and in collaboration with Center for Humanities, the UC Merced Library was recently awarded (2022) a National Endowment for the Humanities (NEH) Infrastructure and Capacity Building Challenge Grant of $750,000 matched with funding from UC Merced's Chancellor. This $1.5 million capital project will increase and enhance space for archival purposes through renovations in the Kolligian Library building. Spaces will be created for preservation of collections as well as for research access and instruction to increase engagement with the archival materials.



There is both an interest and need in the region for the UC Merced Library to become the home for valuable primary sources materials from the region. Within the past three years, the Library brought both the Sequoia and Kings Canyon National Parks (SEKI) archive and the Sequoia National Forest collections (on loan) to UC Merced to mitigate risks associate with wildfire and unsuitable storage. Climate change is just one factor that has put irreplaceable documents at risk.

In the past year, the Library has successfully engaged students, faculty, and the UC Merced community with archival collections by developing exhibits that have drawn attention to historical photographs in the archives, by supporting archival research for a graduate student through a fellowship, and by working with faculty members to introduce undergraduate students to archival research with UCCE and SEKI collections. The UC Merced Library exhibit *Building a New Future: Art and Activism in the Central Valley* featuring George Ballis's photographs of the lives and social activism of farm workers is just one example of how archives surface the history and stories of this region. Archives provide mirrors and windows for students and others in the community to both see themselves reflected and to peer into the cultures and lived experiences of others. For a list of the exhibits hosted by the Library, see Appendix E. These exhibits have showcased the work of UC Merced researchers (faculty and students), highlighted archival collections, and presented viewers with diverse content.

### 3.4.2 Library Archives, Special Collections, and Exhibitions: Challenges and Opportunities

Building a thriving regional archive requires substantial and sustained resources for space, collections, technology, and staffing. Though the NEH Challenge Grant will expand secure storage space for archival collections, the calculation of both existing and anticipated collections means that this space will reach capacity by 2026. Rather than leasing off-site storage, securing additional space within the Kolligian Library building would be a preferable for safeguarding collections, for environmental control, and for operational effectiveness. If this is not feasible, funding is needed to pay for ongoing leases to store archival materials.

Professional staffing is also essential for archival work and needs to be expanded. The five-year archives plan outlines a need for an Operations Manager for the Reading Room, Metadata & Publishing Coordinator, and Community Archives & Outreach Librarian/Archivist. These positions will ensure that archival collections are processed, described, and digitized; that researchers can engage with physical archival materials through Reading Room services; and that archival collections are exposed for programming and educational purposes. Professional staff will also supervise the work of undergraduate and graduate assistants. Much of this work also relies heavily on an investment in technology (e.g. digitization equipment) and services (e.g. Merritt Preservation, https://merritt.cdlib.org).

Currently, there is no allocation for the acquisition of archival collections. Though some collections may not have upfront costs to the UC Merced Library, many do. To acquire them, the UC Merced Library has either obtained grant funding or cobbled together funding through willing campus partners or gifts from the Chancellor. This is reactive and a tenuous way to build a regional archive. Ideally, the Library's budget would provide funding not only for general collections (books, databases, journal subscriptions) but also for unprocessed archival collections. However, this would first require a fully funded collections budget.

The establishment and ongoing growth of a regional archive will require funding from the campus, an endowment, and grants/contracts. While the Library has a successful record of obtaining grants for archival development, grant funding does not adequately sustain core operations and has resulted in a series of short-term positions that make it difficult to retain valuable staff experience and expertise. The Library envisions the following funding streams to support the archives: permanent employees and space costs fully supported by the campus; operational costs funded by the campus (85%) and supplemented with grants or gifts (15%); and student assistant employees primarily funded by grants and contracts (75%) while the campus commits the remainder (25%). The UC Merced Library is engaging with External Relations (ER) in an effort to build a $5 million endowment that would generate $250,000 in annual income. This income would be marked for expenditures including acquisitions, specialized equipment, and graduate student fellowships.

Investing in Archives & Special Collections and the plan to firmly establish a Sierra Nevada-Central Valley Archive will contribute to our campus's commitment to the advancement of knowledge, the development our scholars, and deepening our appreciation for diversity. With these collections, researchers can contribute to scholarship, students can increase their research competencies, and all of us can learn from the individuals and communities in our region who have gone before us. UC Merced and the UC Merced Library have the opportunity to preserve valuable materials that surface the diverse social, cultural, and environmental histories of this region and make them broadly available for research, reflection, and imagining a better future.

**Logic Model: UC Merced Library's Contributions to Strategic Planning Goal 3** – Cultivate a culture of dignity and respect for all

3.4 Deepen our collective appreciation for diversity

| Activities | Current | Short/Mid Outcomes | Long-Term Outcomes |
|---|---|---|---|
| Archives & Special Collections<br><br>Preserve, digitize, and make accessible distinctive collections of relevance to our region and our researchers. These collections include the diverse histories of hidden, neglected, and underrepresented communities in the region.<br><br>Engage the campus and our larger community with archival collections through programming and educational opportunities.<br><br>Expand physical archives space to accommodate anticipated collections.<br><br>Foster relationships with archives' contributors, supporters, and potential donors. | Address reference inquiries about materials in the collection and use of those materials.<br><br>Process (arrange, describe, and house) three archival materials acquired.<br><br>Digitize archival materials and make discoverable via Calisphere. ~10,000 items per year or 30,000 to 50,000 pages. Sample: University of California Cooperative Extension (UCCE) records.<br><br>Collaborate with faculty to incorporate the use of archival collections into curriculum, example HIST 117R in spring 2023.<br><br>Offer a graduate student fellowship (spring 2023) to support students' research interests and develop their archival competencies.<br><br>Lead the creation of exhibits & programming based on archival collections or topics of interest to our campus, region, or larger community.<br><br>Build awareness of archival materials through communications including blog postings, news features, and social media.<br><br>Expand archival spaces at UC Merced (storage, reading room, instruction/programming) through the National Endowment for the Humanities (NEH) Challenge Grant obtained in 2022.<br><br>Engage in regular conversations with government agencies, community members, and the campus community to build interest in and support for the archives and to surface at-risk collections. | UC Merced, community, national, and international researchers will be able to access a growing collection of archival materials in person and on Calisphere.<br><br>The Library opens new archival spaces constructed with NEH and matching grant funds where researchers, students, and community engage with archival collections.<br><br>The Library offers up to three fellowships to support humanities students in their use of archival collections for research purposes.<br><br>The Library acquires a minimum of one collection yearly in alignment with its collecting priorities.<br><br>The Library increases trust with its community of friends and donors through providing adequate & secure archival storage coupled with archival expertise & personnel. | UC Merced is recognized for its regional archival collections -- attracting public attention, faculty interest, financial investment, and research engagement on issues of environmental, social, or political importance.<br><br>Researchers, both local and global, produce scholarly publications based on the archival collections available at the UC Merced Library.<br><br>The Library is a valued education partner for faculty who wish their students to engage in archival research.<br><br>The Library confidently pursues and acquires archival collections due to a permanent allotment of funding dedicated to growing its archival collections.<br><br>The Library is viewed as a trustworthy partner for anyone seeking a home for their archival materials.<br><br>A minimum endowment of five million is established for the ongoing development of the archives. |

# Part II: Library Budget Overview

The Library is an academic department that supports the research, teaching, and learning of the entire UC Merced campus. These activities and intended outcomes require resources in order to function. In order to better understand the fiscal context within which the Library functions, this section itemizes the Library's budget based upon fiscal year 2021-2022 data. The Library requires additional financial support in order to assist the campus in attaining UC Merced's goal of R1 status.

# Budget

The Library's $6.3 million budget sustains a wide range of expert talent, resources, spaces and activities that directly and indirectly support campus research and instruction. The budget is roughly divided into three main categories: salaries and benefits, information resources, and operations. Similar to many campus departments, salaries and benefits are by far the largest of these three areas at $4.34 million and covers the costs for 13 academic employees, 20 staff positions, and over 40 student employees. The budget for information resources is $1.43 million and covers the costs for consortial (UC-wide) purchases including databases and journal packages as well as locally purchased books/e-books, journals, and databases. The operations budget (S&E) includes most other departmental costs including technology, space renovations and furniture, professional development and travel, and other general expenses.

### Table 8. Overall Budget

| Overall | Allocations |
|---|---|
| Information Resources | $1,425,995 |
| Operations (S&E) | $510,476 |
| Salaries & Benefits | $4,341,454 |
| **Total:** | **$6,277,925** |

### Figure 8. Overall Budget
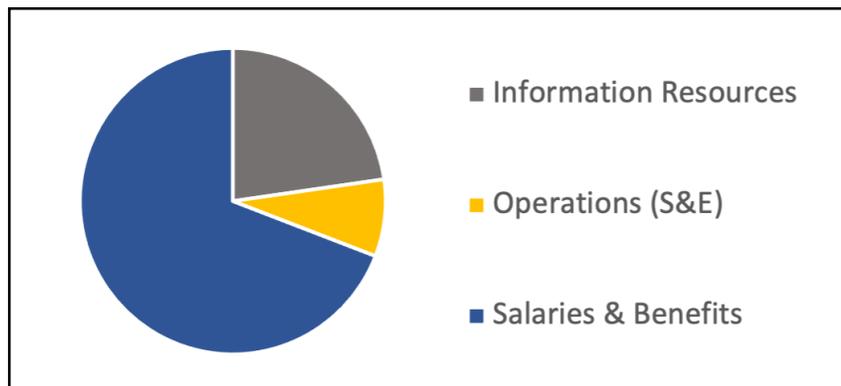
# Staffing

Library staffing costs are currently very closely split between academic and non-academic personnel with each accounting for approximately $1.3 million annually. The thirteen academic personnel, consisting of librarians and others with discipline-specific expertise, support the entire campus academic and research enterprise. In recent years, the Library has expanded and added some limited capability to meet new program needs such as GIS and research data services. The Library's twenty non-academic employees support the academic personnel as well as provide the entire breadth of services that a much larger university library would offer with specialization and a high degree of expertise in several operational areas. All these personnel are supported by a cadre of student employees who perform many routine library functions and clerical activities such as staffing customer service points and supporting services across the rest of the organization.  See Appendix C for the Library's Organization Chart.

**Table 9. Salaries**

| Salaries | |
|---|---|
| Academic | $1,324,601 |
| Non-Academic | $1,343,891 |
| Students | $292,745 |
| Benefits | $1,380,217 |
| **Total:** | $4,341,454 |
| Note: student funding typically augmented with non-state funds, FWS, etc. | |

**Figure 9. Salaries**
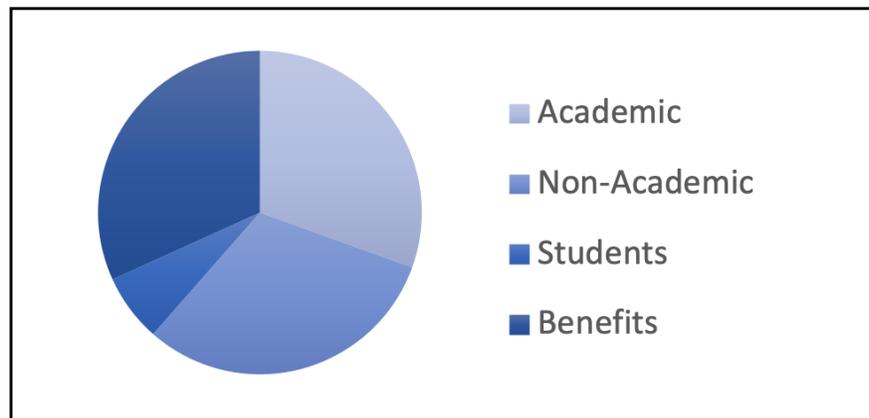
# Information Resources / Collections

Information resources constitute the largest non-salary portion of the Library's budget and represent a key library contribution to the campus' strategic goals. By providing access to cutting-edge journals and books, the Library supports faculty research across all disciplines.

The Library's information resources budget is roughly divided into three major areas: California Digital Library (CDL) acquisitions, local acquisitions, and other costs. The Library pays CDL annually for participation in consortially purchased and licensed information resources including electronic journals, ebooks, and databases that CDL negotiates using the purchasing power of the entire ten-campus UC system to negotiate very favorable deals with publishers and vendors. UC Merced's costs are proportional to the other campuses based on per capita calculations as well as discounts for being the newest and smallest campus. As UC Merced grows, these costs will increase with our population and the sunsetting of discounts. Local purchases include journals, books (print and ebook) purchased for the UC Merced campus. The "Other" category includes memberships, interlibrary loan (ILL) services, and other miscellaneous costs.

The Library's strategies for collections have netted the campus significant budgetary savings and efficiencies since 2003. These efficiencies include a heavy reliance on the California Digital Library's consortial purchasing and the power of ten, and purchasing print books through an approval plan in co-operation with a vendor who provides physical processing of the books. These strategic choices have eliminated the need for costly local procurement and management of dozens of unique vendor accounts. Further, approval plans eliminate the need for highly-specialized, highly-paid librarian bibliographers and the associated support staff. The Library also relies heavily on interlibrary lending/borrowing (ILL) with other UC campuses and institutions around the world. ILL is a much more cost-effective method of providing information resources to meet scholarly needs than outright purchases and also eliminates the need for long-term, expensive on-site climate-controlled storage. ILL requests are primarily initiated through UC Library Search, a discovery tool implemented in July 2021 as part of the UC Libraries' systemwide integrated library system (SILS) initiative.

### Table 10. Information Resources

| Information Resources | |
|---|---|
| California Digital Library | $1,066,264 |
| Local Purchases | $147,868 |
| Other | $211,863 |
| **Total:** | $1,425,995 |

### Figure 10. Information Resources



California Digital Library
Local Purchases
Other
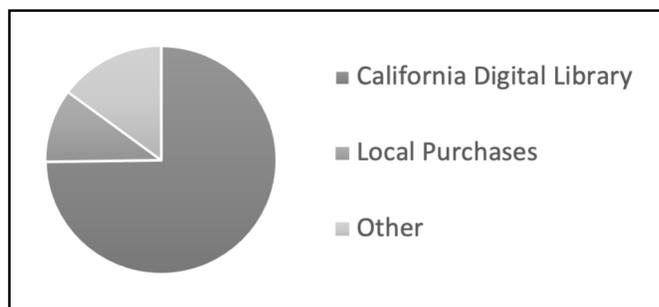
# Operations

Library Operations comprises the third major portion of the Library's budget. While relatively smaller than the other areas ($0.5 million), this portion of the allows the Library to carry out the myriad of operational activities.  This portion of the Library's budget can be roughly divided into three to four 'buckets'.  These include 1) professional development, 2) technology, and 3) furniture upgrades and facility renovations and improvements.

Technology is one area that the Library is heavily reliant upon, and therefore, a significant annual investment is made to keep system and equipment as current as possible to ensure that services meet the needs of the campus community.  Annual technology expenditures can range from $100,000 to $150,000 depending on how many systems are due for refreshes and new equipment purchases or major upgrades. When a major piece of equipment, such as one of the high-end digitization scanners, needs to be replaced or a new one purchased many other routine technology purchases are placed on hold until the next fiscal year. Similarly, the Library funds furniture reupholstery and occasionally furniture replacement from this budget. Reupholstering existing furniture costs about two-thirds the price of replacement and extends the life of furniture almost indefinitely. The same applies to minor building repairs renovations which have seen costs nearly double in the last few years. The campus rarely has funds available for building maintenance short of emergency repairs so most minor and cosmetic repairs are deferred indefinitely. The Library typically funds repairs and renovations from this budget to ensure that Library spaces remain attractive and appealing for use, particularly as study space for students. Building renovations are often delayed or canceled when other budget priorities emerge that take priority. The other major area of expenditure is professional development and travel expenses, primarily for librarians and other academic personnel, but also for staff.  Costs have increased dramatically since the pandemic, but library administration has avoided placing restrictions on these activities to ensure fair and equal access to professional development, training, and business travel activities.  And, finally, when any of these priority buckets requires greater expenditures in a given fiscal year, reducing spending in the another areas is the only way to ensure fiscal responsibility and avoid spending in deficit.

### Table 11. Operations

| Operations | |
|---|---|
| General Expenses | $172,976 |
| Technology | $125,000 |
| Renovations/Furniture | $150,000 |
| SILS | $62,500 |
| **Total:** | $510,476 |
| Note:  General Expenses includes: supplies & equipment, insurance, memberships, professional development & travel, etc.; SILS means "Systemwide Integrated Library System" | |

### Figure 11. Operations



Legend: General Expenses, Technology, Renovations/Furniture, SILS
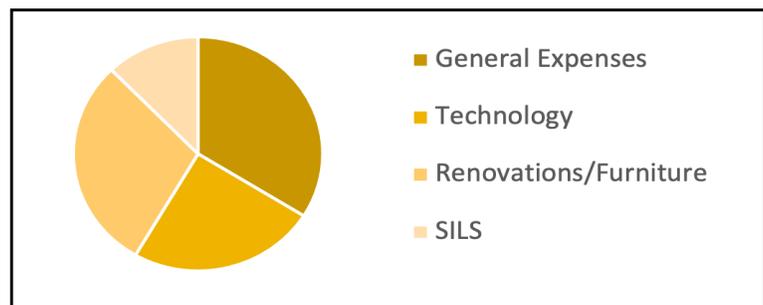
All collections funding comes from the administration. The Library also receives a small amount of grant funding and other external income annually. Grant funding is typically project specific and mostly covers salaries and benefits for employees performing the grant-funded work. The Library has one moderate sized endowment and several smaller ones that generate limited discretionary funding that the University Librarian allocates to support programs, staff development or projects that cannot be covered by regular budgetary funding. In recent years, annual grant income has been between $250,000 and $300,000. Summer Sessions is another source of funds that varies with per capita enrollment. With these funds, the Library maintains expanded summer open hours to benefit these students, specifically. In recent years, this income from endowments and Summer Sessions has been approximately $150,000 per year with much of the Summer Sessions funding being spent on the student employment program (salaries) and renovations to public spaces.[73]

With additional financial support, the Library would be better situated to further the UC Merced Strategic Plan and to support the campus in attaining UC Merced's goal of R1 status. The Library's $6.3 million budget advances the research, teaching, and learning of the entire UC Merced campus.

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[73] The Library does not overspend its budget, nor does it practice deficit spending.

# Part III: Summary of Recommendations

The UC Merced Library requires financial investment for collections, operations, space, and staff in order to:

- optimally serve the educational and research mission of the university;
- promote the UC Merced Strategic Planning Goals, and
- serve as a crucial partner in the university's aspirational goal of R1 status.

Please note that since this report does not address all Library activities, these recommendations represent some but not all Library needs.

**Reinstate and Grow Collections Funding**: Provide a reliable and sufficient collections funding allocation that considers enrollment growth, faculty needs, and inflation. Preserve existing collections and support new requests and needs.

**Monitor & Expand Capacity for Data Management Services**: Contribute to successful grant-getting and compliance through robust data management services. Increase capacity for this work via expert personnel.

**Increase the Availability of GIS Services & Expertise**: Hire a Geospatial Data Analyst to expand capacity for consultations, GIS education for undergraduates, and project consulting with faculty.

**Contribute to Student Learning**: Hire librarians with teaching pedagogy and subject area expertise to work closely with students and faculty.

**Increase Research Productivity via Carpentries Training**: Keep pace with the demand for coding and data science training and expand offerings to meet specialized needs; hire a Research Data Specialist in Data Services.

**Promote and Support Open Educational Resources (OER) Use & Creation**: Create a librarian position focused on no-cost and low-cost course material initiatives and collaborations. Ensure the library can support OER adoption, adaptation, creation, and publication through this personnel addition and adequate operations funding.

**Invest in Students' Development**: Acquire funding to support students' employment, internships, and fellowships to provide them with valuable work experience and experiential learning opportunities.

**Make Spaces Available for Library Operations & Student Access**: Allocate spaces in the Kolligian Library for library operations and public services. Priorities include increasing student study spaces, establishing spaces for Archives processing, and ensuring on-site staff have suitable work areas.

**Dedicate Resources to Transform the Publishing Landscape**: As part of the collection budget, allocate funding to Transformative Agreements in support of Open Access publishing.

**Establish a Sierra Nevada-Central Valley Archive**: Funding is required to acquire, process and preserve unique collections. These activities require expert staff, suitable spaces, technology, and outreach resources

# Conclusion

The UC Merced Library is an essential partner in the university's mission of teaching, research, and public service. Its resources and activities contribute to the campus' Strategic Plan goals ensuring that we advance knowledge, develop scholars & leaders, and cultivate respect for all. The logic models demonstrate how the Library's current work is aligned with Strategic Plan and what can be achieved in the future with adequate resources.

By 2031, the campus also aspires to be an R1 university. The Library will contribute to R1 designation through providing deep and diverse collections and research support which directly further research expenditures, a crucial R1 metric. Furthermore, these resources support graduate students' successful completion of doctoral degrees – a second important R1 metric.

However, to optimally support growing university's goals and research aspirations, the Library will require additional funding dedicated to collections, staffing, and operations and space allocations for public and operational uses. Adequate resource commitments will ensure that the Library can expand its capacity to acquire robust and unique collections, increase information availability, provide expert research services, increase students' information literacy and data competencies, minimize barriers to student success, offer students rich learning experiences, and celebrate the rich diversity of our community and region. The Library is committed to furthering the campus' 2031 vision, supporting the success of our students and faculty, and contributing to our community.

> "Give me a **library** and I'll **build a university** about it."
>
> Benjamin Ide Wheeler
> UC President, 1899 to 1919

# <u>Appendices</u>

## <u>Appendix A: LASC White Paper Charge</u>

**The White Paper should do the following:**

1. Demonstrate how the Library can position itself as an extraordinary resource for the campus through initiatives, such as data carpentry & regional archival collections

2. Demonstrate how the Library provides resources for sustainability and cultural heritage and the interconnections of those two

3. Demonstrate how essential the Library is for faculty as researchers, teachers, and supporters of the surrounding community

4. Profile current facilities

5. Explain the opportunities the Library provides

6. Address current and upcoming challenges

7. Address resources, functions, finance, service, who the Library is serving, and impact

8. Explain how the library contributes to strategic outcomes

9. Explain how long-term funding can contribute to supporting the long-term strategic planning goals

**Provide benchmarking for the following:**

1. Collections data

2. Space

3. Differential costs for supporting different types of disciplines

4. Projected costs to provide support for data curation (especially with current NIH / NSF requirements)

5. Staffing

6. Educational enterprise (esp. student learning digital and info literacy)

7. Graduate needs (such as data carpentry)

8. All of the above require staffing

9. Archives and special collections

10. Challenges caused by external contexts in the near future, next 2 to 10 years, such as federal granting agencies' requirements for data curation

| Library Service/Resource (Existing) | Area | Units | 1.1 | 1.2 | 1.3 | 2.1 | 2.2 | 2.3 | 3.1 | 3.2 | 3.3 | 3.4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Library Instruction (in-person; also accommmodate remote); includes By Request Workshops | Education | Research & Learning Services | | x | x | x | x | | | x | | |
| Information Literacy Modules (Asynchronous) via CatCourses & Library Guides | Education | Research & Learning Services | | x | x | x | x | | | x | | |
| Library Tour | Education & Outreach | Research & Learning Services | | x | x | x | x | | | | | |
| Research Guides (online) | Education | Research & Learning Services | | x | x | x | x | | | x | | |
| Reference Services (24/7 chat, research consultations, email) | Reference | Research & Learning Services | | x | x | x | x | | | x | | |
| Zero-Cost Course Materials mini-grants | Open Access | Research & Learning Services | | | | x | | x | | | x | x |
| Research Data Management Consultations (with OIT) | Data Management | Data Services | | | x | | | | | | | |
| Data Management Consultations / Feedback (email or via DMPTool) | Data Management | Data Services | | | x | | | | | | | |
| DMPTool | Data Management | Data Services / CDL | | | x | | | | | | | |
| Software Carpentries (R, Python, SQL etc.) | Education | Data Services | | | x | x | x | x | | | | |
| UC Merced ArcGIS Online Portal | GIS Software Resource | GIS | | | x | x | | x | | | | |
| GIS Lab | GIS Hardware Resources | GIS | | | x | | x | x | | | | |
| GIS Consulting Services (e.g. for research projects) | Consulting | GIS | x | | x | | | | | | | |
| GIS Workshops | Education | GIS | | | x | x | x | x | | | | |
| Reference Services | Reference | GIS | | | x | x | x | x | | | | |
| Scholarly Publishing Consulting | Reference | Digital Curation & Scholarship | x | | | | | | | | | |
| eScholarship Publishing Support | Publishing | Digital Curation & Scholarship | x | | x | | | | | | | |
| Course Resources | Information Access | Digital Curation & Scholarship | | | | x | | x | | | | x |
| Library Award for Student Research Excellence | Outreach | Research & Learning Services | x | x | | x | | | | | | |
| Faculty Author Series | Outreach | Research & Learning Services | x | | | | | | | | | |
| Archival Collections | Access & Collections | Digital Curation & Scholarship | x | | | | | x | | x | x | x |
| Archival Instruction | Education | Digital Curation & Scholarship | | | | x | | x | x | | | |
| Support Graduate Student Research (LUCE grant participation) | Education | Digital Curation & Scholarship | | | | | x | x | x | | | |
| Exhibits | Outreach | Digital Curation & Scholarship | x | | x (p) | | x (p) | | | x | x | x |
| Student Assistant Employment | Access & Education | Access Services (primary); multiple units | | | | | x | | | x | x | |
| Host Student Success Interns (SSI) | Education | Multiple units | | | | x | | x | | x | | |
| Library Space (individual, group) | Access | Access Services | | | | | x | x | x | x | x | |
| Library Services Desk | Access | Access Services | | | | x | x | | x | x | x | |
| UC Library Search | Access | Technical Services | | | | | x | | x | x | | |
| Interlibrary Loan (ILL) | Access & Collections | Access Services | x | x | | x | x | | | | x | x |
| Library Collections (journals, books, databases ...) | Collections & Access | Technical Services | x | x | x | x | x | | | x | x | x |
| Transformative Agreements (OA) | Collections & Open Access | Technical Services; CDL | x | | x | | | | | x | x | |

# Appendix C: Library Organization Chart

**UC Merced Library**
May 1, 2023 (v2)



**Gregg Camfield**
EVC & Provost

**Haipeng Li**
University Librarian
University Librarian 0118

**Eric Scott**
AUL for Library Operations
Assoc. University Librarian 3600

**Sara Davidson Squibb**
AUL for Research & Engagement
Assoc. University Librarian 3600

**Tom Bustos**
Dir of Library Technology
Info Sys Manager 10667

- **Imtiaz Haq**
  Library Systems Administrator
  Info Syst Analyst 3 7309
- **Samantha Fort**
  Technology Services Coord
  Computer Resource Spec 2 4804

**Stephanie Peterson**
Library Chief Admin Officer
Admin. Officer 3 7377

- **Mekenna Hagerman**
  Library Business Officer
  Financial Svcs Analyst 2 4627
- **Crystal Fontes**
  Executive Assistant to the UL
  Exec Asst 3 7384
- **Krista Walsh**
  Library Administrative Coord
  Admin Officer 2 7376

**Ross Anastos**
Head of Access Services
Library Manager 10541

**Interlibrary Services**
- **Demitra Borrero**
  Interlibrary Services Coord
  Library Assistant 4 6759
- **Nathan Garcia**
  Interlibrary Services Coord
  Library Assistant 4 6759

**Library Services**
- **Sunni Nelson**
  Night/Weekend Svcs Coord
  Library Assistant 3 6760
- **Maria Martinez**
  Night/Weekend Svcs Coord
  Library Assistant 3 6760
- **VACANT**
  Night/Weekend Svcs Coord
  Library Assistant 3 6760

**VACANT**
Head of Research & Learning Services
Associate Librarian 3617/3616

- **Elizabeth McMunn-Tetangco**
  Instruction & Research Librarian
  Associate Librarian 3616
- **Joe Ameen**
  Research Services Librarian
  Associate Librarian 3616
- **Olivia Olivares**
  Instruction & Outreach Librarian
  Associate Librarian 3617
- **Kelli Breland**
  Learning Services Specialist
  Library Professional 4 6268

**Jim Dooley**
Head of Collections Services
Librarian 3612

- **Sarah Sheets**
  Electronic Resources Coord
  Library Professional 4 6268
- **Latasha Means**
  Physical Resources Coord
  Library Professional 4 6268

**Emily Lin**
Director of Digital Curation & Scholarship
Librarian 3612

**Archives & Special Collections**
- **Jerrold Shiroma**
  University Archivist
  Associate Librarian 3616
- **Alisak Sanavongsay**
  DC&S Programmer
  Applications Programmer 2 7299
- **Heather Wagner**
  Digitization Coordinator
  Library Assistant 4 6759

**CARA Archives Project**
- **VACANT**
  Archivist Regional History Coll.
  Assistant Librarian 3622
- **Rebecca Gourevitch**
  CARA Project Archivist
  Assistant Librarian 3622
- **Fabiola Chavez**
  Archives Specialist
  Library Professional 4 6268
- **Sophia Fernandez**
  CARA Communications Asst
  Student 4 Non-UC 4925

**Erin Mutch**
Director of GIS Services
Academic Coord 2 0843

- **Amy Newsam**
  GIS Assistant
  Assistant Specialist NEX 3321

**Derek Devnich**
Director of Data Services
Academic Coord 2 0843

# Appendix D: Library Spaces



KOLLIGIAN LIBRARY
First Floor

# KOLLIGIAN LIBRARY
## Second Floor



275K

299

275C

Stacks /
Study Room
(280)

276

274

272

257

268

Elevators

266

265

Service Desk
(255)

262

260

232

| Stairs | | Library Public Space |
| Restrooms | | Library Lab / Instruction Space |
| Non-Library Space | | Library Collaborative / Meeting Space |
| Library Operations | | Public Access / Corridors |
| | | Utility Spaces |

# KOLLIGIAN LIBRARY
## Third Floor

397

399

396

Stacks /
Study Room
(380)

371

361

359

376

374

372

368

357

Elevators

362

360

336

330

355

**Stairs**

**Restrooms**

**Non-Library Space**

**Library Operations**

**Library Public Space**

**Library Lab/Instruction Space**

**Library Collaboration Space**

**Public Access**

**Utility Space**

KOLLIGIAN LIBRARY
Fourth Floor

Archives (489A)

Archives (489)

499

Stacks (480A)

471

Study Area (480)

457

Elevators

474

470

464

455

460

Stairs

Restroom

Non-Library Space

Library Operations

Utility Spaces

Library Public Spaces

Public Access / Corridors

Library Collaborative / Meeting Spaces

# Appendix E: Library Exhibits

*McFadden-Willis Reading Room dedication*, 2005

*At Work: California Labor*, Fall 2005

*Merced 4-H*, Spring 2006

*Miracles on the Border: Folk Paintings of Mexican Migrants to the U.S.*, 2006

*Daruma*, July-Nov 2006

*Frank Cameron: Metal Art*, Nov 2006-Feb 2007

*David Johnson Photography*, May 8-Aug 31, 2006

*Living Under the Trees*, Sept 4-Oct 21, 2007

*Antarctica*, Spring 2007

*Treasures from the Lee Institute for Japanese Art at the Clark Center*

*Artful Produce: Label Art of California's Growers*, April 4-May 30, 2007

*The Valley Experience: Works by the CHAA*, Fall 2008

*The Cold War*, Dec 11, 2007-Feb 29, 2008

*liberARTE*, January 28-March 7, 2008

*"The Best of" the Merced Camera Club*, March 12-May 23, 2008

*Trees Turned into Stone*, Summer 2008

*Remembering Robert Rauschenberg*, Summer 2008

*The Omnivore's Dilemma; Food Summit* exhibits Fall 2008

*California Archaeology Month*, Fall 2008

*The Holocaust: Genocide in History*, opened December 10, 2008

*ARTS 141 Digital Photography display*, 2008/annual

*Hobos to Street People:  Artists' Responses to Homelessness from the New Deal to the Present*, Aug 31-Nov 8, 2009

*Head Games:  Ceramic Sculpture by Pancho Jiménez*, Feb 13-May 31, 2009

*Transitions:  Portraits of UC Merced's Founding Students by Roger Wyan*, Mar 19-Jun 18, 2009

*The Fairy Shrimp Chronicles*, May-Dec 2009

*The Okie Poet Laureate:  Wilma Elizabeth McDaniel*, Sep-Dec 2009. Student curator, Kacy Marume (senior thesis project).

*Designing Costumes for Igor Stravinsky's Oedipus Rex and Symphony of Psalms*, July 7-Oct 30, 2010

*My Family Through Clothing*, Oct 25-Dec 17, 2010

*3-D Archaeology at Çatalhöyük.* Nov 15-Dec 17, 2010

*Remembering 9-11*, Aug 22 - Dec 16, 2011

*Banned and Recovered*, Jan 10 - Feb 27, 2011

*M[y]erced Photography Exhibit*, Apr 11 – May 4, 2011

*Enacting Change : UC Merced Arts 71 Student Mural*, 2011

*Exploring Marine Biodiversity and Environments*, April 15th - July 30th

*Jan Wurm - Paintings and Drawings*, Aug 25 - Dec 16, 2011

*International Education Week 2011*, Nov 7 - Dec 16, 2011

*Creative Research Exhibition: An Exhibition of Art and Science*, May 28 - Sep 9, 2012

*Art & Language: A Collaboration of Poets & Artists*, July 2 - Oct 15, 2012

*Creating Awareness: UC Merced Students Environmental Mural*, 2012

*Prison Nations*, Jan 19 - Mar 9, 2013

*DLM Lab Tour: Southern Sierra Critical Zone Observatory*, July 15 - Sep 20, 2013

*SNAMP: Learning to Implement Adaptive Management in the Sierra Nevada*, July 15 - Sept 20, 2013

*DLM Lab Tour: MESA*, Oct 1 - Dec 20, 2013

*Simplicity/Complexity: Digital Works by Ryan Hoover*, Oct 10 - Dec 20, 2013

*Selected works of Laura Cunningham*, 2014

*A World Turned Upside-Down: Tiananmen 89 @ 25*, 2014

*Seeking the Silver Screen in the Golden State: Rose Maddox and Wilma McDaniel*, 2014-2015

*Project Protect Concept Art*, 2014-2015

*Selected Works: Graduate Student Research @ UC Merced*, 2015

*Ann Johnston: Quilt Artist*, 2015

*The Americas Underground: Where our Past and Present Meet in the Dark*, 2015

*Enlightened Perspectives: Interdisciplinary Art — A Mixed Media Show*, 2015

*San Joaquin River Kiosk*, 2015

*O Vast Rondure: Paintings by Darick Ritter*, 2015-2016

*Hmongstory 40 Satellite Exhibit*, 2015-2016

*兔兒爺†Tu'er Ye: Old Beijing's Rabbit God,* 2015-2016

*Beginnings*, 2015-2016

*Selected Works: Graduate Student Research @ UC Merced*, 2016

*Victory Over Violence*, 2016

*Delta Grandeur: The Bucolic Splendor of California's Inland Estuary*, 2016

*Refugee Currents: Bodies at Sea*, 2017

*Be Aware: Elevate Your News Evaluation*, 2017

*Hydraulic Landscapes: Water History and Industrial Photography in California*, 2017

*Transitions: Portraits of a Decade Long Journey*, 2017-2018

*Toni Morrison's Beloved: 30th Anniversary*, 2018

*Waterscapes & Wet Bodies through the Colonial Eye: West Africa, Hawai'i, and India*, 2018

*Singing California*, 2018

*2019 Bobcat Art Show*, 2019

*AIDS History Collections*, 2020-2021

*Central Valley Portraits*, 2021-2022

*McLean Collection: Miwok Baskets*, Aug 14, 2022 - May 31 2023

*Two Years of Heat and Covid in the San Joaquin Valley: Photographs of David Bacon* (2022-2023)

*A Century of Impact in California's Counties: Highlights from the University of California Cooperative archive*, Sept 22, 2022 - May 13, 2023

*The Poetic Creation Process of the Oralitor Fredy Chikangana: To Feel, Think and Write in Quechua*, Nov 7 – May 31, 2023

*Building a New Future: Art and Activism in the Central Valley—Photographs by George Ballis*, 2023


Long-term/rotating exhibits:

- *UC Merced Bobcat/Family Art Show*, annual through 2019

- *The Great Central Valley*

- *Highlights from the McLean Collection*

- *From the Archives*

- *Based on the Book*

- *Honoring Our Faculty*

- *Arboleda Fossils*

- *Structures of Utility*

- *Yosemite Murals*

# Bibliography

Allcott, Hunt, and Matthew Gentzkow. "Social Media and Fake News in the 2016 Election." The Journal of Economic Perspectives 31, no. 2 (2017): 211–235. http://www.jstor.org/stable/44235006.

American Association of Colleges & Universities (AAC&U). "High-Impact Practices." January 16, 2022. https://www.aacu.org/trending-topics/high-impact.

Association of College & Research Libraries (ACRL). "Framework for Information Literacy for Higher Education." (February 9, 2015): 1-34, esp. 8, https://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/infolit/framework1.pdf.

Calisphere University of California. https://calisphere.org.

Center for Institutional Effectiveness, UC Merced. Faculty Headcount. https://cie.ucmerced.edu/faculty-and-staff-interactive-data.

Center for Institutional Effectiveness, UC Merced. Student Headcount. https://cie.ucmerced.edu/overall-enrollment-totals.

Center for Systems Science and Engineering (CSSE). "COVID-19 Map." Johns Hopkins Coronavirus Resource Center. Accessed February 20, 2023, https://coronavirus.jhu.edu/map.html.

Chodock, Ted. "Mapping Sense of Belonging in Library Spaces." Library Assessment Conference (September 2020): 1-15, esp. 12. https://www.libraryassessment.org/wp-content/uploads/2021/09/197-Chodock-Mapping-Sense-of-Belonging.pdf.

Data Carpentries. https://carpentries.org.

Davidson Squibb, Sara, and Elizabeth Salmon. "Pick and Choose: Offering Options to Expand Library Sessions for Undergraduate Researchers." College & Research Libraries News (May 6, 2022): 206-210. doi:https://doi.org/10.5860/crln.83.5.206.

Davidson Squibb, Sara, Catherine Koehler, and Jerrold Shiroma. "Engaging Neglected Histories: First-Year Students, Archives, and Wikipedia." College & Research Libraries News 84, no. 3 (March 6, 2023): 103-109. doi:https://doi.org/10.5860/crln.84.3.103.

Davis, Philip M. "Open access, readership, citations: a randomized controlled trial of scientific journal publishing." The FASEB Journal, 25 (7) (2011): 2129-2134.

Davis, Philip M., Bruce V. Lewenstein, Daniel H. Simon, James G. Booth, and Mathew J. L. Connolly. "Open access publishing, article downloads, and citations: randomised controlled trial." British Medical Journal 337 (7665) (2008): 343-345.

Esri. "ArGIS Online and ArcGIS." https://www.esri.com/en-us/about/about-esri/overview.

Holdren, John P. "Increasing Access to the Results of Federally Funded Scientific Research." Office of Science and Technology Policy (OSTP). February 22, 2013. https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf.

Ithaka S+R. "Ithaka S+R US Faculty Survey 2021." Accessed January 19, 2023. https://sr.ithaka.org/publications/ithaka-sr-us-faculty-survey-2021/.

Jaggars, Shanna Smith, Marcos D Rivera, and Briana Akani. "College Textbook Affordability: Landscape, Evidence, and Policy Directions." MidWestern Higher Education Compact Policy Report (March 2019): 1-15.

Jenkins, J. Jacob, et al. "Textbook Broke: Textbook Affordability as a Social Justice Issue." Journal of Interactive Media in Education. 2020(1): 1-13. doi: 10.5334/jime.549.

Langham-Putrow, Allison, Caitlin Bakker, and Amy Riegelman. "Is the Open Access Citation Advantage Real? A Systematic Review of the Citation of Open Access and Subscription-Based Articles." PLOS ONE 16, no. 6 (June 23, 2021): e0253129, doi:10.1371/journal.pone.0253129.

Lynch, Conor P., Elliot D.K. Cha, Madhav R. Patel, Kevin C. Jacob, Michael C. Prabhu, Hanna Pawlowski, Nisheka N. Vanjani, and Kern Singh. "How Does Open Access Publication Impact Readership and Citation Rates of Lumbar Spine Literature?" Clinical Spine Surgery 35, no. 6 (July 20, 2022): E558–565. doi:10.1097/BSD.0000000000001303.

"Merced Assembly Center," Wikipedia, February 25, 2023, https://en.wikipedia.org/w/index.php?title=Merced_Assembly_Center&oldid=1141559456.

Miller, Thaddeus. "UC Merced Map a Tool for Watching Butte Fire." Merced Sun-Star: The: Web Edition Articles (CA). September 21, 2015, https://infoweb.newsbank.com/apps/news/openurl?ctx_ver=z39.88-2004&rft_id=info%3Asid/infoweb.newsbank.com&svc_dat=AWNB&req_dat=ED7E6DEF119D4A348FDEFF4CD5CD88F9&rft_val_format=info%3Aofi/fmt%3Akev%3Amtx%3Actx&rft_dat=document_id%3Anews%252F158B257DA0D526C0.

National Association of Colleges and Employers (NAC), "What Is Career Readiness?." Accessed February 15, 2023. https://www.naceweb.org/career-readiness/competencies/career-readiness-defined/.

National Institute of Health (NIH). "Writing a Data Management & Sharing Plan." Accessed January 31, 2023. https://sharing.nih.gov/data-management-and-sharing-policy/planning-and-budgeting-for-data-management-and-sharing/writing-a-data-management-and-sharing-plan.

Naughton, Colleen, and UC Merced Students. "COVIDPoops19." https://ucmerced.maps.arcgis.com/apps/dashboards/c778145ea5bb4daeb58d31afee389082.

Nemec, Julie. "NACS Report: Student Spending on Course Materials Continues to Decline." National Association of College Stores. June 25, 2020). https://www.nacs.org/student-spending-on-course-materials-continues-to-decline.

Office of Distance Learning & Student Services Florida Virtual Campus. "2018 Student Textbook and Course Materials Survey." March 8, 2019. https://dlss.flvc.org/documents/210036/1314923/2018+Student+Textbook+and+Course+Materials+Survey+Report+--+FINAL+VERSION+--+20190308.pdf/07478d85-89c2-3742-209a-9cc5df8cd7ea.

Office of Distance Learning & Student Services Florida Virtual Campus. "Student Textbook and Instructional Materials Survey." (September 2022): 1-57. https://dlss.flvc.org/documents/210036/1314923/FLVC+Textbook+Survey+Report+-+2022.pdf/818e20cb-1daa-3565-a948-192f5287917c.

Office of Scholarly Communication. University of California. "UC Academic Senate Committee on Library and Scholarly Communication – Statement regarding Open Access Publishing." Accessed February 16, 2022.

Office of Scholarly Communication, University of California. "Publisher OA Agreements and Discounts." https://osc.universityofcalifornia.edu/for-authors/publishing-discounts/.

Otto, Frank. "COVID-19 Misinformation: The Flip Side of 'Knowledge Is Power.'" Penn Medicine News, October 25, 2022. https://www.pennmedicine.org/news/news-blog/2022/october/covid-misinformation-the-flip-side-of-knowledge-is-power.

Project Information Literacy (PIL). "Publications." https://projectinfolit.org/publications/.

Rowe, Jennifer, et al. "The Impact of Library Instruction on Undergraduate Student Success: A Four-Year Study." College & Research Libraries (January 4, 2021): 7-18. doi:https://doi.org/10.5860/crl.82.1.7.

Senack, Ethan. "Fixing the Broken Textbook Market: How Students Respond to High Textbook Costs and Demand Alternatives." Center for Public Interest Research, January 2014. https://publicinterestnetwork.org/wp-content/uploads/2014/01/NATIONAL-Fixing-Broken-Textbooks-Report1.pdf.

Stein, Rob. "As the Pandemic Ebbs, an Influential COVID Tracker Shuts Down." NPR, February 10, 2023. https://www.npr.org/sections/health-shots/2023/02/10/1155790201/as-the-pandemic-ebbs-an-influential-covid-tracker-shuts-down.

UC Cooperative Extension Archive. https://calisphere.org/institution/238/collections/.

UC Love Data Week 2023. https://uc-love-data-week.github.io/uc-love-data-week.github.io/.

University of California Undergraduate Experience Survey (UCUES) Data Tables, 2022. Academic Development tab. https://visualizedata.ucop.edu/t/Public/views/UCUESdatatables22/AcademicDevelopment?:embed_code_version=3&:embed=y&:loadOrderID=0&:display_spinner=no&:showAppBanner=false&:display_count=n&:showVizHome=n&:origin=viz_share_link.

UC Library Annual Statistics (2021-2022) https://libraries.universityofcalifornia.edu/about/facts-and-figures/.

UC Merced. "Research Proposals and Awards Dashboard (Beta)." https://visualizedata.ucop.edu/t/UCMerced/views/ResearchProposalsandAwards/ResearchProposalsandAwards/5b1c8d39-56ff-4a72-b1a6-60b22eeb296f/cf489105-ff50-4535-8722-09d59889c7d6?%3Adisplay_count=n&%3AshowVizHome=n&%3Aorigin=viz_share_link&%3Aembed=y#1.

UC Merced. "ServiceHub. Research Consultation (OIT) Description and Form." https://ucmerced.service-now.com/servicehub?id=public_kb_article&sys_id=3c3ee9ff1b67a0543a003112cd4bcb13&form_id=06da3f8edbfc08103c4d56f3ce9619f4.

UC Merced. "UC Merced Strategic Plan 2021-2031." https://strategicplan.ucmerced.edu/.

UC Merced Library. "CatCourses Library Modules: About & Import Instructions." https://libguides.ucmerced.edu/library-modules-catcourses.

UC Merced Library, "Information Literacy (IL) Outcomes," https://library.ucmerced.edu/research/instructors/library-instruction-services/infolit-outcomes.

UC Merced Library. "Make an Appointment," https://libcal.ucmerced.edu/appointments/.

UC Merced Library. "Mission Statement." https://library.ucmerced.edu/about/library/about-library.

UC Merced Library. "Starting Your Research series." https://libguides.ucmerced.edu/starting-your-research.

UC Merced Library. "Think Like a Researcher." https://libguides.ucmerced.edu/think_like_a_researcher/background.

University of California, Office of the President. "Chapter 9: Research." UC Accountability Report 2022. https://accountability.universityofcalifornia.edu/2022/chapters/chapter-9.html.

University of California, Office of the President. "Chapter 9: Research." Accountability Report, 2020. https://accountability.universityofcalifornia.edu/2020/chapters/chapter-9.html.

University of California Office of the President. "Graduating Senior Survey Longitudinal Tableau Dashboard (2019-2022) Results." https://visualizedata.ucop.edu/t/UCMerced/views/GSSLongitudinalTableauDashboardpwb/GraduatingSeniorSurveyStory/722fc136-4572-48c2-9d67-9bd32f3bc479/d845a7d0-04a4-41cb-96df-14bbaf55f857?:display_count=n&:showVizHome=n&:origin=viz_share_link.

University of California Office of the President. UC's Mission. https://www.ucop.edu/uc-mission/.