

# Capstone Project Seminar

## DHSS-GA.2000

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### Course description:

The purpose of the Capstone Project Seminar is to provide every student with an opportunity to apply the skills that they have mastered in the other core and elective courses in the MS in Applied Computing to the development of an independent project of their own design.

### Overview:

This is a capstone project course focusing on the application of computer-science based tools to a project in the humanities and/or social sciences. Students will be required to write a project proposal, along with interim, final and other reports. Students are also required to do a formal presentation in which they discuss their project's content and scholarly goals along with the technical requirements and development of their work.

Students should submit a proposal for a capstone project of their own design, due to the course instructor two weeks in advance of the first course meeting. The proposal should be no more than 1000 words. The proposal should include:

- Brief description of project's objectives and significance
- Technology requirements, specifying anticipated tools, methods and competencies required to accomplish the project outcomes
- Preliminary development schedule for the course term

### Sample Projects

Some examples of possible projects could include: building an online archive based on primary source materials accompanied by original research on the materials; building an online study of a dataset derived from primary source materials using extensive data visualizations and/or maps accompanied by research to interpret the results; developing an original statistical study based on textual analysis of a corpus in a specific field accompanied by a research report to contextualize the findings; using 3-D models to study artifacts for scholarly purposes; analyzing political speeches for tone or sentiment; building integrated databases of campaign spending or other federally reported data that is currently hard to use; building platforms to allow for experiments using Mechanical Turk or other crowd-sourcing applications; building tools to analyze large scale social or political networks.

### Readings:

Readings for this course will be selected from current sources reporting on trends, projects, and research in the Digital Humanities and in the Computational Social Sciences. Current research in the Digital Humanities could be drawn from digital publications such as M.I.T.'s HyperStudio publication "h+d insights" (available from their site <http://hyperstudio.mit.edu/>); from the MLA Commons' "Literary Studies in the Digital Age", the Digital Humanities Quarterly (<http://www.digitalhumanities.org/dhq/>),

as well as journals specific to the students' fields such as the "International Journal for Digital Art History" (<http://www.dah-journal.org/index.html>), and many other sources.

#### Course Meetings: Workshops and Tutorials

The course will meet weekly for 2.5 hours so that all students can report on their progress and give feedback to each other. Students will have the option of attending these class meetings virtually by sharing screens with the instructor and other students. The course instructor will also devote an hour each week to sequential individual meetings with students; again these individual meetings can be either physical or virtual. In the final course meetings, each student will present his or her work both from a content perspective and a technical perspective. In addition, four guest speakers from NYU Humanities and Social Science departments will present their research on topics in the Digital Humanities and Computational Social Sciences over the course of the semester.

#### Prerequisites

Students must have completed at least three of the following four courses: Introduction to Programming, Programming Applications, Web Development, and Working With Data. Students must also have completed Statistics: Understanding and Using Data.

#### Grading for a research-based computational project (Digital Humanities or Computational Social Sciences):

Written project proposal and plan	10%
Written interim report	10%
Annotated bibliography	10%
Written final report	10%
Final Technical documentation	10%
Final Website to present the student's findings	10%
Source code (Python, database scripts, etc.)	40%

#### Grading for an archival website project (Digital Humanities):

Written project proposal and plan	10%
Written interim report	10%
Annotated bibliography	10%
Written final report	10%
Technical documentation	10%
Source code (web scripts, database E-R diagrams, etc.)	10%
Archival website to present the student's findings	40%

#### Course materials: software

The software development environment for each student will be based on the goals and requirements for his or her specific project.