Master of Arts in Digital Studies of Language, Culture, and History

Department Website: http://digitalstudies.uchicago.edu

People

Faculty Director: David Schloen

Associate Director: Brooke Luetgert

Digital Studies Faculty Board (https://digitalstudies.uchicago.edu/people/)

Overview

The University of Chicago's program in Digital Studies of Language, Culture, and History provides a one-year Master of Arts (https://digitalstudies.uchicago.edu/overview-timeline/) curriculum intended for full-time students who have a bachelor's degree in the humanities or in a related discipline such as history, anthropology, or linguistics. A two-year Master of Arts program has been added beginning in Autumn 2024. In addition, a joint BA/MA (https://digitalstudies.uchicago.edu/bama/) and undergraduate Minor (https://digitalstudies.uchicago.edu/minor/) in Digital Studies are offered to students in the College of the University of Chicago, and a Graduate Certificate (https://digitalstudies.uchicago.edu/graduate-certificate/) in Digital Studies is available to graduate students in other programs of the University. The MA in Digital Studies (https://digitalstudies.uchicago.edu/overview-timeline/) qualifies as a STEM Designated Degree Program (https://www.ice.gov/sites/default/files/documents/Document/2016/stem-list.pdf) under the regulations of the United States Immigration and Customs Enforcement agency.

The Digital Studies program at the University of Chicago responds to the growing demand for academic rigor in the loosely defined field of digital humanities (https://en.wikipedia.org/wiki/Digital_humanities/) and the need to certify technical competence in this area. The program equips students of the humanities to pursue careers that utilize their skills in research, writing, and critical thinking in tandem with the use of software for the study of human languages and cultures, past and present.

The Digital Studies faculty and staff (https://digitalstudies.uchicago.edu/people/) represent a wide range of academic fields, including linguistics, literary studies, media studies, history, philosophy, anthropology, archaeology, art history, visual arts, musicology, and religious studies. They share a common interest in understanding the impact of digital technology and in using digital tools to represent, analyze, and preserve the products of human language and culture. Collectively, their work shows how digital studies encompass the full range of human activities, from everyday speech and writing to historical documents and literary texts, and include music and art as well as mundane objects, places, and institutions.

The core courses (https://digitalstudies.uchicago.edu/course-descriptions/) and electives (https://digitalstudies.uchicago.edu/electives/) in Digital Studies (DIGS) are designed to foster, not just technical skills in coding and data analysis, but an understanding of the history of computing and its cultural impact from the perspective of the humanities. Students in these courses are introduced to computer programming and the use of software libraries via three widely used programming languages: Python, R, and JavaScript. Learning to code in these languages is the gateway for students to understand and use cutting-edge digital tools and data standards to manage, analyze, and publish information, with emphasis on the kinds of data commonly encountered in the humanities, including texts, images, maps, and other media.

The general MA in Digital Studies entails six core courses (https://digitalstudies.uchicago.edu/course-descriptions/) and three electives (https://digitalstudies.uchicago.edu/electives/). A thesis is not required for degree completion in the one-year program. The two-year program offers four specialized concentrations in which additional courses in a particular subject area are taken and students complete a thesis project in that area.

Degree Requirements

Information about degree requirements can be found here: https://digitalculture.uchicago.edu/teaching/masters-program/

Admission

The Master of Arts in Digital Studies of Language, Culture, and History program welcomes a cohort of students dedicated to exploring humanistic knowledge in the digital realm.

Information on How to Apply

The application process for admission and financial aid for all graduate programs in the Humanities is administered through the divisional Office of the Dean of Students. The Application for Admission and Financial Aid, with instructions, deadlines and department specific information is available online at: http://humanities.uchicago.edu/students/admissions (http://humanities.uchicago.edu/students/admissions/).

Questions pertaining to admissions and aid should be directed to humanitiesadmissions@uchicago.edu or (773) 702-1552.

International students must provide evidence of English proficiency by submitting scores from either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). (Current minimum scores, etc., are provided with the application.) For more information, please see the Office of International Affairs website at https://internationalaffairs.uchicago.edu, or call them at (773) 702-7752.

Further information is available at https://digitalstudies.uchicago.edu/application (https://digitalstudies.uchicago.edu/application/)

Contact Information

digitalstudies@uchicago.edu

(773) 702-1552

Digital Studies Courses

DIGS 30000. Approaches to Digital Humanities Using Python. 100 Units.
This course introduces students to (1) current work in digital humanities with examples of the software applications being used and the computational research being done in literary, historical, linguistic, and cultural studies; and (2) the principles and practices of computer programming using the Python programming language. (Taught remotely via Zoom in the Summer Session; undergraduate only.)
Instructor(s): Clovis Gladstone Terms Offered: Summer
Equivalent Course(s): DIGS 10000

DIGS 30001. Introduction to Computer Programming Using Python. 100 Units.
This course provides an introduction to computer programming and computational concepts using the Python programming language. Students are also introduced to the use of Visual Studio Code as an industry-standard source code editor. This course is a prerequisite for most of the other Digital Studies (DIGS) courses. Students enrolled in one of the Digital Studies programs (MA, joint BA/MA, undergraduate minor, or graduate certificate) who have previously passed an equivalent college-level course in computer programming with a grade of B (3.0) or higher may petition the Associate Director of Curriculum and Instruction of the Forum for Digital Culture for an exemption from taking this course and permission to take an additional elective course instead.
Instructor(s): Clovis Gladstone Terms Offered: Autumn
Equivalent Course(s): DIGS 20001

DIGS 30002. Introduction to Statistics Using Python. 100 Units.
This course provides an introduction to statistics and computational data analysis using Python and Jupyter Notebook. It is a prerequisite for "Data Analysis II: Data Visualization and Machine Learning" (DIGS 20004/30004) in the Winter Quarter. Topics covered include probability, distributions, and statistical inference, as well as linear regression and logistic regression. Students will gain additional practice in Python coding and will learn how to use Python libraries for statistics and plotting. The textbook for this course is OpenIntro Statistics, which is available online, free of charge. Students enrolled in one of the Digital Studies programs (MA, joint BA/MA, undergraduate minor, or graduate certificate) who have previously passed an equivalent college-level course in statistics with a grade of B (3.0) or higher may petition the Associate Director of Curriculum and Instruction of the Forum for Digital Culture for an exemption from taking this course and permission to take an additional elective course instead.
Instructor(s): Brooke Luetgert Terms Offered: Autumn
Equivalent Course(s): DIGS 20002

DIGS 30003. Data Management for the Humanities. 100 Units.
This course introduces concepts and techniques related to the representation and management of digital data with emphasis on the forms of data encountered in the humanities. Topics covered include: (1) digital text encoding using the Unicode and XML standards, with attention to the TEI-XML tagging scheme of the Text Encoding Initiative; (2) digital typefaces ("fonts") for displaying encoded characters; (3) digital encoding of 2D images, 3D models, sound, and video; (4) database models and querying languages (especially SQL for relational databases and SPARQL for non-relational RDF-graph databases), with attention to methods for integrating and querying the kinds of semi-structured and heterogeneous data characteristic of the humanities; (5) ontologies, the Semantic Web, and related technical standards; and (6) cartographic concepts (e.g., coordinate systems and map projections) and the basics of geospatial data management using Geographic Information Systems. This course has no prerequisite; i.e., prior knowledge of computer programming is not required.
Instructor(s): Miller Prosser Terms Offered: Autumn
Equivalent Course(s): DIGS 20003

DIGS 30004. Data Visualization for the Humanities. 100 Units.
This course introduces best practices for visualizing data sets to assist the study of human languages, cultures, and history. Python-based tools will be used to create data visualizations, enhancing familiarity with that programming language. The emphasis will be on displaying data in a clear and elegant manner that is appropriate for the type of information we wish to showcase. Students will learn exploratory and explanatory data visualization techniques both to analyze the data and to communicate ideas via data-based storytelling.

Possible biases in the way data is presented will be noted so students can learn to guard against them. Examples of data sets derived from research in the humanities will be used to develop creative and technical skills to produce standard 2D and 3D plots for descriptive summaries of the data, to identify outliers, and to do statistical correlations and model predictions that reveal underlying trends and potential anomalies. Social network analysis (a method widely used in the humanities and social sciences) will also be introduced, as well as tools for data visualization using geographical maps and timelines. Prerequisites: DIGS 20001/30001, "Introduction to Computer Programming Using Python," or an equivalent course in computer programming and DIGS 20002/30002, "Introduction to Statistics Using Python," or an equivalent course in statistics.
Instructor(s): Brooke Luetgert Terms Offered: Winter
Prerequisite(s): DIGS 20001/30001, "Introduction to Computer Programming with Python" (or an equivalent course in computer programming) and DIGS 20002/30002, "Data Analysis I: Introduction to Statistics" (or an equivalent course in statistics).
Equivalent Course(s): DIGS 20004

DIGS 30005. Data Publication for the Humanities. 100 Units.
This course introduces software techniques and tools for building Web browser apps written in HTML5, CSS, and JavaScript with emphasis on user interfaces for presenting information to researchers and students in the humanities. Students will take an active role in evaluating approaches and outcomes of existing digital publications. Topics covered include: (1) the use of application programming interfaces (APIs) to integrate into Web apps the various analysis, visualization, and database services provided by external systems; (2) the transformation of data into formats appropriate for publication on the Web; and (3) the nature of data in the humanities as pertains to digital publication.
Instructor(s): Miller Prosser Terms Offered: Spring
Prerequisite(s): DIGS 20001/30001, "Introduction to Computer Programming with Python" (or an equivalent course in computer programming).
Equivalent Course(s): DIGS 20005

DIGS 30006. Artificial Intelligence and the Humanities. 100 Units.
In this course we will look at artificial intelligence (AI) from the perspective of the humanities both to assess the impact of AI on the creation and study of cultural materials and to question its presuppositions. The first part of the course will survey the history of the attempts made over the years to create AI using computational methods and the philosophical critiques of those attempts. Attention will be paid both to symbolic AI that employs explicit digital representations of human knowledge and reasoning and the quite different paradigm of connectionist AI that employs neural networks and predictive models. In the latter part of the course, we will discuss the recent development of "generative AI" systems (e.g., ChatGPT) that use large "foundation models" to create remarkably human-like text and images and we will experiment with these systems via hands-on exercises. We will consider the benefits and drawbacks of such tools for research in the humanities and discuss their social and cultural impact more generally.
Instructor(s): Jeffrey Tharsen Terms Offered: Spring
Equivalent Course(s): DIGS 20006

DIGS 30007. History and Theory of Computing for the Humanities. 100 Units.
This course surveys (1) the history and theory of digital computing, (2) the ways computers have been used in the humanities, (3) recent theoretical debates surrounding the contested concept of "digital humanities," (4) the philosophical issues raised by digital knowledge representation and artificial intelligence, and (5) the ethical and public policy issues raised by the pervasive use of digital technology in present-day societies.
Instructor(s): David Schloen Terms Offered: Winter
Prerequisite(s): DIGS 20001/30001, "Introduction to Computer Programming with Python" (or an equivalent course in computer programming) and DIGS 20003/30003, "Data Management for the Humanities." These prerequisites may be waived in some cases with the instructor's consent.
Equivalent Course(s): DIGS 20007

DIGS 30008. Thesis Preparation. 000 Units.
This course is intended for students in the two-year version of the Digital Studies MA program, who will normally enroll in it in the Spring Quarter of their second year, when they are completing their MA thesis projects.
Instructor(s): n/a Terms Offered: Spring

DIGS 30021. Digital Archaeology. 100 Units.
This course introduces students to a variety of computational methods used in archaeology and art history for the digital representation and analysis of cultural sites, buildings, landscapes, and artifacts. Relevant concepts and techniques are taught by means of both explanatory lectures and hands-on exercises. Software tools used in the course include ArcGIS and QGIS for geospatial data and map-creation; Agisoft Metashape for photogrammetry and 3D modeling; OCHRE for integrated multimedia data management; and Python software libraries for image analysis, feature recognition, and statistics. Gamification and the use of augmented reality and virtual reality in archaeology are discussed briefly; these topics are covered in detail in DIGS 20041/30041, "Digital Media I: Game Design with Unity," and DIGS 20042/30042, "Digital Media II: Extended Reality with Unity."
Instructor(s): David Schloen Terms Offered: Spring

Prerequisite(s): DIGS 20001/30001, "Introduction to Computer Programming with Python" (or an equivalent course in computer programming), DIGS 20002/30002, "Data Analysis I: Introduction to Statistics" (or an equivalent course in statistics), and DIGS 20003/30003, "Data Management for the Humanities." These prerequisites may be waived in some cases with the instructor's consent.
Equivalent Course(s): DIGS 20021

DIGS 30031. Digital Texts I: Corpus Building and Corpus Statistics. 100 Units.
The purpose of this course is to introduce students in the humanities to digital methodologies for the study of texts. Students will not only learn how to construct a digital text collection but also how to process text as data. Among the various digital approaches which will be introduced in class are concordances (retrieving occurrences of words), semantic similarity detection (finding similar passages across texts), sentiment analysis, and stylometry (analysis of literary style). The course will highlight how these approaches to text can provide new avenues of research, such as tracing intellectual influence over the longue durée, or uncovering the distinguishing stylistic features of an author, work, or literary movement. Students need no prior knowledge of such methods, and the course will aim at providing both the basics of computer programming in Python and giving students the necessary tools to conduct a digital humanities project. The source material for the course will be drawn from literary sources, and students will be free (and encouraged) to use texts which are relevant to their own research interests. Students will need to bring a laptop to class.
Instructor(s): Clovis Gladstone Terms Offered: Winter
Equivalent Course(s): DIGS 20031, RLLT 24550, RLLT 34550

DIGS 30032. Digital Texts II: Natural Language Processing and Deep Learning. 100 Units.
This course builds on DIGS 20031/30031, "Digital Texts I: Corpus Building and Corpus Statistics," by introducing students to advanced computational methods for studying texts, including deep learning (AI), with emphasis on the needs of research in the humanities. Students will evaluate these methods and gain practical experience in applying them. Prerequisites: DIGS 20001/30001, "Introduction to Computer Programming with Python," DIGS 20004/30004, "Data Analysis II: Data Visualization and Machine Learning," and DIGS 20031/30031, "Digital Texts I: Corpus Building and Corpus Statistics," or equivalent prior preparation.
Instructor(s): Jeffrey Tharsen Terms Offered: Spring
Prerequisite(s): DIGS 20001/30001, "Introduction to Computer Programming with Python," DIGS 20003/30003, "Data Management for the Humanities," DIGS 20004/30004, "Data Analysis II: Data Visualization and Machine Learning," and DIGS 20031/30031, "Digital Texts I: Corpus Building and Corpus Statistics."
Note(s): Prerequisites may be waived by permission of the instructor for students who have sufficient background in the subject.
Equivalent Course(s): DIGS 20032

DIGS 30035. Introduction to Cultural Analytics. 100 Units.
This course introduces students to the emerging field of cultural analytics - a field that sits at the intersection of cultural studies, information science, and the computational social sciences. At root, the field is oriented around questions of how to study the cultural past and present (whether text, image, or sound) with the aid of data-driven methods, and what such methods imply for our understanding of human culture. The course will begin with a look at how past scholars wrestled with the problem of applying numbers to cultural objects, and some of their initial attempts to do so. We then move to survey the wide variety of scholarship happening today under the influence of new digital technologies and vast new information infrastructures. How have scholars across different humanistic fields adopted new computational tools? What methodological and theoretical problems has this raised? What new discoveries has it yielded? Finally, the course will consider new research directions opened up by recent advances in artificial intelligence and the increasing convergence of cultural production with online platforms that are global in reach (e.g., TikTok, Wattpad, Netflix, Spotify). Students will engage with these questions through primary readings, attempts to replicate past studies, and by designing their own research proposals.
Instructor(s): Long, Hoyt Terms Offered: Spring
Note(s): Some programming experience preferred, but not required

DIGS 30041. Digital Media I: Game Design with Unity. 100 Units.
This course introduces the principles, practices, and techniques of game design. Students will develop several small games, gaining hands-on experience with the Unity development platform and the C# programming language it uses. The course takes a "ground up" approach: starting with the fundamentals of object- and component-oriented programming, then using those fundamentals to build complex, interactive experiences. While the course focuses on Unity, an introduction to software design patterns and an emphasis on a rapid feedback/iteration cycle will provide tools that translate to other game engines and creative computing projects. Through critique and the close examination of case studies from prior art, students will cultivate their critical eye and articulation, equipping them to discuss, assess, and refine games at various stages of development.
Prerequisite: DIGS 20001/30001, "Introduction to Computer Programming Using Python" or an equivalent course in computer programming.
Instructor(s): Cameron Mankin Terms Offered: Winter
Prerequisite(s): DIGS 20001/30001, "Introduction to Computer Programming with Python" (or an equivalent course in computer programming).

Note(s): Undergraduate MAAD students attempting to join the course should fill out this form to join a shortlist: https://airtable.com/appF7rAlnH3zoRdB4/shrfuB9cVwZC1b5hc. ONLY undergraduates who fill out the form will be considered for the course. Please do NOT send consent requests before filling out the form.
Equivalent Course(s): MADD 20041, DIGS 20041

DIGS 30042. Digital Media II: Extended Reality with Unity. 100 Units.
Part-two of a two-course sequence, this course teaches students how to develop extended reality (XR) environments using the Unity platform. The course emphasizes the creation of augmented reality (AR) and virtual reality (VR) environments, allowing students to gain hands-on experience. Additionally, students will discuss development with their instructor and peers, assisting them in refining their skills and ideas while creating. By the end of the quarter, students will clearly understand the process of transforming ideas into final products, equipping them with the necessary tools for future XR endeavors.
Instructor(s): Crystal Beiersdorfer Terms Offered: Spring
Prerequisite(s): DIGS 30041/MAAD 20041, "Digital Media I: Game Design with Unity" (or an equivalent Unity course approved by the instructor).
Note(s): Undergraduate MAAD students attempting to join the course should fill out this form to join a shortlist: https://airtable.com/appF7rAlnH3zoRdB4/shrfuB9cVwZC1b5hc. ONLY undergraduates who fill out the form will be considered for the course. Please do NOT send consent requests before filling out the form.
Equivalent Course(s): MADD 20042

DIGS 30043. Digital Media III: Creating 3D Worlds in Blender. 100 Units.
This course introduces students to digital rendering, modeling, and sculpting using the Blender platform.
Prerequisite: DIGS 20001/30001, "Introduction to Computer Programming Using Python" or an equivalent course in computer programming.
Equivalent Course(s): DIGS 20043, MADD 20043

DIGS 49900. Reading and Research. 100 Units.
Reading and Research
Instructor(s): David Schloen Terms Offered: Spring

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