

# Growing a Mutually-Beneficial Digital Curation Internship Program that is Sustainable and Low Cost

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## Abstract

*Digital curation is a fast-growing subfield of librarianship and archival management. The number of calls for digital curation positions that often require advanced knowledge of multimedia digitization practices, metadata standards, digital asset management systems and project management strategies has increased significantly over the past few years. Yet, Library and Information Science (LIS) programs rarely prepare students adequately in these disciplines. Meanwhile, digital departments are expected to sustain and grow digital collections in the face of system-wide budget reductions. Many departments are operating with fewer staff and resources than ever before. The Digital Services Department at the University of Houston Libraries (UHDS) is one such department. In response, the UHDS Internship Program was designed to provide a comprehensive digital curation experience for library school students while providing the UHDS Department with a steady, low-cost base of intern workers. This paper outlines in detail the steps taken to establish a mutually-beneficial digital curation internship program including motivations behind the decisions, results and lessons learned.*

## Introduction

Digital curation is a fast-growing subfield of librarianship and archival management. The number of calls for digital curation positions that often require advanced knowledge of multimedia digitization practices, metadata standards, digital asset management systems and project management strategies had increased significantly over the past few years. Yet, Library and Information Science (LIS) programs rarely prepare students adequately in these disciplines. Meanwhile, digital departments are expected to sustain and grow digital collections in the face of system-wide budget reductions. Many departments are operating with fewer staff and resources than ever before. The Digital Services Department at the University of Houston Libraries (UHDS) is one such department.

The UHDS Department is a small unit within the University of Houston, M.D. Anderson Library. Established in April of 2009 with one librarian, no digital asset management system, no content, and no underlying mission, the unit picked up speed quickly. By the two-year mark in April 2011 the department will have two librarians, two staff members and several student and intern workers; the department will use CONTENTdm as the digital asset management system and will hold collections containing over 15,000 image, video, and audio files; the department will operate under a well-defined mission to provide content via the digital library and preserve digital materials according to standards in the field; and the department will support an institutional repository that ingests and displays electronic thesis and dissertations and

scholarly communication materials. As the UHDS Department grew it became apparent that without more staff, student workers, and interns the flow of digitization, publication, and preservation would be greatly curtailed. Unfortunately, recent budget cuts prevented hiring more full-time staff and recent changes to the College Work Study program administered by the United States Government made hiring student workers more challenging. One solution to the problems above was to establish a comprehensive library school internship program in which students could gain hands-on experience in the full digital collection lifecycle while contributing to UHDS Department tasks.

The UHDS Internship Program (UHDSIP) began modestly with one student from the University of North Texas College of Library and Information Science (UNT). The first student intern came onboard informally in spring of 2010. As a full-time employee at another institution this intern could only work in a remote capacity. She provided valuable service to the UHDS department and presented a unique opportunity to experiment with the idea of hosting remote interns on a regular basis. She gained experience researching and composing metadata descriptions for the University of Houston People digital collection [1]. The second student hailed from the Texas Women's University (TWU) and began work summer of 2010. She preferred to work in the UHDS office to complete her internship and she provided staff an opportunity to experiment with hosting on-site interns. Her internship allowed the UHDS team to pilot a highly structured program that would impart to future interns a well-rounded understanding of digital curation. As the program grew, the precedents set by the first remote internship experience and the first office rotation pilot remained the backbones of the UHDSIP. The focus of this paper will be the office rotation UHDSIP.

## Internship Program

In order for such an intern program to be manageable for the small UHDS staff, the program needed to consistently attract a competitive pool of applicants and be administered using minimal staff time. The first goal was to offer a robust program that provides comprehensive hands-on training in order to attract library school students interested in careers in digital curation each semester. The second goal was to harness technology tools to create a low cost online management system that would allow UHDS staff to manage large numbers of interns efficiently and effectively. This paper outlines in detail the steps taken to establish a mutually-beneficial digital curation internship program including motivations behind the decisions, results and lessons learned.

### ***Rotational Units: The Full Digital Curation Experience***

The most efficient way to design an internship program would have been to train students in only one aspect of digital collection creation so that the student might contribute as much work as possible to one specific project over the course of the semester. The UHDS Department would then glean the most possible student work from the least possible staff time spent training students. However, the desire to establish an internship program that would give LIS students hands-on experience creating digital collections, thereby training future digital curators outweighed the extra staff time needed to train students on more than one workflow.

UHDS staff designed a rotational internship program in which students receive hands-on training and projects in four workflows within the department. The rotation structure mimics the lifecycle of digital collection creation as well as the unit structure within the department. Prior to the first unit rotation, the intern is given an overview of the department units and the internship experience. The first unit rotation is digital reformatting. In this unit the student receives training on one or more of the following: a flatbed scanner, an orbital scanner or a digital single-lens reflex camera. Ideally at this stage of the internship experience the student is assigned a project that they will carry through all of the steps of the workflow. The student is then allotted a period of time in which to digitally reformat their assigned materials. During this stage, the intern also collects what preliminary metadata can be captured from the materials themselves. The intern is also given detailed training on file naming for preservation purposes and general collection creation strategies. The intern also receives training on upload of digital items to CONTENTdm.

The second unit rotation is metadata. For the metadata rotation, the student is trained in principles of Dublin Core metadata and creates metadata for the project materials they were assigned. The student works in CONTENTdm to add appropriate metadata using national and local metadata standards and controlled vocabularies while conforming to the expectations of the collection owner—usually a stakeholder outside of the UHDS Department.

The final unit rotation is the project management stage of the internship program. Throughout the project management rotation, the student researches a project that has already been completed in the UHDS Department and calculates the total resources devoted to the project; considers the challenges of the project and how these might inform workflow revisions and prepares a formal report to present to UHDS staff as the culmination of the internship experience. Frequently, this final report fuels future initiatives and sparks creative solutions to existing problems. This stage is not restricted to the project that was initially assigned to the intern, but can be performed on any number of past projects. The student gathers information about past projects from the UHDS Online Management System (UHDSOMS) which will be discussed in more detail later in this paper.

The fourth workflow in which interns participate is not one of the digital collection creation units within the department, but is rather an ongoing departmental task. Promotion of previously and soon-to-be-published digital materials is a procedure that interns participate in throughout all three rotational units of their

internship experience. The UHDS staff created a promotional workflow that includes publishing content to a departmental blog, Facebook account, Twitter account and Flickr account. During each shift, the student is responsible for creating short articles highlighting either materials currently available in the digital library or collections that will be published in the future. Allowing the intern to participate in collection promotion connects the student with existing and in-progress collections and engages them in online marketing activities—another aspect of digital curation that is not well-represented in LIS curriculum. Likewise, UHDS marketing campaigns are strengthened by a consistent flow of new voices and fresh perspectives.

The four workflows described above give the intern experience in every step of digital collection creation. The intern learns imaging and metadata standards and practices in the first two rotations; the intern has the opportunity to take on some of the responsibilities of department head during their project management rotation; and the intern learns the importance of ongoing marketing strategies to engage the public through their promotional responsibilities over the course of the semester. Participation in the full lifecycle of digital collection creation not only provides the student with diverse experience that prepares them for a career in digital curation, but also gives them a global view of how each of the tasks associated with collection creation fit together.

Finally, interns have the opportunity to gain an understanding of librarianship in the academic setting more generally through staff meetings, library-wide events and conference presentations and papers. Interns are respected members of the highly collaborative UHDS team and as such, they are included in all staff meetings that fall within their work hours or and those they elect to attend on their own time. At staff meetings they are encouraged to share ideas, volunteer for projects or comment on procedures. Second, when UHDS staff attend library-wide functions interns are invited to join. One particularly enriching activity is the open forum segment of the UH librarian interview process. UHDSIP interns are encouraged to attend these sessions in order to glimpse the academic interview and hiring processes at UH. Attending open forums is especially useful for interns interested in pursuing academic librarianship. Finally, many students also leave the UHDSIP with projects appropriate for presentations at professional conferences or publication. In the past, UHDS staff has collaborated with interns to present and publish case studies of innovative projects conducted in the department.

### ***Scheduling: Making Rotation Manageable***

With limited workspace in the department and staff time at a premium, scheduling the rotational structure of the internships is an important step in ensuring that the experience is smooth and manageable for everyone involved. UHDS staff are responsible for offering interns enough hours to satisfy practicum program requirements for their respective schools, for ensuring that the appropriate computer workstations and digital reformatting equipment are available when interns shifts are scheduled and for arranging unit rotation training with staff throughout the semester. Each intern student effectively has two schedules—a weekly schedule and a semester schedule. UHDS staff encourage students to establish a regular schedule of shifts each week so that their

hours are spread evenly over the semester and so that staff can expect the student at the same time each week. When intern weekly schedules are created at the beginning of the semester, shifts are first-come, first-served and overlap is limited to the number of work stations and access to specialized equipment.

Semester schedules can sometimes be used to alleviate some of the conflicts that arise when compiling the weekly schedules. While the ideal unit rotation for every intern would begin with digital reformatting, move to metadata and end with project management, staggering intern rotational schedules allows UHDS staff to accept more interns for a given semester and distribute supervisory responsibilities. For example, if three interns are accepted for a semester, unit rotations may be staggered as shown in the figure below.

**Example Staggered Unit Schedule**

	Student A	Student B	Student C
First Rotation	Reformatting	Metadata	Management
Second Rotation	Metadata	Management	Reformatting
Third Rotation	Management	Reformatting	Metadata

This type of staggering means that only one student needs a work station in each of the areas at any given time. This system also distributes supervisory duties more evenly so that one staff member is not responsible for three students at one time. Conversely, given a smaller group of interns—three, for instance—there are times when multiple workstations are available and training and supervising more than one student at a time is more efficient for staff. In these cases, UHDS staff attempt to create semester schedules that allow students to rotate through the units in a cohort. Doing so can conserve staff time and cultivates a sense of team among the interns.

**Recruitment: Relationships & Marketing**

It is probably clear at this point that while the UHDS intern workforce is unpaid and the technology fueling the system itself is free, administration of the UHDSIP constitutes a significant investment of staff time. In order for such a program to contribute significantly to departmental tasks, a competitive pool of applicants is needed every semester. For both time management and workforce planning purposes, UHDS staff must be able to count on a certain number of interns on the team each semester. There were three ways in which UHDS staff worked to consistently recruit a quality intern workforce.

First, UHDS staff built strong relationships with area LIS programs. The Houston, Texas area boasts several universities offering LIS education in the immediate area. The TWU library school grants Master’s of Library Science degrees either on campus or through a distance program. Another university in the state of Texas that administers library science distance education is UNT in Denton, Texas, which also offers on campus and distance programs. The UNT program also supports a large Houston area cohort. Establishing relationships with these two schools was of primary importance to the UHDS Department. UHDS staff began by contacting staff members at each institution who were responsible for student listservs. Prior to each semester, UHDS

staff sent a call for student interns to both listservs soliciting applicants. Through satisfied previous interns, the UHDSIP has also gained a reputation with UNT and TWU faculty and practicum advisors for being a rigorous, worthwhile program and many of our intern applicants are referred by these colleagues. Second, UHDS staff used our promotional outlets mentioned above to promote the program on social media sites. UHDS Departmental social media accounts as well as UNT student social media accounts were used to market the program and share information about application deadlines. Finally, UHDS staff created a website to serve as a home base for all information for prospective applicants [2]. Initially, applicants who had been attracted by listserv messages were lost because the specifics of the program were not spelled out in enough detail or because the call was not posted early enough to align with practicum timelines. Working with colleagues from UNT and TWU helped UHDS staff market the program in a way that complimented practicum guidelines and deadlines. Hosting a website about the program allowed prospective interns uninterrupted access to information about the UHDSIP in greater detail than was practical to outline in the listserv calls.

**Administration: Online Collaborative Management**

Once interns were attracted to the program, UHDS staff needed a way to efficiently manage a large workforce of students. The UHDSOMS mentioned above allowed UHDS staff to monitor student progress through rotational units, manage students collaboratively within the department and streamline supervisor responsibilities so that a large number of interns could be comfortably hosted. The UHDSOMS is a suite of free online software—Google Calendar, Google Docs and Blogger—used within the department by all staff, students and interns to track managerial interactions and project status online.

Google Calendar and Google Docs are used to administer the weekly and semester schedules respectively. At the beginning of each semester, each intern receives training on Google Calendar. Once the student has decided on a weekly schedule, the student is responsible for entering recurring events in Google Calendar and updating their schedule whenever there is a change. Interns are still expected to let a supervisor know when a change will occur. Requiring the student to manage their weekly schedule not only shifts that burden from the supervisor, but also makes the student accountable for the number of hours per week they work toward the fulfillment of their practicum requirement.

Semester schedules for students are input into a Google Doc that is shared with all staff and students. Exact dates for when the student switches units are set out at the beginning of the semester—though they can be shifted when needed due to staff travel or other scheduling conflicts. Information about the number of hours required for the practicum experience and the number of hours the student has committed to work over the semester is also recorded in the shared Google Doc. Semester schedules are also entered into Google Calendar as daily events so that a glance at the Google Calendar tells supervisors in what unit a student is working and at what time their shift is for any given day.

Structured rotational unit schedules in a shared Google Doc and calendar allow UHDS staff to collaboratively manage students. Each of the rotational units mentioned above—digital reformatting,

metadata and project management—is represented by one member of UHDS full-time staff. This means that as the students rotate through the UHDSIP they also rotate supervisors. This model distributes the managerial load so that managing the intern workforce does not fall to only one staff member. It also gives the intern the opportunity to receive training from a diverse group. Structuring the schedules in advance of the semester allows for smooth transitions from one unit—and one supervisor—to the next.

While Google Calendar and Google Docs made administration of a rotational internship program possible, the use of a departmental blog streamlined UHDS staff management responsibilities so that a large number of student interns could be effectively managed by a small number of staff. UHDS staff created a home base using Blogger to track progress of collections as they move through the units of the department. Originally the blog was created for use with College Work Study Students, but as the intern workforce grew, the blog became an integral part of the internship program as well.

The UHDSOMS Blog is used to deliver student assignments and track student status reports. For each shift a student works, UHDS staff is expected to create an assignment post outlining what the student should work on for the day. If the student is working in the digital reformatting unit, digital reformatting unit staff is responsible for assignment posts. When the student advances to the next to unit rotation, then another staff member is responsible for assignment posts. One advantage of creating assignment posts for students via the blog is that a supervisor does not need to be present for a student to begin a shift. With a small staff, meetings and travel often interfere with supervisory responsibilities. Because Blogger allows posts to be created in advance, a supervisor has the option of creating posts for a conference week or a full day of meetings so that interns always arrive for a shift knowing what is expected of them that day. The other advantage of creating posts in advance is that student supervision can be transformed from a daily or hourly task to a weekly task. Rather than discussing assignments with students each day as they come in, a supervisor can create blog posts for a full week in as little as fifteen minutes and then concentrate on other responsibilities for the remainder of the week. Responding to questions via the UHDSOMS Blog is equally freeing. Students are encouraged to post minor questions that do not halt the flow of work in their status blog posts at the end of their shifts. Doing so, allows managers to respond to major questions when they occur and leave minor questions until it is convenient to respond. The ability to perform managerial duties in advance and when convenient is a powerful streamlining technique provided by the UHDSOMS Blog.

The second component of UHDSOMS Blog interaction is the status post that is created by a student after each shift. Students are expected to stop work five minutes before the end of their shift to compose a brief summary of what was accomplished that day and to list any minor issues that arose. In addition to keeping all UHDS staff informed of the status of the project, creating status posts also creates a record of project progress that can be retroactively mined during the project management portion of the UHDSIP experience. The tagging feature in Blogger groups all assignment and status posts for a particular project while Google

Calendar records the number of hours spent working during each shift. Interns can review status posts and shift information captured in the UHDSOMS to draw conclusions about the resources devoted to a project during creation or to aggregate lessons learned from a particular project.

## Conclusion & Future Directions

To date, developing a comprehensive intern program has rewarded all those involved with anticipated and unanticipated results. LIS interns receive complete hands-on training in all aspects of digital collection curation. Interns leave the program with first-hand experience working through the digital collection lifecycle at every stage—collection inception, image choice, digital reformatting, file management, image treatment, metadata creation, publication in a Digital Asset Management System and marketing. They are valued members of a highly collaborative team in which their suggestions are valued. Many students also leave the program with projects about which they are able to write and present at professional conferences.

The UHDS Department benefits from the UHDSIP by maximizing the unpaid members of our team while maintaining a manageable supervisory workload. Departmental tasks are completed more rapidly and more effectively than would otherwise be possible with such a small full-time staff. The department also benefits from the innovative and refreshing ideas that emerge as future librarians enter and leave the department each semester. Finally, UHDS staff gets the opportunity to mentor students in digital collection creation, curation and promotion—developing lasting professional relationships with emerging leaders in the field. The UHDSIP has proved so beneficial that other departments within the UH Libraries are considering ways to implement similar programs.

Because it is relatively new, the UHDSIP is a constantly evolving project in the department. Future directions of the program come from three sources: intern assessment, staff input and the general direction of departmental initiatives. An underlying assumption of the UHDSIP is that LIS interns bring to the department fresh perspectives and ideas. As such, one important component of the program is assessment. At the end of each semester, a survey is circulated that encourages interns to give anonymous advice on how the internship program and departmental task workflows could be improved in the future. Survey responses have been incorporated into the existing internship program. For instance, having one assigned project that the intern follows through the first two rotational units was a suggestion from a former intern. Likewise, departmental workflows have been improved as a result of the assessment portion of the internship process. One intern suggested the UHDS staff also be expected to report time worked directly on projects on the UHDSOMS blog so that the blog could represent the most complete view of the project and provide more robust data for the project management unit of the internship experience.

Due to the fact that the UHDS Department manages the UHDSIP collaboratively, all staff have contributed to advancing the project. Administering a project management unit as part of the rotation system was designed and implemented by staff member suggestion at the end of the second semester of rotational internships. Willingness to experiment and assess new directions

on the fly has proved instrumental in the evolution of the UHDSIP Program.

Finally, the department in general shifts over time and both the overall structure of the UHDSIP program and specific intern projects have likewise evolved. As the UHDS collection goals expand to include audio and visual materials, we are able to offer internship experiences in which the digital reformatting unit goes beyond image technology education. The UHDS Department also has a growing emphasis in digital storytelling and is currently working to identify ways in which interns could contribute to these emerging initiatives. Whatever the future directions of the department, UHDS staff remain committed to advancing this mutually-beneficial, sustainable and low cost internship program.

## References

- [1] University of Houston People Collection in the UH Digital Library, [http://digital.lib.uh.edu/cdm4/about\\_collection.php?CISOROOT=/p15195coll6](http://digital.lib.uh.edu/cdm4/about_collection.php?CISOROOT=/p15195coll6)

- [2] Digital Library Internship at University of Houston, <http://info.lib.uh.edu/about/internships/digital-services-internship-program>

## Author Biography

*R. Nicole Westbrook earned an MA in Art History from Washington University in Saint Louis (2007) and an MS in Library and Information Science from the University of North Texas (2010). She currently works as part of the Digital Services team at the University of Houston. Her recent work focuses on digital collection best practices and online management strategies. She remains active with the ALA Spectrum Scholarship program and serves on several local and national library committees.*

*Michele Reilly received her MLS from Indiana University (2005). She works for the University of Houston Libraries as the Head of Digital Services. She spearheaded the digital initiatives at the library. She serves as the chair of the Texas Heritage Online board and the Texas Digital Library PresNet steering committee. Her work has focused on developing a comprehensive digital library and the preservation of those digital materials.*