



## NATIONAL ENDOWMENT FOR THE HUMANITIES

DIVISION OF EDUCATION PROGRAMS

### **Narrative Section of a Successful Application**

The attached document contains the grant narrative and selected portions of a previously-funded grant application. It is not intended to serve as a model, but to give you a sense of how a successful application may be crafted. Every successful application is different, and each applicant is urged to prepare a proposal that reflects its unique project and aspirations. Prospective applicants should consult the current guidelines, which reflect the most recent information and instructions, at <https://www.neh.gov/grants/education/humanities-connections>

Applicants are also strongly encouraged to consult with the NEH Division of Education Programs staff well before a grant deadline.

Note: The attachment only contains the grant narrative and selected portions, not the entire funded application. In addition, certain portions may have been redacted to protect the privacy interests of an individual and/or to protect confidential commercial and financial information and/or to protect copyrighted materials.

Project Title: *Designing a Humanistic Computing Curriculum*

Institution: University of Tennessee, Knoxville

Project Director: Amy Elias, Hilary Havens, Amir Sadovnik

Grant Program: Humanities Connections Planning Grants

## **Designing a “Humanistic Computing” Curriculum at the University of Tennessee, Knoxville**

While the language used to describe machine learning in Artificial Intelligence fields today seems to be increasingly similar to that describing human action, there actually has been a growing gap between the humanities and the data sciences concerning shared values, institutional research, and curricular planning. Our Connections project addresses this gap at the University of Tennessee, Knoxville. We intend to develop a set of interdisciplinary undergraduate courses in “humanistic computing” that brings together computing science skills; humanities subjects, pedagogy, and habits of inquiry; and experiential learning opportunities in the East Tennessee region. Our goal is to connect and build bridges, with new digital humanities courses, between students and scholars from the humanities and those from computer and computational science.

### **1. Intellectual Rationale**

This planning project is timely and vital to education at the University of Tennessee at Knoxville (UTK). Our campus of almost 30,000 students has developed very few undergraduate courses introducing humanities students to methods of research based in computer modelling (courses that would be included in the general category “digital humanities”) that are common at other Carnegie I universities. Humanities and STEM students have little contact as they try to meet the course demands of their own disciplinary majors and minors, and there are few opportunities for their faculty to teach or do research together. This is surprising given that UTK, the state’s flagship university, has deep institutional ties to Oak Ridge National Laboratory ([ORNL](#)), the national Oak Ridge Institute for Science and Education ([ORISE](#)), and other

organizations that generate some of the most advanced computing research on the planet. Managed by UT-Battelle LLC and located on a 30,000-acre campus near Knoxville, Oak Ridge National Laboratory has a staff of more than 5,100 people (including scientists and engineers in more than 100 disciplines), hosts more than 3000 guest researchers annually, and has a budget of more than two billion dollars. While people may still associate Oak Ridge with the Manhattan Project, it in fact separated after WWII from the [Y-12 facility](#), which is dedicated to nuclear security and production. Under the umbrella of the Department of Energy, ORNL is a multiprogram research laboratory with significant investment in artificial intelligence and quantum initiatives, cyber security, environmentally sustainable technologies, and manufacturing materials. It houses the fastest supercomputer in the US, the exascale computer “Frontier.” In addition to hosting joint faculty, it has multiple partnerships on the UT campus. For example, with offices on both the UTK and ORNL campuses, the [Bredesen Center for Interdisciplinary Research and Graduate Education](#) offers coursework that joins ORNL and UT teams focused on energy science (including renewable energies and nuclear energy) and data sciences (health and biological sciences, transportation, national security, and other areas), complemented by studies in policy, entrepreneurship, and economics. The Bredesen Center is partnered with the Joint Institute for Computational Sciences ([JICS](#)), another collaboration between ORNL and UTK that supports both fundamental and applied research and teaching programs in computational sciences, computational mathematics, computer science, high-performance computing, storage and networking, and cyber security. JICS was established to help researchers needing high-performance computing power; it provides resources and experienced staff that can assist UTK students with their computational tasks. Partnerships between ORNL, the Bredesen Center, and UTK are creating a new technological corridor in East Tennessee. With a world-class

humanities faculty, UTK thus has the potential to become one of the top schools in digital humanities education. But this is currently not being effectively pursued, and UTK needs curricular innovations to create student interest, enhance student job-training opportunities, and attract institutional, federal, and entrepreneurial support for digital humanities education.

In response, the UT Humanities Center (<https://uthumanitiesctr.utk.edu>) is now investing in digital humanities education and research through its nine affiliated arts and humanities departments. Since 2018, it has created programmatic support for visiting speakers, faculty research seminars, a community of scholars, and a faculty residency fellowship in digital humanities, and is now working to fund a media production studio. Two of the PIs on this grant application, Amy Elias and Hilary Havens, have submitted a proposal for a Graduate Certificate in Digital Humanities to the UTK College of Arts and Sciences that, pending approval, will take effect by August 2021. As Center director, Elias has made it a priority to establish connections with ORNL, JICS, and UTK computer science and engineering faculty and is modelling collaborations between computing sciences and the humanities through the Center's public events. In fall 2019, for example, she hosted Michael Witmore, the Director of the Folger Shakespeare Library in Washington, DC, and Vinton Cerf, VP of Google and one of the inventors of the Internet, in a public dialogue and two days of campus events showcasing how digital humanities connected the sciences and the humanities. Witmore and Cerf spent a full day at ORNL that included a meeting with director Thomas Zacharia and a standing-room-only talk on machine learning by Cerf. The following day on the UTK campus included a workshop with faculty at the Innovative Computing Laboratory; a public lecture by Witmore on Shakespeare and text mining; and a public dialogue between Witmore and Cerf about how using computers to analyze literary texts could create new insights even about Shakespeare's 400-year-old plays.

The Witmore/Cerf events were attended by UTK humanities undergraduates who were eager for courses that would incorporate these new methods. It was clear, however, that curiosity flowed in both directions and that UTK computing science students who enthusiastically emailed Elias after the event were questioning how they might benefit from integrated learning opportunities with humanities students. While they receive excellent instruction in computing methods and theory, these students are rarely able to explore the cultural implications of their studies.

We believe, however, that because society today is structured, assisted, and manipulated by digital technologies such as social media platforms, financial trading algorithms, and search engines, our students need to consider technological studies in relation to questions about design, ethics, political justice, and cultural history. Students should think about the social effects of hardware and algorithms that superficially seem to be ethically neutral and culturally benign tools. This reflection could be prompted for students through engaged learning opportunities. Yet while the UTK campus espouses robust institutional support for experiential and community-engaged learning, such support tends to be overseen by offices of student life or dominated by the health and social sciences. UTK offers relatively few experiential learning opportunities directed by its humanities departments, and none that combine computing sciences with humanities interests. One of our aims is to close this gap, particularly when experiential learning opportunities abound in East Tennessee, at once the center of an emerging technology corridor and the home to the state's flagship university. Knoxville is situated next to the Smoky Mountains, has a rich Appalachian history, and is fast becoming a premier arts center in the southeast. The community partnerships we will pursue will enhance students' education by allowing them to implement digital projects in the contexts of real arts organizations and cultural

institutions, reinforcing the dialogue between computer science and humanities perspectives upon which their courses are grounded.

We wish to create “humanities computing” courses that will become part of a new Humanities Computing minor at the University of Tennessee, Knoxville. These courses will be differentiated from more generic “digital humanities” courses, broadly defined as courses that include the use, application, and analysis of digital technologies in traditionally defined humanities courses, such as American Literature or Introduction to Philosophy. Rather than advocating that Philosophy 101 be “gamefied” or that a course in Shakespeare include text-mining projects, we wish to create truly interdisciplinary courses based in questions that demand answers using both computer science and humanities approaches. Open to any UTK student, these courses will be of equal interest to students in both majors. We anticipate that at least 200 students will benefit from these new courses within the first year of implementation.

## **2. Content and Design:**

The project goal is to facilitate the development of a set of new, related courses that bring together computing science skills and subject matter; humanities habits of inquiry and cultural analysis; and experiential learning opportunities in the Knoxville area, with its rich learning assets in the arts and its diverse cultural traditions.

The courses we wish to build during our planning year will form the basis of a new undergraduate IDP (Interdisciplinary Program) minor in “humanities computing” but will be cross-listed in other university programs as well. At the University of Tennessee, the College of Arts and Sciences has created IDPs to combine the resources of several departments to offer interdisciplinary majors and minors; these currently include courses of study such as Asian

Studies, Medieval and Renaissance Studies, and Women, Gender, and Sexuality Studies.

Successful and popular IDPs can become fully functioning departments with the support of university administration. Creating these courses and their corresponding IDP will greatly expand the role of the humanities in the UTK undergraduate curriculum, extending their reach directly into the STEM fields. But the courses will also be cross-listed as stand-alone electives.

Rather than rethinking the methods of one humanities discipline through digital technology--for example, positing how historians might use GIS mapping tools to provide data-based answers to what drives scientific development instead of interviewing scientists themselves about this--we wish to create courses that raise questions about established or emerging practices underlying digital platforms, coding, and data analysis. While certainly modern technology has improved society beyond past imagining, recent books such as Safiya Umoja Noble's *Algorithms of Oppression* (2018), Virginia Eubanks' *Automating Inequality* (2018), Michael Kearns' *The Ethical Algorithm* (2019), or Jaron Lanier's *Ten Arguments for Deleting Your Social Media Accounts Right Now* (2019) also ask readers to consider how seemingly neutral platforms, code, algorithms, and automation practices can embed longstanding racial, gender, and class assumptions of a society or naturalize certain social practices and attitudes, "encoding" them in the technologies that become routine in our lives. We envision new courses that will combine computer programming pedagogy with humanistic questions such as "What assumptions about users are embedded in this procedure?" "In what ways might this technology replicate or reinforce stereotypes?" "How has media changed the way that we interact with others?" or "How are our notions of 'the good,' redefined by technology?" While the planning year would give us time to work out the titles and details of these courses, as well as their execution, we are considering starting points such as these for our cohort to discuss:

- **Humanities Computing: “(Dis)Information Studies”**-- A course focused on text mining, data analysis, and social media and the question, “What is truth?”
- **Humanities Computing: "Decolonizing the Digital"**-- A course focused on GIS mapping and visual modelling in relation to questions about the ethics and politics of mapping, such as “Do maps and models represent the world or train us to visualize it in specific ways?”
- **Humanities Computing: “Systems and Sustainability”** -- A course focused on hardware production and tech transfer in relation to questions such as “What is the impact of technology on social and natural environments?”
- **Humanities Computing: “Machine Relationships”** -- A course focused on natural language processing and spoken dialogue systems in relation to such questions as “How do we define authentic and meaningful human communication?”
- **Humanities Computing: “Designing the Virtual”** -- A course focused on design computing, digital morphogenesis, and computational art in relation to such questions as “What is beauty and how is it meaningful?”
- **Humanities Computing: “Analyzing Our World”** -- A course focused on analytics in social contexts, such as sports analytics, to ask “How do societies and social groups respond to and resist quantification?”

Humanities students often discuss questions such as these about the cultural effects of media without having a firm understanding of how foundational algorithms work. Such courses would enable humanities students to gain specific computer skills, understand the type of work done by computer scientists, and engage in computational thinking. For example, students may explore the types of computational questions that a text mining algorithm could answer, and experiment with different types of visualizations. However, computer science students in these courses might



gain a better understanding of how their algorithms are used outside of their field, for in traditional computer science programs, algorithms are discussed without paying much attention to their ethical and social consequences. The courses in our new curriculum will allow us to bridge these divides and will allow all students to explore the ways in which technology has an impact on human lives often well beyond the specific tasks it was designed to perform. During our planning year, we will investigate how to teach interdisciplinary content effectively and also how these and other courses might eventually be included in the UTK [General Education Curriculum](#), which currently includes a category titled “Cultures and Civilizations” that serves to contextualize beliefs about global events, ideas, and social practices.

The suite of courses we will create will include a diverse set of experiential learning opportunities as part of coursework and course evaluation. Students in these humanities computing courses will construct course projects and internships that will allow them to integrate computing skills with the needs of diverse communities and cultural groups both on the UTK campus and in the Knoxville area. The partnerships listed below illustrate possible non-academic and community-oriented areas for student engagement. Also, as the Bredesen Director notes in his letter of support, the experiential learning component of these courses may allow undergraduate students from across the university opportunities to collaborate with STEM Ph.D. students as they work to create technical solutions to problems of data science and engineering but also try to communicate how this technology may be used by members of our regional population.

The following individuals have already agreed to work with us during our planning year as community partners to develop experiential learning activities for participating undergraduates (see appendix for letters of commitment):

- **Katy Malone**, Curator of Academic Programs, McClung Museum of Natural History and Culture, University of Tennessee Knoxville <https://mcclungmuseum.utk.edu/>
- **Sudarsanam Suresh Babu**, UT/ORNL Governor's Chair of Advanced Manufacturing, Professor of Mechanical Engineering, and Director of Bredesen Center, The University of Tennessee, Knoxville <https://bredesencenter.utk.edu/>
- **David Butler**, Executive Director of the Knoxville Museum of Art <https://knoxart.org/>
- **Ashley Capps**, President of AC Entertainment, founder of the Bonnaroo Music and Arts Festival, the Big Ears Music Festival, and the Forecastle Festival  
<https://bigearsfestival.org/>

We will continue to build this partnership base potentially to include organizations such as [Centro Hispano de East TN](#), [The Beck Cultural Exchange Center](#), [SEED Knoxville](#), the [Foothills Conservancy](#) and other organizations in the Knoxville area. We envision possible student engagement in the design and use of digital materials--websites, social media sites and campaigns, data collection and analysis, outreach campaigns, etc.--by students for these organizations. This would help students to practice computing and design skills and introduce them to area nonprofit organizations associated with the issues and cultural perspectives that inform their studies. Recently, for example, UT Humanities Center Director Amy Elias partnered with [The Delaney Project](#) in Knoxville and won an NEH Convening Grant to host a public symposium on the work of Black, queer, American artists James Baldwin and Beauford Delaney. The grant allowed a former UT student to build a website (<https://baldwindelaney.org/>) that required collaboration with the [Knoxville Museum of Art](#), the [Beck Cultural Exchange Center](#), [Marble City Opera](#), and the [East Tennessee Historical Society](#). This made clear that students working on even small projects with community partners could gain important knowledge about

history, the arts, and diverse regional communities while using specific computer skills to help regional cultural organizations.

The yearlong project to develop “humanistic computing” courses at UTK will launch in summer 2021 with a two-day planning workshop hosted on campus at the UT Humanities Center. UTK faculty, administration, and community leaders will be included in this planning workshop. It will a) build a cohort of project stakeholders that will sustain any created curriculum over time; b) educate and inform this cohort about successful models of undergraduate “humanistic computing” courses and programs; c) give the entire cohort an introduction to the unique local resources and sites that can be mined for experiential learning projects; and d) model the cross-disciplinary, creative interaction between STEM and the humanities that we wish to create in new undergraduate courses. As the project is implemented, the planning cohort will continue to identify and recruit additional staff, community partners, and advanced undergraduate students whose engagement can amplify and enrich the goals of the project and lead to new course creation or a minor in Humanistic Computing at UTK. Led by the director of the UT Humanities Center and the elected cohort chairs from computer science and the humanities faculty, the project will continue during the 2021-22 academic year with recurring meetings of the planning cohort and assigned tasks for its members. By the end of the project period, the planning cohort will have fully identified a suite of experiential learning partners; defined the role of the UT Humanities Center in supporting a humanistic computing curriculum; designed a number of specific courses that could be implemented in the following year; and identified departmental homes for these cross-disciplinary humanistic computing courses. The project co-directors will implement the project in three phases, with each focusing on a key activity.

- **Phase I: June-August, 2021:** Key activity: develop and run a two-day workshop hosted by the UT Humanities Center for all project stakeholders. The workshop will feature two keynote speakers and presentations by UTK staff responsible for undergraduate curriculum, and it will offer participants specific ice-breaker activities, informational sessions about course content modelling, and creative brainstorming sessions. During this phase, the Humanities Center also will utilize its existing resources to develop shared documents and planning materials. The planning cohort will consider ways to involve students in the planning activities.
- **Phase II: September-December 2021:** Key activity: concretize the program goals and explore new possibilities for curriculum development and experiential learning. Meeting monthly at the Humanities Center, the planning cohort will address specific curricular issues. The project directors will coordinate two to four virtual visits from experts in curriculum development in order to address specific concerns of the planning cohort. During this phase, the cohort will consult members of the community and computing partners to help develop new pedagogies and interdisciplinary approaches to community needs.
- **Phase III: January-May 2022:** Key activity: finalize “humanities computing” curriculum at the undergraduate level, confirm community partners, and affirm the experiential learning component. Course descriptions and their pre-/co-requisites will be identified and defined, and the curriculum will be approved by the planning cohort. The planning cohort will outline the next steps in implementation by faculty members and administrators as part of the larger approval process during a workshop hosted by the UT Humanities Center in spring 2022. The workshop will also address next stages of grant submission to the NEH for a Connections Implementation Grant.

### 3. Collaborative Team

The project co-directors at UTK are Amy J. Elias, Hilary Havens, and Amir Sadovnik. They will jointly share responsibility for forming the planning cohort; meeting project goals; setting meeting agendas of the planning cohort; consulting with UTK staff and faculty on the design of curriculum and engaged learning opportunities; and adhering to all NEH requirements. Virginia Stormer, Assistant Director for Experiential Learning in the UTK Office of the Provost's Teaching & Learning Innovation (TLI) unit, will serve as a consultant on the committee and has provided a letter of support from her director for this project. Additional planning committee members will include our community partners; staff from the UTK Libraries' Digital Initiatives and Teaching and Learning Program; and UTK faculty members active in the UTK Digital Humanities Community of Scholars as well as interested faculty from Computer Science. TLI will assist in constructing student and faculty surveys concerning course creation and program expansion.

- Project Co-Director **Amy J. Elias** is Director of the UT Humanities Center and UT Chancellor's Distinguished Professor in English. A specialist in contemporary literature, time studies, and cross-disciplinary aesthetics, she is the author of the award-winning *Sublime Desire: History and Post-1960s Fiction* (Johns Hopkins UP, 2001), *The Planetary Turn: Relationality and Geoaesthetics in the 21st Century* (with Christian Moraru, Northwestern UP, 2015), and *Time: A Vocabulary of the Present* (with Joel Burges, NYU Press, 2016). Elias was the founder of *ASAP: The Association for the Study of the Arts of the Present* and founding co-editor-in-chief of its three-time award-winning scholarly journal, *ASAP/Journal*, published by Johns Hopkins UP. She won an NEH sponsored grant for the Humanities Center in 2019. Hired as UTHC Director in 2017, she will host the planning

year workshops and act as lead for partner engagement, collaborating with UT leadership and community partners on project developments, documenting project activities, and preparing the project evaluation and report(s) for NEH.

- Project Co-Director **Hilary Havens** is an associate professor in the Department of English. Dr. Havens has published work on digital approaches to paleography in *Digital Humanities Quarterly* and in her monograph, *Revising the Eighteenth-Century Novel: Authorship from Manuscript to Print* (Cambridge UP, 2019). Her work using the digital humanities to explore manuscript texts has received grants from the NEH, the Huntington Library, and the New York Public Library. She is a co-editor of the *Maria Edgeworth Letters* project, which will eventually TEI-encode Maria Edgeworth's complete correspondence, and is working on a digital Jane Austen project that involves text mining and visualizations of Austen's six novels. She will be the program director for the new graduate certificate program in digital humanities at UTK, and she will serve as the lead liaison with faculty from the humanities departments at UTK.
- Project Co-Director **Amir Sadovnik** is Assistant Professor of Electrical Engineering and Computer Science. Dr. Sadovnik's research lies in the intersection of computer vision and machine learning with publications in leading conferences in the field. He also has a deep interest in computer science education and is currently a Co-PI on two NSF grants which tackle early computer science and computational thinking education. His interest in digital humanities began as a faculty member in the computer science department at Lafayette College. There Dr. Sadovnik won two "Digital Humanities in the Classroom" internal grant awards to integrate humanistic concerns and questions into the introductory studies in computer science. Since arriving at UTK he has been an active member of a committee

looking to restructure the computer science introductory courses and develop programming courses for majors outside of the computing science fields. He will serve as the lead liaison with faculty from computer sciences.

#### **4. Institutional Context and Resources**

As noted above, through ORNL and the Oak Ridge Institute, UTK has partnerships with some of the most advanced computing research centers in the US, and the director of the Bredeson Center, Suresh Babu, will work with our cohort during the planning year to facilitate connections to this curriculum. As the largest department of engineering on the University of Tennessee Knoxville campus, the Min H. Kao Department of Electrical Engineering and Computer Science offers undergraduate and graduate education in artificial intelligence, bioinformatics, embedded systems, electronics, high performance computing, power and energy, visualization and image processing, and wireless and sensor networks, and its chair will support our curricular initiative. The university is also investing in digital resources for students. The interim dean of the UTK Libraries, Holly Mercer, was made a Board of Governors member of HathiTrust, which secured online access for students to more than 3.4 million volumes in the public domain, and UTK Libraries have created media game rooms, a virtual reality studio, video and sound studio production facilities, GIS workstations, and digital media instruction for undergraduates. We will invite Dr. Mercer and her digital team as consultants as we consider library curriculum needs, such as teaching resource guides, collection acquisition, and faculty training in software use. The College of Arts and Sciences will also collaborate directly with us. As UTK's flagship college supporting more than 2000 arts and humanities majors and minors on average each year, the College's strategic plan includes developing cross-college and community

partnerships, and Dean Theresa Lee has committed to approving an IDP in Humanities Computing when that curriculum is fully developed. The UT Humanities Center will be the channel of communication between the cohort and university administration as well as the UTK Office of Research. It will donate the use of its seminar rooms for the projects' meetings and workshops; coordinate monthly meetings; and provide office support to gather meeting materials, organize events, and publicize visiting speakers. Support for experiential learning will come from UTK's Teaching & Learning Innovation unit, which recently completed a five-year initiative to increase institutional investment in [experience learning](#) as part of university re-accreditation by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC); assistant director Virginia Stormer will participate in the cohort during the planning year and TLI has promised additional support.

## **5. Evaluation**

The project will include a qualitative summary evaluation to be shared with the NEH and campus and community partners to show how project objectives were met during the planning year. The evaluation will offer an overview of a) courses that will be developed, and b) place-based experiential learning opportunities that have been developed. It will summarize the yearlong planning activities, detail the involvement of campus and community stakeholders, and capture the decision-making process for developing curriculum, interdisciplinary learning and pedagogy, and experiential learning activities. The report will also offer recommendations for the implementation of these courses. We expect this evaluation to be a valuable basis for an application to the NEH for an implementation grant the following year.



**“Designing a “Humanistic Computing’ Curriculum at the University of Tennessee,  
Knoxville”**

Amy Elias, Hilary Havens, Amir Sadovnik, Project Directors

| Date                                   | Activity  | Responsible Leaders           | Partners  |
|--|---|-------------------------------|---|
| June 1-<br>August 1,<br>2021           | Planning for Project Orientation Workshop. <ul style="list-style-type: none"> <li>• Workshop materials defined and gathered, including reading lists</li> <li>• Collaborate with stakeholders and consultants to shape workshop activities, goals, and intended outcomes.</li> <li>• Co-Project Directors will work with UTK’s Teaching and Learning Innovation Center to develop Planning Committee Meeting topics for the entire project year.</li> </ul>   | Elias,<br>Havens,<br>Sadovnik |   |
| August 15-<br>16, 2021                 | 2-day Project Orientation Workshop. <ul style="list-style-type: none"> <li>• Introduction of stakeholders, cohort members.</li> <li>• Talks by 2 experts in DH curricular development</li> <li>• Calendar of Task Committee reporting and shared group site shared to all members of cohort for sharing documents, questions, and plans</li> <li>• Discussion of guiding questions to be used for developing subject matter expertise and shaping and pedagogical inquiry.</li> </ul> Task Committees assigned, with chairs, for information gathering: <ol style="list-style-type: none"> <li>1. Experiential Learning               <ol style="list-style-type: none"> <li>a. Internal Policies and Procedures</li> <li>b. External Partners</li> </ol> </li> <li>2. Course development and New Pedagogies</li> <li>3. Curriculum Policies and Procedures</li> <li>4. Other to be determined by cohort</li> </ol> | Elias,<br>Havens,<br>Sadovnik | Internal<br>UTK<br>partners:<br>Libraries<br>staff, TLI<br>staff,<br>participating<br>faculty |
| September<br>2021-<br>December<br>2021 | Monthly meetings of the Planning Cohort; topics for each meeting scheduled in advance; minutes of meetings recorded.<br>Additional meetings each month will be scheduled as needed.   | Elias,<br>Havens,<br>Sadovnik | All cohort<br>members,<br>community<br>stakeholders<br>by                                     |

|                         |  |                         |  |
|-------------------------|--|-------------------------|--|
|                         | Task Committees will meet at least monthly apart from monthly cohort meetings.   |                         | invitation, special guests   |
| January, 2022-May, 2022 | <p>Monthly meetings of the Planning Cohort; topics for each meeting scheduled in advance; minutes of meetings recorded.</p> <p>Additional meetings each month will be scheduled as needed. Task Committees will meet at least monthly apart from monthly cohort meetings.</p> <ul style="list-style-type: none"> <li>• “Humanities computing” undergraduate curriculum finalized;</li> <li>• community partners confirmed;</li> <li>• experiential learning component finalized;</li> <li>• course descriptions and their pre-/co-requisites finalized.</li> </ul> | Elias, Havens, Sadovnik | All cohort members, community stakeholders by invitation, special guests |
| May 1, 2022             | <p>One-day Exit Workshop hosted by the UT Humanities Center on the UTK campus. The planning cohort will outline the next steps in implementation by faculty members and administrators as part of the larger approval process during a workshop hosted by the UT Humanities Center in spring 2022. The workshop will also address next stages of grant submission to the NEH for a Connections Implementation Grant.</p>   | Elias, Havens, Sadovnik | Internal UTK partners: Libraries staff, TLI staff, participating faculty |
| May 1-April 1, 2022     | <p>The Project Co-Directors will complete their summary evaluation of the project and disseminate project activities to a wider audience, such as campus and community offices, as well as to the NEH.</p>   | Elias, Havens, Sadovnik |  |

**“Designing a “Humanistic Computing’ Curriculum at the University of Tennessee,  
Knoxville”**

Amy Elias, Hilary Havens, Amir Sadovnik, Project Directors

**Readings and Resources: Humanities Computing**

**What is Digital Humanities and Humanities Computing?**

Bodenhamer, David J., John Corrigan, and Trevor M. Harris, eds. *The Spatial Humanities: GIS and the Future of Humanities Scholarship*. Bloomington: Indiana University Press, 2010.

Burdick, Anne, Johanna Drucker, et al. *Digital Humanities*. Cambridge, MA: MIT Press, 2012.

Cecire, Natalia. “Theory and the Virtues of Digital Humanities.” *Journal of Digital Humanities* 1.1 (2011): 44-53.

Da, Nan Z. “The Computational Case against Computational Literary Studies.” *Critical Inquiry* 45 (2019): 601-39.

Drucker, Johanna. “Humanities Approaches to Graphical Display.” *Digital Humanities Quarterly* 5.1 (2011). <http://www.digitalhumanities.org/dhq/vol/5/1/000091/000091.html>.

Gold, Matthew K., ed. *Debates in the Digital Humanities*. Minneapolis: University of Minnesota Press, 2012.

Liu, Alan. “The Meaning of the Digital Humanities.” *PMLA* 128.2 (2013): 409-23.

Liu, Alan. ”The State of the Digital Humanities: A Report and a Critique.” *Arts and Humanities in Higher Education* 11.1-2 (2012): 8-41.

McCarty, Willard, and Marilyn Deegan, eds. *Collaborative Research in the Digital Humanities*. London: Routledge, 2012.

McCarty, Willard. *Humanities Computing*. London: Palgrave Macmillan, 2014.

Moretti, Franco. *Graphs, Maps, Trees: Abstract Models for Literary History*. London: Verso, 2005.

Nyhan, Julianne, and Andrew Flinn. *Computation and the Humanities: Towards an Oral History of Digital Humanities*. Cham, Switzerland: Springer International, 2016.

Price, Kenneth M., and Ray Siemens. *Literary Studies in the Digital Age: An Evolving Anthology*. New York: MLA Commons, 2013.

Schiuma, Giovanni, and Daniela Carlucci, *Big Data in the Arts and Humanities: Theory and Practice*. Boca Raton, FL: CRC Press, 2018)

Scholes, Robert, and Clifford Wulfman. "Humanities Computing and Digital Humanities." *South Atlantic Review* 73.4 (2008): 50-66.

Schreibman, Susan, Ray Siemens, John Unsworth, eds. *A Companion to Digital Humanities*. Oxford: Blackwell, 2004.

Siemens, Ray, and Susan Schreibman, eds. *A Companion to Digital Literary Studies*. Oxford: Blackwell, 2007.

Terras, Melissa, Julianne Nyhan, and Edward Vanhoutte, eds. *Defining Digital Humanities: A Reader*. Surrey: Ashgate, 2013.

### **Digital Humanities Pedagogy and Curriculum**

Ayers, Edward L. "The Academic Culture and the IT Culture: Their Effect on Teaching and Scholarship." *Educause Review* 39.6 (2004): 48-62.

Cohen, Daniel J. and Tom Scheinfeldt, eds. *Hacking the Academy: New Approaches to Scholarship and Teaching from Digital Humanities*. Ann Arbor: University of Michigan Press, 2013.

Eubanks, Virginia. *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*. New York: St. Martin's Press, 2018.

Hirsch, Brett D. *Digital Humanities Pedagogy: Practices, Principles and Policies*. Cambridge, UK: Open Book Publishers, 2012.

Jarmon, L. Traphagan, T. et al. "Virtual World Teaching, Experimental Learning and Assessment: An Interdisciplinary Communications Course in Second Life." *Computers in Education* 53 (2009): 169-82.

Kearns, Michael. *The Ethical Algorithm: The Science of Socially Aware Algorithm Design*. Oxford: Oxford University Press, 2019.

Kee, Kevin, ed. *Pastplay: Teaching and Learning History with Technology*. Ann Arbor: University of Michigan Press, 2014.

Kirschenbaum, Matthew G. "What Is Digital Humanities and What's It Doing in English Departments?" *ADE Bulletin* 150 (2010): 55-61.

Lanier, Jaron. *Ten Arguments for Deleting Your Social Media Accounts Right Now*. New York: Picador, 2019.

Noble, Safiya Umoja. *Algorithms of Oppression: How Search Engines Reinforce Racism*. New York: NYU Press, 2018.

Nyerges, Timothy L., et al., eds. *The SAGE Handbook of GIS And Society*. London: SAGE Publications, 2011.

Russell, John. "Teaching Digital Scholarship in the Library: Course Evaluation." *dh + lb*. ARCL Digital Humanities Discussion Group, 2013.

Sinton, Diana Stuart, and Jennifer J. Lund. *Understanding Place: GIS And Mapping Across the Curriculum*. Redlands, CA: ESRI, 2007.

Tanner, Simon. "Inspiring Research, Inspiring Scholarship. The Value and Benefits of Digitized Resources for Learning, Teaching, Research and Enjoyment." *Proceedings of Archiving 2011*. 77-82. Arlington, VA: Society for Imaging Science and Technology, 2011.

Terras, Melissa. "Disciplined: Using Educational Studies to Analyse 'Humanities Computing.'" *Literary and Linguistic Computing* 21.2 (2006): 229-46.

### **Experiential and Community-Based Learning**

Beard, Colin, and John P. Wilson. *Experiential Learning: A Best Practice Handbook for Educators and Trainers*. 2nd ed. London; Philadelphia: Kogan Page, 2006.

Cantor, Jeffrey A. *Experiential Learning in Higher Education: Linking Classroom and Community*. Washington, DC: ERIC Clearinghouse on Higher Education, 1997.

Fried, Jane. *Transformative Learning Through Engagement: Student Affairs Practice as Experiential Pedagogy*. Sterling, VA: Stylus, 2012.

hooks, bell. *Teaching to Transgress: Education as the Practice of Freedom*. New York: Routledge, 1994.

Kolb, Alice Y., and David A. Kolb. "Learning Styles and Learning Spaces: Enhancing Experiential Learning in Higher Education." *Academy of Management Learning & Education* 4.2 (2005): 193-212.

Kolb, David. *Experiential Learning: Experience as the Source of Learning and Development*. New York: Pearson FT Press, 2014.

Lucas, Kristin, and Pavlina Radia. "Experiential Learning in the Humanities." *Pedagogy: Critical Approaches to Teaching Literature, Language, Culture, and Composition* 17.1 (2016): 129-38.

Lund, Darren E. *The Wiley International Handbook of Service-Learning for Social Justice*. Newark: Wiley, 2018.

Moon, Jennifer A. *A Handbook of Reflective and Experiential Learning: Theory and Practice*. New York: Routledge, 2013.

*Pedagogy: Critical Approaches to Teaching Literature, Language, Composition, and Culture* 1-20 (2001-20).

Wurdinger, Scott D., and Julie A. Carlson. *Teaching for Experiential Learning: Five Approaches That Work*. New York: Rowman and Littlefield, 2010.