



# LAURA BUSH 21<sup>st</sup> CENTURY LIBRARIAN PROGRAM

Sample Application RE-259032-OLS-25  
Project Category: Planning

Florida State University (Florida State University, College of  
Communication and Information)

Amount awarded by IMLS:       \$88,906

Florida State University will develop a sustainable data curation internship program for Library and Information Science (LIS) students, centered on the ongoing curation of the Unified Astronomy Thesaurus. In collaboration with stakeholder partners, this project will design a structured internship program providing LIS students with hands-on experience in metadata management, knowledge organization, and scientific information curation. Through mentorship, experiential learning, and collaboration with astronomy and LIS professionals, students will gain practical competencies in managing controlled vocabularies and supporting open science initiatives. Key project outcomes include a defined internship framework, a planned curriculum integrating UAT curation into LIS education, a landscape mapping of other hands-on curation opportunities that could follow a similar model, and a sustainability plan. This initiative bridges LIS education and STEM data curation, preparing students for interdisciplinary, data-driven careers.

Attached are the following components excerpted from the original application.

- Narrative
- Schedule of completion

When preparing an application for the next deadline, be sure to follow the instructions in the most recent Notice of Funding Opportunity for the grant program to which you are applying.

# Training an LIS workforce of the future through curation of the Unified Astronomy Thesaurus

## 1. Introduction

Florida State University's School of Information (FSU iSchool) requests \$88,906 to support an 18-month Planning Grant project to explore the creation of an experiential learning opportunity through curation of a community-developed controlled vocabulary, the Unified Astronomy Thesaurus (UAT) (Accomazzi, et al., 2022). This project will develop a structured internship program that provides Library and Information Science (LIS) students with hands-on experience in the curation of a scientific, community-maintained, Simple Knowledge Organization System (SKOS) vocabulary (Miles & Pérez-Agüera, 2007). By integrating maintenance of a space science thesaurus into LIS education, the project will train a more science-literate, data-savvy workforce while supporting the long-term sustainability of the UAT as both a perpetual training framework and a critical knowledge resource. Project results will include a well-defined internship structure with curricular recommendations, and a summary report and sustainability plan to ensure continued student involvement in the UAT beyond the grant period. Additionally, this project will lay the groundwork for expanding student participation in future phases of the UAT, cultivating long-term institutional partnerships, and establishing a transferrable model for integrating LIS students into other community knowledge organization system efforts. This proposed project aligns most closely with **LB21 Program Goal 2.1**, "Develop or enhance professional development and training programs to enable the library and archival workforce to meet the needs of their communities".

## 2. Project Justification

In the era of big data and vast digital repositories, well-chosen keywords are critical for turning a search query into meaningful results (Gross, Taylor & Joudrey, 2015). For scientists, educators, journalists, and the public, having a structured approach to identifying the main topics within a publication, the primary coverage of a data set, or the purpose of a software package facilitates the finding, understanding, and leveraging of information. By distilling research outputs into their core concepts, keywords make literature searches faster and more effective. Refined keywords guide search engines and indexing tools, helping scientific work stand out and ensuring that the right audiences find it. Standardized terms also empower potential consumers to quickly judge the suitability of a resource to their interests.

Controlled vocabularies (CVs), such as thesauri and ontologies, play a key role in metadata creation by ensuring consistent keywords and discoverability of resources across digital repositories (Joudrey & Taylor, 2017). LIS students studying knowledge organization and metadata often engage with CVs throughout their coursework. Meanwhile, LIS as a field of research, education, and practice is evolving at the intersection of data science, where there is increasing need for structured metadata to manage large and complex datasets and collections (Palmer, et al., 2024). As information systems become more data-driven, LIS programs must prepare students accordingly for roles in data management and data science (Marchionini, 2016). Particularly with advancements in artificial intelligence (AI), CVs are now being leveraged for automated classification, entity recognition, and semantic search, representing a key area for innovation in LIS education (Marchionini, 2024). Providing students with effective education and experience with CV management equips them with the skills needed to curate, structure, and optimize information for emerging technologies, and overall cultivating a workforce that is prepared for the challenges of large-scale data environments.

This Planning Grant project builds upon the Project Director's prior successful integration of the UAT as a learning tool in several graduate-level courses ("Information Organization", "Data Organization") to develop a structured internship program that will introduce LIS graduate students to the curation and maintenance of community-driven CVs while supporting the day-to-day curation of the UAT. The FSU iSchool's Master of Science in Information Technology (MSIT) and Master of Science in Information (MSI) graduate programs attract students with a wide range of expertise, from software development to traditional librarianship. This interdisciplinary skill set aligns directly with the components of UAT management and curation, which require proficiency in a broad range of areas such as information retrieval, metadata management, digital infrastructure, and community engagement. By engaging cohorts of MSIT and MSI students in the real-world challenges of thesaurus management, this project will help to foster collaborative data curation and knowledge organization expertise and Science, Technology, Engineering and Mathematics (STEM) literacy in the next generation of LIS professionals.

### **The Unified Astronomy Thesaurus (UAT)**

The UAT is an open, interoperable community thesaurus that harmonizes astronomy, planetary science, and heliophysics concepts and their relationships into a single high-quality resource that presently contains 2275 concepts and continues to grow (Frey & Accomazzi, 2014; Accomazzi, et al., 2022). Its founders specifically designed it to enhance semantic enrichment of the scholarly literature, improving how space science research is indexed, searched, and shared (Accomazzi, et al., 2014). The American Astronomical Society (AAS) owns the UAT, which is built upon community input, ensuring that its terminology is current, accurate, and reflective of consensus. With a Creative Commons Attribution-Share-Alike license, UAT content is freely available, removing barriers to broad adoption (UAT, n.d.). Through the UAT's open governance and community contributions, its content evolves with scientific progress. Its standardized structure also provides interoperability with other systems.

The UAT supports knowledge discovery and enhances the accessibility of research, data, and software. However, maintaining and curating such a dynamic resource requires ongoing updates to reflect the evolving nature of the fields it supports (astronomy, planetary science, and heliophysics). Until 2024, a partnership with the Wolbach Library at the Center for Astrophysics | Harvard & Smithsonian (CfA) provided a 0.5 FTE curator position dedicated solely to the UAT. The recent closure of Wolbach Library and the elimination of the curator position created an urgent need for renewed efforts to sustain this important tool (AIP, 2024). Now, a new AAS Working Group on the UAT (WGUAT), of which the Project Director is a member, is developing a comprehensive strategic plan for this community resource (AAS, n.d.). Consisting of librarians, computer scientists, editors, and repository managers, the WGUAT is identifying models and resources for ongoing curation and community outreach, which presents an opportunity for innovation and student engagement in these pivotal efforts. The creation of the WGUAT raises the profile of the UAT within the AAS, consistent with its importance to disseminating scholarly research.

Like other knowledge system managers, the WGUAT is navigating the opportunities, challenges, and ethics posed by the rapidly evolving and increasingly available AI. For example, the UAT is a large and complex polyhierarchical vocabulary, and the relationships between concepts (i.e. the concept hierarchy) represent an important and time-consuming aspect of the UAT's curation. Twenty-first century LIS professionals must adapt to an ever-changing technological landscape and assist their collaborators in understanding the interplay of human and machine curation. Working with WGUAT members as they integrate AI appropriately into the UAT ecosystem will prepare LIS students for similar challenges in their professional work. Furthermore, UAT curation presents opportunities for hands-on student work with software and platforms such as PoolParty (SKOS-based thesaurus management software), GitHub (software development platform), WordPress, Python, and Flask (web development software), Open Science Framework (project repository), and multiple custom widgets.

The envisioned program that will be developed through this Planning Grant project will offer students hands-on experience in thesaurus curation, taxonomy development, scholarly communication, repository interoperability, and community engagement. In addition to building technical skills, the program will provide students with valuable networking opportunities while emphasizing the importance of interdisciplinary collaboration between space scientists, data curators, scholarly publishers, and information scientists. To ensure the success of this initiative, the Planning Grant project will conduct a comprehensive needs assessment, engage stakeholders from both academic and professional communities, and develop a scalable framework for ongoing student participation and sustainability. In addition to UAT curation, this Planning Grant project will also explore additional community-contributed knowledge systems that can similarly broaden the experiences of LIS students at other institutions.

### 3. Project Work Plan

Over the past four years, the Project Director (PD) has successfully leveraged her involvement with the UAT to enhance LIS student learning opportunities. In addition to integrating the UAT into two iSchool graduate courses, the PD recently placed an FSU graduate student in an internship designed to simplify the UAT technology systems while exposing the student to software development in a multi-platform environment. Recent feedback from this preliminary “pilot” internship has been very positive, with the student intern commenting, “I would recommend this experience to another student seeking an internship majoring in Information Technology or Information Sciences fields and I have learned valuable skills”. The Astrophysics Data System (ADS) index of scholarly literature presently hosts the internship and provides mentorship along with AAS and Space Telescope Science Institute (STScI) staff. ADS adopted the UAT as its preferred keyword system while STScI uses the UAT in its proposal system, often resulting in urgent vocabulary needs as missions and research evolve. The PD is also supervising a Ph.D. student research project evaluating the receptivity of astronomers to an AI algorithm assigning UAT keywords to their papers. ADS is currently developing such an algorithm and alpha testing it with WGUAT members, including AAS journal staff. These synergies and pilot efforts will be leveraged as described in the Work Plan and Table 1 summary below.

Personnel roles include the following:

- **Project Director (PD):** Gretchen Stahlman, Assistant Professor in the FSU iSchool, will lead the project. Stahlman’s research focuses on scholarly communication, research data management, and science studies. She has substantial career experience with both LIS education and knowledge organization in astronomy (Buchanan, et al., 2024; Stahlman, 2022a; Stahlman, 2022b; Heidorn, Stahlman & Steffen, 2018). Stahlman will ensure completion and success of the project, including planning and implementation of deliverables, dissemination, and supervision of one graduate student assistant supported by this LB21 project. Stahlman will be responsible for liaising with collaborators and guiding the development of the internship program framework. Moreover, Stahlman will consult regularly with faculty colleagues in the FSU iSchool to seek advice, recruit mentorship, and cultivate institutional support and interest within FSU and throughout the broader iSchools community (see letter of support from the FSU iSchool).
- **Graduate Student Assistant (paid):** A graduate student assistant (GA) will be hired for Spring and Fall semesters in 2026 to assist the PD with background research, community engagement, and preparation of deliverables and dissemination materials. The GA will play a key role in virtual fieldwork and in-person conference attendance. The position will provide a valuable networking and learning opportunity for the GA.

- **Graduate Student Interns (unpaid):** Building upon the current preliminary internship discussed above, graduate student interns will continue to be recruited each semester throughout the project to engage similarly with UAT curation in exchange for course credit. This will allow them to experience the program and provide feedback to enhance the planning process. In alignment with the envisioned internship program, two interns will be recruited from each master's program (MSIT and MSI) as an interdisciplinary, collaborative cohort. The interns (x6) will be a key source of information for internship planning, and debriefing interviews will be held with the PD and/or GA at the end of each semester-long internship period.
- **WGUAT Collaborators (unfunded):** WGUAT members will provide subject matter expertise, host fieldwork, and assist with program refinement, community engagement, and mentorship structures. The WGUAT includes representatives from AAS staff, ADS, STSCI, National Radio Astronomy Observatory (NRAO), Astronomisches Rechen-Institut, International Virtual Observatory Alliance (IVOA), Cornell University, National Science Foundation National Optical-Infrared Research Astronomy Laboratory (NSF NOIRLab), Rutgers University, IOP Publishing, and NASA Planetary Data System. Most WGUAT members are also AAS members. The level of involvement for WGUAT members and other AAS staff will be consistent with their current commitment to UAT maintenance. AAS and ADS are committed to developing the continuing, UAT-based, curator-training program proposed here (see letters of support from AAS and ADS).

Beyond the initial grant period, sustainability is a key focus of this project. The internship framework that will emerge through the Planning Grant project will be designed for long-term integration within LIS education, with a roadmap for continued funding and institutional support. The project will create pathways for sustained student involvement and mentorship and will explore embedding UAT curation into existing coursework and research initiatives, ensuring that thesaurus maintenance continues as an ongoing, structured educational opportunity. Ultimately, this initiative seeks to establish a scalable, sustainable model for UAT curation that benefits both the LIS and astronomy communities. Because the PD sees opportunities for other community-contributed knowledge management systems and LIS institutions to benefit from similar arrangements, all deliverables will be prepared with transferability and generalizability in mind.

## **I: Project initiation & needs assessment.**

- **Establish partnerships and recruit pilot interns.** In collaboration with the WGUAT through meetings and established channels of engagement (email listserv, shared documents), the project will cultivate and strengthen partnerships with other key stakeholders to ensure that the program aligns with LIS and astronomy community needs. In Phase I, the PD will work to identify potential mentors for future interns, beginning with faculty members at FSU and WGUAT institutions, who can provide guidance and expertise on aspects of UAT curation, community development, and student training. The PD will also recruit a cohort of two unpaid student interns from the MSIT and MSI programs at FSU for each semester of the project beginning in Fall 2025.
- **Environmental scan.** To inform the structure and goals of the internship program, the PD will conduct a comprehensive environmental scan of existing internship and fellowship programs in LIS, astronomy, and other fields with robust controlled vocabularies, such as medicine. This background research will be implemented through a literature review and online searching to construct a catalog of similar programs and identify best practices for experiential learning, student engagement, and skills development in data curation. In addition, it will work towards identifying key conditions for sustainability. The PD will also

assess the current state of the UAT through evaluation of project documents and WGUAT dialogue. This assessment will identify key gaps in UAT processes and areas where student contributions would be most impactful while ensuring that the proposed program supports the evolving UAT strategic plan. Because the missions of the AAS and most UAT partner institutions include educational components, the UAT strategic plan is likely to contain investments in education or professional development that can be leveraged for sustainability.

- ***PD early outreach.*** The Library & Information Services in Astronomy (LISA) conference is held roughly every three years as a key international convening for information professionals, publishers, repository managers, and researchers working in astronomy fields. The next LISA conference to be held in November 2025 represents a timely opportunity to present early insights and findings and engage with the broader community to solicit feedback and buy-in. The PD will attend this meeting to network and deliver a presentation about the project and envisioned outcomes. Conversations and information gathered at the conference will help to inform future phases.

## II: Scope the internship program.

- ***Appoint a graduate student assistant.*** Building upon the launch of the project in Phase I, a graduate student assistant at FSU will be recruited for subsequent phases beginning in Spring 2026 through the end of the project period to support the planning and development of the internship program. The position will be 20 hours/week. Preference will be given to students who already have some UAT experience through prior coursework or internships. The student will assist the PD with background research, stakeholder engagement, design of the internship framework, and preparation of deliverables.
- ***Outline core objectives and learning outcomes.*** A key step in designing the internship program is to define its core objectives and expected learning outcomes. As the program will aim to provide LIS students with hands-on experience in thesaurus curation, taxonomy development, and scientific data management, learning outcomes must include the ability to critically evaluate and update controlled vocabularies, to articulate the role of thesauri in enhancing research discoverability, and to apply best practices in metadata and knowledge organization. Additionally, the internship will cultivate interdisciplinary competencies by exposing students to space science-specific terminology, AI technology, and collaborative communities. Regular interactions with domain experts will provide additional mentorship, networking, and professional development. These objectives will be refined in consultation with stakeholders (WGUAT, iSchool faculty) to ensure alignment with both LIS education and the needs of the astronomy community.
- ***Plan for initial curriculum framework.*** Based on the defined learning objectives and background research, the PD and GA will create an initial curriculum roadmap for the internship program. This framework will include plans for structured learning modules covering relevant areas for UAT curation such as information organization principles, data management, metadata curation, science communication, and data science. The envisioned curriculum will incorporate a combination of independent learning activities such as online bootcamps, mentorship opportunities, and applied curation tasks. Additionally, the team will explore options for assessment, such as project-based evaluations or portfolio submissions, to measure student progress and skill development throughout their internship experience. WGUAT collaborators will review the proposed curriculum to ensure that it effectively prepares students for real-world challenges. FSU iSchool faculty will also be engaged in this process.
- ***Stakeholder interviews and AAS Winter Meeting.*** To further refine the internship program and gather insights from the astronomy community, the PD and recruited GA will attend the AAS Winter Meeting in

January 2026. This conference is an important convening for the astronomy community and provides an opportunity to engage with astronomers, data curators, publishers, and information science professionals, facilitating discussions on the evolving needs of astronomy research infrastructures. The PD-GA team will conduct in-person structured interviews with WGUAT members and other stakeholders in attendance (data managers, publishers) to seek feedback on the UAT's curation priorities, potential mentorship partnerships, and strategies for integrating LIS students into the broader scholarly communication ecosystem. In person interviews will be scheduled at the convenience of interviewees, aiming for at least five stakeholder interviews at the conference. Key takeaways from this meeting and stakeholder interviews will directly inform the final design of the internship structure and help establish connections for future student engagement opportunities.

### III: Fieldwork and community engagement.

- **Continue stakeholder interviews.** To ensure that the internship program aligns with the needs of both the LIS and astronomy communities, the PD and GA will continue conducting virtual structured interviews with key stakeholders identified through pilot internships, WGUAT and iSchool faculty recommendations, and snowballing (n=10–20 total interviews) These may include astronomers, publishers, data curators, LIS faculty, community managers, and professionals involved in thesaurus management. The interviews will focus on identifying essential skills for thesaurus curation, gaps in current UAT maintenance, and the most effective ways to integrate student contributions. Additionally, we will seek insights into mentorship structures and sustainable support mechanisms to ensure long-term student engagement. Findings from these interviews will inform the final internship design and contribute to a framework for continued stakeholder collaboration.
- **Facilitate networking.** Establishing strong professional networks will be a key focus of this phase. The PD and GA will connect with potential mentors, research institutions, and professional organizations in astronomy and information science. These networking efforts will begin at the LISA and AAS Winter Meeting conferences and continue through virtual collaborations with the broader communities. We will also explore partnerships with UAT stakeholder institutions that could host future internship placements. By establishing connections early in the planning phase, we aim to create a solid foundation for ongoing student engagement and interdisciplinary collaboration. This will likely involve negotiating financial and in-kind buy-in from UAT stakeholders and institutions to support the program into the future.
- **Explore sustainability models.** Building upon the environmental scan conducted in Phase I, the PD and GA will create an evidence map of sustainability models in comparable contexts (such as the IMLS/LB21-funded LEADING program described by Goldman & Mitchell, 2024 and Poole, 2021) to evaluate their potential application for the internship program. Based on this evaluation, we will begin drafting a sustainability plan with recommendations for viable models and strategies.

### IV: Program refinement.

- **Incorporate input into internship structure and curriculum.** Following the environmental scan, stakeholder interviews, networking efforts, and feedback gathered from conferences and discussions with pilot interns, the PD and GA will refine the internship structure and curriculum to align with best practices in LIS education and UAT curation. This phase will involve integrating recommendations on student learning objectives, skill-building activities, and practical curation tasks for the UAT. We will also work to enhance the program's interdisciplinary approach, ensuring that students gain exposure to both LIS methodologies and domain-specific knowledge in astronomy. This iterative process will result in a well-

defined curriculum that supports student learning while addressing the needs of the UAT and how to generalize our findings for use by other knowledge management communities and LIS programs. We will also establish recommendations for the structure and format of recruitment and mentorship materials, such as informational guides, application procedures, and expected learning outcomes. Additionally, we will further establish mentorship guidelines for astronomers and LIS professionals who will support student learning, providing clear expectations and best practices for guiding interns through UAT curation tasks, while considering transferability and potential adoption by other institutions and knowledge organization contexts.

## V: Finalize program structure & deliverables.

- **Finalize internship structure and curriculum.** In this final phase, we will complete the design of the internship program and curriculum plans, incorporating all feedback from stakeholders, collaborators, and community engagement activities. We anticipate that other LIS training programs will be able to refer to and potentially use these materials. The final internship framework will outline the roles of students, mentors, and institutional partners, ensuring that future cohorts receive high-quality, hands-on training.
- **Summary report.** A summary report will document the outcomes of the planning project, including key findings from the environmental scan, stakeholder interviews, and fieldwork activities. This report will detail the finalized internship model, lessons learned, and recommendations for future implementation. It will serve as a reference for potential funders, institutional partners, and LIS programs looking to integrate similar experiential learning opportunities into their curricula. We will also share the report with the broader astronomy and LIS communities to encourage ongoing collaboration and feedback.
- **Sustainability plan.** To ensure the long-term success of the internship program, the summary report will include a sustainability plan based on knowledge acquired throughout the project, outlining strategies for securing ongoing funding, expanding institutional partnerships, and embedding UAT curation as a recurring educational opportunity. This plan will include potential sources of financial and in-kind support, pathways for broader student engagement beyond FSU, and recommendations for institutionalizing the program within LIS education. The sustainability plan will also propose governance structures for maintaining the UAT with continued student contributions, ultimately working toward the establishment of a long-term training center or professional development program dedicated to UAT curation.
- **Dissemination.** In addition to disseminating the above-described materials, we will communicate project outcomes through conference presentations and publications. Specifically, the PD will attend the Association for Library and Information Science Education (ALISE) conference in October 2026 to present the project and outcomes to the LIS education community. Furthermore, where possible and in consideration of human subjects research protocols, we will make project data (background research, reports) available through platforms such as institutional repositories, per the Digital Products Plan.
- **Evaluation.** We will track the progress and success of the project through regular meetings and monitoring of our key results and deliverables (see Performance Measurement Plan and Schedule of Completion for further details). Specific coordination efforts will include regular PD-GA and WGUAT meetings to plan data activities, evaluate results, and write reports and manuscripts. The PD will manage and execute the evaluation process and coordinate activities with partners.

Table 1: Summary of work plan and schedule

| <b>Phase 1: Project Initiation &amp; Needs Assessment</b>     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Month 1–3                                                     | <ul style="list-style-type: none"> <li>• Conduct initial project meetings with WGUAT collaborators, especially those at AAS and ADS.</li> <li>• Begin environmental scan of existing internship/fellowship programs in similar areas and topics.</li> <li>• PD to attend LISA conference, present the project, and gather feedback.</li> </ul>                                                                                                                                                                                                                                                                                                                                                             |
| <b>Phase 2: Scope the Internship Program</b>                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Month 4–8                                                     | <ul style="list-style-type: none"> <li>• Appoint and onboard a graduate student assistant.</li> <li>• Collaborate with the WGUAT, including AAS and ADS staff, to outline core objectives and learning outcomes for the student internship program.</li> <li>• Develop an initial curriculum framework for the program, including modules for training in thesaurus curation, data management, and research infrastructures.</li> <li>• PD and GA to attend the AAS Winter Meeting in January 2026 to meet with collaborators in person, present the framework, gather additional insights on the integration of thesaurus curation into education, and conduct initial stakeholder interviews.</li> </ul> |
| <b>Phase 3: Fieldwork &amp; Community Engagement</b>          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Month 9–12                                                    | <ul style="list-style-type: none"> <li>• Continue conducting virtual stakeholder interviews (scientists, data curators, community managers, and academic professionals) to further gather insights into project needs.</li> <li>• Facilitate networking with potential mentors and collaborators for the internship program.</li> <li>• Create an evidence map of sustainability models.</li> </ul>                                                                                                                                                                                                                                                                                                        |
| <b>Phase 4: Program Refinement</b>                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Month 13–16                                                   | <ul style="list-style-type: none"> <li>• PD and GA meet virtually with WGUAT collaborators, including AAS and ADS staff, to refine the internship structure based on input.</li> <li>• Collaboratively review the proposed internship and curriculum framework and adjust as needed to ensure relevance and scalability.</li> <li>• Develop plans for student recruitment and mentor engagement.</li> </ul>                                                                                                                                                                                                                                                                                                |
| <b>Phase 5: Finalize Program Structure &amp; Deliverables</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Month 17–18                                                   | <ul style="list-style-type: none"> <li>• Finalize program curriculum and detailed structure (modules, mentorship, recruitment strategy, assessment tools).</li> <li>• Complete a comprehensive report summarizing the planning process and findings.</li> <li>• Develop a detailed plan for sustainability.</li> <li>• Continue disseminating results (PD attends ALISE conference).</li> <li>• Evaluate success.</li> </ul>                                                                                                                                                                                                                                                                               |

## 4. Project Results

The outcomes of this Planning Grant project will include a detailed strategy for the internship program, partnerships with institutions and mentors, and a set of recommendations for systematically integrating the UAT curation process into iSchool education. The resulting documentation will include generic components that other communities and institutions can use directly and more UAT-specific components for which we will provide guidance on adapting to other knowledge management communities. Ultimately, this project will contribute to sustaining the UAT as a valuable tool while providing students with a transformative learning experience that prepares them for careers at the intersection of data management, scientific research, and disciplinary community engagement. It will also

inspire the deeper integration of experiential learning into LIS professional development programs. Specific deliverables include:

- **Environmental scan.** A literature review, online searching and evidence mapping will be conducted to explore existing internship and fellowship programs in LIS, astronomy, and related fields, and to catalog their frameworks for education and sustainability.
- **Internship structure and curricular plan.** Feedback from stakeholder interviews, pilot internships, collaborator meetings, and community engagement activities will be synthesized into an internship framework that will outline the roles of stakeholders, training plans, and curriculum recommendations.
- **Summary report and sustainability plan.** A summary report will document the outcomes of the project, including the finalized internship model and recommendations for implementation, as a reference for potential funders, institutional partners, and LIS programs. The summary report will include a sustainability plan outlining strategies for governance, securing ongoing funding, expanding institutional partnerships, and embedding UAT curation into LIS education to ensure the long-term future of the UAT through collaborative curation.

The primary intellectual merit of the project is to serve as 1) a vehicle for training a robust LIS workforce through FSU; 2) a solution for UAT curation needs; and 3) a transferable model for other iSchools and scientific domains seeking to provide hands-on, interdisciplinary learning opportunities. Educational activities also carry implications for knowledge dissemination. By educating both students and stakeholders about the importance of best practices in data curation, the project further addresses considerations related to data sharing and data integrity. These considerations are paramount in the era of big data and AI, where maintaining the quality and credibility of increasingly larger and more numerous datasets is crucial for scientific rigor. The UAT's emphasis on conscientious data organization and management practices adds an important dimension to the project's intellectual merit.

## 5. References

- AAS (n.d.). Working group on the Unified Astronomy Thesaurus. Retrieved from: <https://aas.org/comms/working-group-unified-astronomy-thesaurus-wguat>
- Accomazzi, A., Bouquin, D., D'Abrusco, R., Derriere, S., Frey, K., Kern, B., ... Williams, P. K. G. (2022). Building the UAT as a Community. *Bulletin of the AAS*, 54(2). <https://doi.org/10.3847/25c2cfec.c71aa342>
- Accomazzi, A., Gray, N., Erdmann, C., Biemesderfer, C., Frey, K., & Soles, J. (2014). The Unified Astronomy Thesaurus. *arXiv preprint arXiv:1403.6656*.
- AIP (2024). *Prominent astrophysics library is set to close*. Retrieved from: <https://pubs.aip.org/physicstoday/online/43162/Prominent-astrophysics-library-is-set-to-close>
- Buchanan, S. A., Alsaïd, M., Harris, R., Hawamdeh, S., Herr, J., Hirschy, J., ... & Stahlman, G. (2023). Translating practice to positively transform our information workforce: Archival/Preservation Education SIG session. In *Proceedings of the ALISE Annual Conference, 2023*.
- Frey, K., & Accomazzi, A. (2018). The Unified Astronomy Thesaurus: Semantic metadata for astronomy and astrophysics. *The Astrophysical Journal Supplement Series*, 236(1), 24.

- Goldman, C., & Mitchell, E. T. (2024). Assessing the Value of a Fellowship Program and Community of Practice at the Intersection of Data Science and Library and Information Science. *portal: Libraries and the Academy*, 24(4), 807-846.
- Gross, T., Taylor, A. G., & Joudrey, D. N. (2015). Still a lot to lose: the role of controlled vocabulary in keyword searching. *Cataloging & classification quarterly*, 53(1), 1-39.
- Heidorn, P. B., Stahlman, G. R., & Steffen, J. (2018). Astrolabe: curating, linking, and computing astronomy's dark data. *The Astrophysical Journal Supplement Series*, 236(1), 3.
- Joudrey, D. N., & Taylor, A. G. (2017). *The organization of information*. Bloomsbury Publishing USA.
- Marchionini, G. (2024). Information and library professionals' roles and responsibilities in an AI-augmented world. *Journal of the Association for Information Science and Technology*, 75(8), 865-868.
- Marchionini, G. (2016). Information science roles in the emerging field of data science. *Journal of Data and Information Science*, 1(2), 1-6.
- Miles, A., & Pérez-Agüera, J. R. (2007). Skos: Simple knowledge organisation for the web. *Cataloging & Classification Quarterly*, 43(3-4), 69-83.
- Palmer, C. L., Renear, A., Dempsey, L., Hall, T. D., Marchionini, G., Subramaniam, M., & Coward, C. (2024). Provocations on iSchools and Librarianship: New Priorities for LIS Forward. *Proceedings of the Association for Information Science and Technology*, 61(1), 807-811.
- Poole, A. H. (2021). Leading the way: A new model for data science education. *Proceedings of the Association for Information Science and Technology*, 58(1), 525-531.
- Stahlman, G. R. (2022a). From nostalgia to knowledge: Considering the personal dimensions of data lifecycles. *Journal of the Association for Information Science and Technology*, 73(12), 1692-1705.
- Stahlman, G. R. (2022b). Illuminating the Characteristics and Accessibility of Data Behind Papers. *Bulletin of the AAS*, 54(2). <https://doi.org/10.3847/25c2cfef.dd334a0a>
- UAT (n.d.). *Unified Astronomy Thesaurus*. Retrieved from: <https://astrothesaurus.org/>

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**Project Title:** Training an LIS workforce of the future through curation of the Unified Astronomy Thesaurus

## Schedule of Completion

| Timeline of Activities and Outcomes                                  | Year 1-1.5 |    |    |    |    |    |
|----------------------------------------------------------------------|------------|----|----|----|----|----|
|                                                                      | Q1         | Q2 | Q3 | Q4 | Q5 | Q6 |
| <b><i>Phase I: Project initiation &amp; needs assessment</i></b>     |            |    |    |    |    |    |
| • Establish partnerships (and meet with WGUAT monthly)               | X          | X  | X  | X  | X  | X  |
| • Recruit unpaid interns (x2)                                        | X          |    |    | X  |    |    |
| • Environmental scan of other internship programs                    | X          | X  | X  | X  |    |    |
| • Assess the current state of the UAT and identify gaps              | X          | X  | X  | X  |    |    |
| • Attend LISA conference for background and outreach                 |            | X  |    |    |    |    |
| <b><i>Phase II: Scope the internship program</i></b>                 |            |    |    |    |    |    |
| • Recruit and appoint RA in Spring semester 2026                     |            |    | X  |    |    |    |
| • Outline learning objectives                                        |            |    |    | X  | X  | X  |
| • Plan curriculum framework                                          |            |    |    | X  | X  | X  |
| • Begin stakeholder interviews at AAS Winter Meeting                 |            |    | X  |    |    |    |
| <b><i>Phase III: Fieldwork and community engagement</i></b>          |            |    |    |    |    |    |
| • Continue stakeholder interviews                                    |            |    |    | X  |    |    |
| • Facilitate mentorship network                                      |            |    |    | X  | X  | X  |
| • Identify potential financial models for sustainability             |            |    |    | X  | X  | X  |
| <b><i>Phase IV: Program refinement</i></b>                           |            |    |    |    |    |    |
| • Incorporate background research into internship structure          |            |    |    |    | X  | X  |
| • Firm up recruitment and mentorship strategies                      |            |    |    |    | X  | X  |
| <b><i>Phase V: Finalize program structure &amp; deliverables</i></b> |            |    |    |    |    |    |
| • Finalize internship structure and curricular plan                  |            |    |    |    | X  | X  |
| • Prepare summary report and sustainability plan                     |            |    |    |    |    | X  |
| • Attend ALISE conference for dissemination                          |            |    |    |    |    | X  |
| • Evaluate project success                                           |            |    |    |    |    | X  |