**Digital Humanities @ RIT**

**A New Degree Proposal Submitted by the College of Liberal Arts at RIT**

# Abstract

This concept paper proposes the creation of a B.S. degree in Digital Humanities (DH) at RIT, representing one of the first such undergraduate digital humanities degrees in the nation. A major and rapidly-growing field of scholarship and funded-research, DH is an innovative and interdisciplinary program of inquiry that merges the study of information science and technologies with liberal arts disciplines. At RIT, where the Golisano College for Computing and Information Science, the College for Imaging Arts and Sciences, and the College of Liberal Arts, together with the Wallace Center, the Cary Collections, and the RIT Press, work in synergistic collaborations, this institution has the capacity to lead undergraduate education, scholarship, and research in digital humanities.

# Overview and Justification

In 2009, the *Chronicle of Higher Education* described Digital Humanities as “the next big thing” and after the 2011 international conference for Digital Humanities in Seattle, the *Chronicle* described it as “the thing.” Both large research universities and small liberal arts colleges now house digital humanities centers, labs, and studios; the National Endowment for the Humanities has created an office for grants in DH; and there are newfound associations, journals, and graduate programs.

At RIT, DH has always been “a thing.” Over the past few years, research and creative activities flexibly organized under the DH label have emerged at RIT: large databases of digitized texts allow for mining data-intensive linguistic analysis of language patterns; the creation of an interactive game engages players in the history of smallpox and vaccinations; and the invention of new 3D visualization technologies and interactive media brings rare books into common space digital archives. But although such collaborations are not at all new, they are only now coming together in a common platform and to build greater visibility and synergy. Datasets are becoming larger and useable in areas such as bio-medical linguistics; interactive media experiments are becoming popular modes of education for cultural heritage institutions; and visualizations are becoming more sophisticated so that even the most fragile archived objects can be digitized and made accessible to larger publics. Today, the goal of research and scholarship in digital humanities at RIT is to use emerging technologies for humanitistic inquiry. In doing so, there is the promise of transformative explorations across disciplines that will lead to new insights and a more expansive understanding of what it means for individuals, institutions, societies, and global communities to be immersed in the digital.

Through DH, RIT has an opportunity to build a robust agenda for large-scale collaborative endeavors across departments, colleges, and geographical locations to pursue teaching and research in human computer interaction, natural language processing, information design, Geospatial Information Systems, and interactivity in new media. DH also includes the study of culture and digitization of cultural heritage, defined broadly as: tangible objects, including texts, artworks, and artifacts; landscapes such as historic sites, monuments, and graves; as well as intangible culture, as in language, oral histories, rituals, music, dance, and other arts. The benefits to be gained from examining culture and devising ways for handling it physically or representing it digitally are routinely sought by: corporations; museums, educational institutions; racial, ethnic and gender communities; the health professions; environmentalists; economists; and policy makers.

The degree program proposed herein is designed to create opportunities for students to explore new data-intensive techniques and methodologies to pose novel questions, and to develop the kinds of expertise to apply new inquiry-based knowledge skills in the high-tech, digital-based culture and markets in which we live. The overall goal is to provide strong cultural expertise in areas like literature, fine arts, history, and STS to students who want to combine such knowledge with computational technology. The intended outcome is to develop a curriculum that will deliver the *integrative literacies to bridge what can no longer be conceived as distinct domains of computation and culture.*

GCCIS and CIAS have national reputations. COLA’s DH faculty and adept approaches to humanities learning, cultural analysis, and computing will add to a national visibility, drawing students to RIT for that *unique balance of* ***digital humanities***. As other universities and liberal arts colleges rush to create DH programs from scratch, RIT is well poised to enhance what it *already offers* to a wide range of students.

# Summary of Program Curriculum

By equally engaging computing and humanities skills, the B.S. program will train students to be technologically-capable, apt at both complex problem solving and critical analysis, skilled at applying diverse methodologies and global perspectives, and amply prepared with excellent communication skills. The curriculum will emphasize project-intensive pedagogy and opportunities for experiential learning, including community engagement. Key components of this innovative program ensure its uniqueness nationally and internationally, making it highly competitive for *attracting* as well as *retaining* RIT/NTID students, and, after completion, placing students in competitive career positions. Key elements of the curriculum are as follows:

* Students will achieve both **broad knowledge in digital humanities** and a **specialization in an area of interest** throughbreadth in the first two years of coursework (*core humanities and technical competencies*) followed by breadth in specific sub-fields, combined with the flexibility to specialize, in the subsequent two years of study (*tailored career trajectories*).
* Following the RIT “co-op” model, students benefit from **experiential learning opportunities in one semester of cooperative education** at relevant partners in the culture industries, governmental institutions, technical/computational organizations, the cultural heritage sector, international service institutions, and other organizations.
* Coherent with a liberal arts education that prepares students for the global society, students would be encouraged to take one year’s study of a modern language and culture other than English to enhance each student’s **global academic and career competencies**. Students who wish to **study abroad** or pursue an **international co-op** will be encouraged.
* Beyond coursework and co-op, students additionally prepare for the professional marketplace or graduate school in a **capstone project/portfolio**.

# Fit with RIT Mission and Strategy

The proposed B.S. degree fulfills RIT’s mission in its effort to *“rigorously pursue new and emerging career areas”* and in its capacity to *“develop and deliver curricula and advance scholarship and research relevant to emerging technologies and social conditions.”* The program also fulfills RIT’s mission to *“provide a broad range of career-oriented educational programs with the goal of producing innovative, creative graduates who are well-prepared for their chosen careers in a global society.”*

The program is designed accordingly to support lifelong learning—the traditional hallmark of the humanities, and to develop a practical, yet adaptable, set of technical-computational skills that lead to immediate career paths. By providing a solid set of *core competencies* in the first two years, complemented by the subsequent exploration of *tailored career trajectories* and exposure to important career-oriented practices in the last two years, students will graduate with a perfect integration, valued in today’s workplace, between core competencies and specialized knowledge.

This program will be an *attractor program*, drawing students from the region and around the country looking for an education invested in the humanities, yet more career-oriented or technologically and professionally applicable than a traditional liberal arts education. It responds to the current draw and academic prestige of the digital humanities. Also, this program will serve as an important *retention program* for RIT, allowing students who intend to double-major with, for instance, computer science, information science and technology, or new media design, to pursue interests that add to and supplement what is supported by their initial major program of study. Further, as a program increasing *RIT/NTID-internal transfer retention*, this program mitigates the loss of students who discover that they are not inclined to “technology-only” careers by allowing them to pursue broader cultural interests in tandem.

This program prepares students to negotiate the “transnational” spaces created by new media across national borders and cultural divides. If socio-cultural and linguistic differences complicate the production and consumption of global media products, our curriculum prepares students to interrogate/question/understand these differences by *incorporating cultural, global, and international education* throughout the curriculum. The program embeds cultural and global education throughout so that students understand both the possibilities and limitations of new technologies — and helps students interrogate the production and consumption of such products. New media and informatics offer unique opportunities for improving *access for people with disabilities* (hearing, visual, cognitive, or physical impairments) but also pose challenges. The program will contribute to training a new generation of innovators to think more deeply about the challenges of inclusion. The opportunity to study *diversity and inclusion* as these inform contemporary information cultures and practices may provide students, women in particular, who are *historically underrepresented* within the disciplinary models of computing (or imaging arts and sciences) with an alternate RIT site and career path. Students may elect to combine disciplinary interests in culture and computation, and develop entirely new professional career trajectories.

# Synergy

The DH program is built on already existent interdisciplinary collaborations that are essential rather than contrived. These collaborations across departments, disciplines, and colleges include humanists, social scientists, computer scientists, media and design artists, and other specialists working together toward shared goals. Rather than working in silos bounded by disciplinary methods, students and faculty in the DH program will create common aspirations that also meet individual professional agendas. The program includes a coherent set of courses from COLA, including from English and Creative Writing, Language Science and Computational Linguistics, History, Philosophy, Fine Arts, Political Science, and STS, as well as from GCCIS and CIAS. The program will also partner with campus resources like the Wallace Center, the Cary Graphic Arts Collection, and the RIT Press to enhance research, scholarship, and publication.

# Administrative Structure for the Program

The degree program will be administered by the English Department with cooperation of a multi-disciplinary, cross-departmental advisory committee that includes members across colleges in COLA, GCCIS, and CIAS. The administrative home for the degree will rest in the English Department for purposes of student management and administrative support. Advising will be conducted through a model that involves the use of professional and faculty advisors across colleges. The degree’s cross-college curriculum committee would administer a curriculum that delivers a strategic blend of humanistic and computing literacies, integrated to provide promising new scholarship and fostering radically innovative undergraduate research and projects. With COLA as its administrative home, the program would stress the importance of the liberal arts and vital contributions humanities are making in the digital domain. DH will allow students to work across college boundaries to nurture experimental or experiential activities, coordinate community engagement and participant research, and extend traditional humanities networks out to business and industry, government, schools, and to a wider public.

# Enrollment Assessment

The proposed BS degree program in digital humanities presents intriguing, yet challenging possibilities to the EMCS division.

The interdisciplinary nature of the program is a strength as it leverages current collaboration among areas of the university’s areas of expertise not currently combined in a curricular manner.   As articulated in the concept paper, the proposed program brings together seemingly disparate disciplines of humanities and computational/information technologies in response to growing interest on the part of social and cultural organizations for graduates with technological and humanities skills and knowledge.  Additionally, there is little or no competition for the prospective students at the undergraduate level.

On the other hand, the nascent nature of the proposed program’s discipline presents a challenge when it comes to articulating the program’s appeal to high school students; the primary source of new student enrollment.  It is likely that there will be few students in the prospective high school student pool with the sophistication and self-awareness necessary to see the digital humanities program as a possible major and/or career path.  It will be a challenge to, first identify prospective students who have an interest in the combined disciplines, and then to effectively articulate the educational and career benefits of the program to them.

We appreciate EMS’s cautious optimism regarding this proposed program. We also offer the websites in the endnotes to document those discussions of “digital humanities” that are actively and prominently taking place at our peer institutions.[[1]](#endnote-1) Our planned speaker series and accompanying website will work much the same way to indicate that RIT is entering this area of “the new humanities” as history, literature, and fine arts begin to build various innovative connections to technology.

**8. Impact on Resources**

The College of Liberal Arts will offer an already approved minor in Digital Literature that will focus on Comparative Media and offer courses and a curriculum that will lead easily to a curriculum in digital humanities. The College will also offer a minor in Language Science that will offer courses in Natural Language Processing. The College currently offers individual courses like Interactive Games for Museums. There are faculty pursing digital geo-mapping in history and offering courses in Free and Open Source Culture. In collaboration with GCCIS, CIAS, NTID, and the Chester Carlson Center for Imaging Science, a curriculum is nearly in place using courses already approved.

The primary resources needed to start the program will be lab and computing space for CLA. There would be some benefit to hiring a faculty member with specific digital humanities credentials and to seeking someone with grant awards from the NEH Digital Humanities Office. Granting agencies are offering awards specifically to Digital Humanities Projects and RIT should aggressively seek out such opportunities.

# 9. Conclusion

As described in the *New York Times*, the “humanities and social sciences are the emerging domains for using high-performance computers.”[[2]](#endnote-2) Over the past five years, nearly every major governmental and private granting agency has established awards in the digital humanities, while universities around the country have created numerous digital humanities research centers. Despite its recent rise to prominence, DH remains a field largely dedicated to institutes and labs, graduate education, and academic/computing specialists. The next wave of innovation will come from colleges and universities that incorporate DH studies into their undergraduate curricula. RIT is unique in that it has the capacity needed to launch an undergraduate program in this field. The program will attract students eager to combine their liberal arts passion in almost any humanities-oriented discipline with an interest in natural language processing, graphics, visualization, interactive games, human computer interaction, Geospatial Information Systems, and social media. The degree will train students to be ready for careers in both the public and private sectors, spanning organizations ranging from technology sector mainstays (e.g., Google, IBM, Apple, Microsoft) to public institutions (government, museums, libraries) and entrepreneurial start-ups.

The National Endowment for the Humanities, in reviewing its grant funding for digital projects stated: “The implications of these projects and their digital milieu for the economics and management of higher education, as well as for the practices of research, teaching, and learning, are profound, not only for researchers engaged in computationally intensive work but also for college and university administrations, scholarly societies, funding agencies, research libraries, academic publishers, and students.”[[3]](#endnote-3) We agree with this assessment. This degree fits directly with RIT’s existing mission, and it also presents unbounded opportunities for student growth, faculty scholarship, publication venues, and sponsored research.

1. [http://www.rpi.edu/magazine/spring2008/humanities/humanities3.html](https://mymail.ad.rit.edu/owa/redir.aspx?C=39ee413df7174a19811449c9a6c2b292&URL=http%3a%2f%2fwww.rpi.edu%2fmagazine%2fspring2008%2fhumanities%2fhumanities3.html)

   \[http://virginia2012.thatcamp.org/?s=digital+humanities](https://mymail.ad.rit.edu/owa/redir.aspx?C=39ee413df7174a19811449c9a6c2b292&URL=http%3a%2f%2fvirginia2012.thatcamp.org%2f%3fs%3ddigital%2bhumanities)

   [http://lmc.gatech.edu/compumedia](https://mymail.ad.rit.edu/owa/redir.aspx?C=39ee413df7174a19811449c9a6c2b292&URL=http%3a%2f%2flmc.gatech.edu%2fcompumedia)/

   [http://www.cmu.edu/interdisciplinary/programs/bcsaprogram.html](https://mymail.ad.rit.edu/owa/redir.aspx?C=39ee413df7174a19811449c9a6c2b292&URL=http%3a%2f%2fwww.cmu.edu%2finterdisciplinary%2fprograms%2fbcsaprogram.html)

   [http://www.northeastern.edu/accomplishments/FIN\_IA\_brochure.pdf](https://mymail.ad.rit.edu/owa/redir.aspx?C=39ee413df7174a19811449c9a6c2b292&URL=http%3a%2f%2fwww.northeastern.edu%2faccomplishments%2fFIN_IA_brochure.pdf)

   [http://www.iit.edu/csl/hum/announcements/new\_digital\_humanities\_series.shtml](https://mymail.ad.rit.edu/owa/redir.aspx?C=39ee413df7174a19811449c9a6c2b292&URL=http%3a%2f%2fwww.iit.edu%2fcsl%2fhum%2fannouncements%2fnew_digital_humanities_series.shtml)

   [http://hyperstudio.mit.edu](https://mymail.ad.rit.edu/owa/redir.aspx?C=39ee413df7174a19811449c9a6c2b292&URL=http%3a%2f%2fhyperstudio.mit.edu)/ [↑](#endnote-ref-1)
2. NYT Nov. 16, 2010. [↑](#endnote-ref-2)
3. Christa Williford and Charles Henry, “One Culture: Computationally Intensive Research in the Humanities and Social Sciences,” June 2012. [↑](#endnote-ref-3)