

DIGITAL HUMANITIES AND SOCIAL SCIENCE (DHSS-GA)

DHSS-GA 1120 Introduction to Programming (4 Credits)

Typically offered Fall

This course introduces students to the fundamentals of computer programming as students design, write, and debug computer programs using the programming language Python. No knowledge of programming is assumed.

Grading: GSAS Graded

Repeatable for additional credit: No

DHSS-GA 1122 Web Development (4 Credits)

Typically offered Spring

This course uses a project-based learning approach towards the study of web technologies and web programming. Students study the principles of web design and each student builds one or more interactive websites based on content relevant to their scholarly interest in the humanities or social sciences. Not open to graduate Computer Science, Information Systems, Mathematics or Scientific Computing students.

Grading: GSAS Graded

Repeatable for additional credit: No

DHSS-GA 1124 Digital Media Theory (4 Credits)

This course introduces the history and concept of the digital. Digital systems are representation systems, and so engage a wide variety of philosophical sources, literary theory, and media theory. Digital technologies developed from a dense multidisciplinary discourse that included mathematics, language philosophy, logic, and philosophy, reposing the classical metaphysical question of the relationship of representation to reality. The course focuses on three concepts that emerged from this rich overlap: information, computation, and the network. These concepts are associated with Claude Shannon, Alan Turing, and Warren McCulloch, and rely on frameworks from Gottfried Wilhelm Leibniz, Immanuel Kant, and the trajectory from Gottlob Frege and Charles Sanders Peirce through the Vienna School's logical positivism, Ludwig Wittgenstein, and beyond. The philosophical origins of digital technologies form a dialogue with media-theoretical assessments of those same technologies, and the course will give particular weight to the works of Friedrich Kittler, N. Katherine Hayles, Wendy Chun, and Luciana Parisi, Ramon Amaro, and Sianne Ngai, with a focus on bridging the gap between the origins of digital technologies and their extensive aesthetic and political-economic consequences in the present. This course fulfills a core requirement for the Advanced Certificate in Digital Humanities.

Grading: GSAS Graded

Repeatable for additional credit: No

DHSS-GA 1125 Programming with Data (4 Credits)

Data is the means by which we turn experience into something that can be published, compared, and analyzed. Data can facilitate the production of new knowledge about the world—but it can also be used as a method of control and exploitation. As such, the ability to understand and work with data is indispensable both for those who want to uncover truth, and those who want to hold power to account. This intensive course serves as an introduction to essential computational tools and techniques for working with data. The course is designed for artists, designers, and researchers in the humanities who have no previous programming experience. Covered topics include: the Python programming language, Jupyter Notebook, data formats, regular expressions, Pandas, web scraping, relational database concepts, simple data visualization and data-driven text generation. Weekly technical tutorials and short readings culminate in a self-directed final project.

Grading: GSAS Graded

Repeatable for additional credit: No