HISTORY 1XX/ DH 1XX

Introduction to Geospatial Humanities

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Course Description

This course introduces undergraduate students to the theory and methods of the geospatial humanities, understood broadly as the application of GIS techniques and other quantitative methods in the humanistic study of social and cultural patterns in past and present settings. By engaging with spatial theory and learning technical methodologies, such as those afforded by ArcGIS software, students develop an understanding of the research questions and tools available in this new field of inquiry, particularly in relation to spatial history and related cultural phenomena. In order to build these capacities, students will work throughout the quarter in project-based learning grounded on the basic elements of spatial theory for the humanities connected to social scientific and statistical methods supported by the staff and resources of the Center for Spatial and Textual Analysis. This course meets the Ways requirements for Aesthetic and Interpretive Inquiry or Social Inquiry.

Course Outcomes

By the end of the course, committed students will have demonstrated a command of the relevant theoretical literature by applying these concepts to hands-on research projects in the geospatial humanities. Students will learn to manipulate GIS software and generate basic spatial analysis. Through the project-based component of the course, students will use these techniques, guided by theoretical rigor, to analyze patterns of change in time and space with respect to a broad range of humanistic questions including literary, historical, and artistic phenomena. Employing tools such as GIS and Adobe Creative Suite, students will generate visual representations of geospatial phenomena in humanistic perspective. Students will be able to explain the underlying warrants for the selection of specific research methods as well as be able to provide critical commentary on the results of their study.

Course Requirements

1. Regular attendance and participation in all course meetings.

2. Completion of course readings in advance of class meetings. Please note that some of the readings are available as scans on the History 1XX space on the sul-koala server hosted by CESTA. If you wish to use the scans, you should also plan to come to class with printouts or a computer with the files for reference.
3. Completion of the ArcMap GIS tutorials and lab exercises led by Celena Allen, CESTA GIS Associate. Attendance and participation in lab meetings is required. Lab meetings will take place in two segments during the weeks indicated below. First, there will be a technical overview provided during the first 30 minutes of our regular class meeting time—this will ensure that everyone is ready to complete the lab independently. Second, students will complete lab tutorials on their own schedule over the following week. To wit, the lab exercises include:
   a) Intro to ArcCatalog: Acquiring and Managing Data
   b) Intro to ArcMap: Exploring and Visualizing Spatial Data
   c) Making GIS Maps: Data Creation & Modification and Basic Spatial Analysis
   Additional workshops on specific spatial analysis tools in GIS as well as other visualization technologies and collaborative research will be held on demand.

4. Completion of the literature review and final collaborative project, as described in the Appendix. Intermediate requirements include the following:
   a) Preliminary project assignments (week 2)
   b) Sketch layout (week 6)
   c) Draft layout (week 9)
   d) Final layout (week 10)

**Course Grading**

Literature Review, students select between 3 and 5 course texts pertinent to their collaborative project and write a 1500 word review—20%

Participation, including tutorials and lab exercises—20%

Final group project—60%

**Sample Readings**

*Atlas of the European Novel*, by Franco Moretti
*The Visual Display of Quantitative Information*, by Edward Tufte
*The Road to Botany Bay*, by Paul Carter
*Infinite City*, by Rebecca Solnit
*Nature’s Metropolis*, by William Cronon
*The Production of Space*, by Henri Lefebvre
“Emerging Trends in Historical GIS,” *Historical Geography*, by Anne Knowles

**Preliminary Course Schedule**

Week 1
Session 1: Introduction to Geospatial Humanities
Session 2: Introduction to GIS and spatial statistics

Week 2
Session 1: Spatial History, Theory & Method

LAB #1
Intro to ArcCatalog: Acquiring and Managing Data

Session 2: Spatial History, Critical Interpretations

Week 3
Session 1: Spatial History and Environmental Humanities

LAB #2
Intro to ArcMap: Exploring and Visualizing Spatial Data

Session 2: Spatial History and Social Analysis

Week 4
Session 1: Mapping Culture

LAB #3
Beginning Data Manipulation

Session 2: Mapping Culture, Literature

Week 5
Session 1: Mapping Culture, Literature II

Session 2: Visualization—Concepts and Methods [guest lecture, Erik Steiner, CESTA Creative Director]

Week 6
Session 1: Team Projects, Theory

Session 2: Tools and Techniques—Introduction to DH geospatial programming and online resources

Week 7
Session 1: Team Projects, Method

Session 2: Project Presentations & Discussion

Week 8
Session 1: Representing Everyday Life

Session 2: Critical GIS—doing things the wrong way on purpose

Week 9
Session 1: Humanities meets Social Science—reading NYT visualizations against the grain

Session 2: Draft layout critique

Week 10
Session 1: Predicting the Space of Culture

Session 2: The Space of Games

Finals Week
Public presentation of final group projects @ CESTA
Appendix

Final Project
The final project for the course is a collaboratively-developed “atlas-style” layout that effectively captures a research thesis through visualization and narrative—OR a web-based visualization of historical data combined with a short text and supporting graphics, figures, and tables as needed.

The final layout your team produces may be no more than a single-sided 11”x17” sheet of paper – including all maps, graphs, tables, charts, text, and captions necessary to tell your story. You will have a style guide to help develop a coherent look and feel across all the projects in the class.

Example Project Tracks

A) Streets of San Francisco--Space and Culture (analysis of street names over historical time, draws upon Paul Carter, but also uses our extensive existing materials on SF and historical street grids)

B) Western Railroads and Political Space in Historical Perspective (uses our railroad shapefiles to assess political ramifications of railroad construction in conjunction with census and election data for the 1870s-1910s--ties in with Cronon and Scott)

C) Human-Environment Interaction: Conservation Histories (draws upon the conservation dataset, connects to environmental data available through ESRI)

D) Mapping Novels: Place and Space in Nineteenth-Century Fiction (draws on Lit Lab corpus, connects to Moretti)
E) Distant/Close Reading of Maps: Exploring the Rumsey Collection (draws on Salim and the resources of the map collection)

F) Wildcard: 3-5 students, if all agree, can propose a project of their choosing

In order to complete the final project, student teams will learn the complete set of skills required to see a spatial history research project from inception to completion.

These skills include:

- developing a spatial thesis
- clarifying and condensing a broad research topic into its manageable essence
- using GIS to collect, analyze, and explore spatial data
- creating professional quality maps and graphs
- working collaboratively with a team with diverse skills and potentially conflicting visions