SYLLABUS

THE OHIO STATE UNIVERSITY
ANTHROPOLOGY 651
Spatial Analysis for Anthropologists

Instructor: Dr. Julie S. Field
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Course Objectives
　　This course will introduce students to the various theoretical and methodological approaches to spatial analysis in anthropological research. Students enrolled in this course will investigate a variety of anthropological problems that involve spatial analysis, ranging from the tracking of primates and foragers to recording the extent of archaeological deposits. Students will learn about the various methodologies for recording spatial data (basic cartography, GPS, and mapping), and also how GIS and other software programs can be used to analyze these data. The course will emphasize research design, and students will be required to construct and run their own research project involving spatial data. The explicit goal of this project is to train students how to record and analyze a wide range of data. Students will also be required to demonstrate their skills, which will include a class presentation and a written research paper.

Disability Services
Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform their instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, http://www.ods.ohio-state.edu/.

Policy on Academic Misconduct
　　All students must be familiar with the University rules governing alleged academic misconduct and the Code of Student Conduct (http://studentaffairs.osu.edu/info_for_students/csc.asp). Alleged cases of academic

misconduct (cheating, plagiarism, etc.) will be referred to the Committee on Academic Misconduct.

Course Format and Requirements

Course material will be covered using both lectures and exercises. The course will include 8 in-class exercises, two exams, and a research project. The exercises will be conducted in class, and focus on the analysis of archaeological data (e.g., map reading, building geodatabases). <u>All exercises are due the following week they were assigned.</u> There will be two examinations: a midterm and a final exam. These exams are cumulative in their coverage of the course material, and include material from lectures, course readings, and assigned exercises. Time for work on the course project will also be provided in class during the end of the semester. The subject of the project will be of the students choosing, but must focus on an anthropological problem and utilize some of the analytical techniques covered in the course. The project includes an in-class presentation and a final paper. The papers should clearly identify the problem and the data requirements, and demonstrate a series of appropriate analyses.

In support of the project and the research paper, students must submit the paper bibliography and a very detailed outline by the 6th week of the quarter. References for this paper must be from credible sources (i.e., peer-reviewed journals or books). **No Internet sites will be allowed as references.** Journal articles or books available via the Internet are okay. You must use the Society for American Archaeologists (SAA) format for your bibliography. The outline should provide sufficient detail that I can evaluate your coverage of the subject adequately.

The paper's text should be <u>10-12 pages of typed text,</u> double-spaced with 1-inch margins. The title page and bibliography do NOT count as part of the text page count, however, they are required components of your paper. Standard font type and size should be used (e.g., no bigger than 12 point Helvetica, Arial, Geneva, Times). Page numbers are required. In addition, papers must include a cover page with your name, the course number and title, and the date.

Research papers will be graded as follows: Grammar, spelling, and organization – 20 %
                                             Content and Bibliography – 70%
                                             Adherence to formatting guidelines – 10 %

Students must use SAA formatting for your bibliography and in-text citations. You can also access them at: http://www.saa.org/publications/StyleGuide/styleGuide.pdf.

Evaluating Student Performance

Final grades will be based on the OSU standardized distribution using the total number of points available for the course. The following scale will be followed: A (93-

100%); A- (90-92%); B+ (87-89%); B (83-86%); B- (80-82%); C+ (77-79%); C (73-76%); C-(70-72%); D+ (67-69%); D (60-66%); and E (Below 59%).

Undergraduate Grading Scheme		*Graduate Grading Scheme*	
Exercises 1-8 (25 pts each):	200 (50%)	Exercises 1-8 (12.5 pts each):	100 (22%)
Midterm Exam:	50 (12.5%)	Midterm Exam:	50 (11%)
Final Exam:	50 (12.5%)	Final Exam:	50 (11%)
Project Presentation:	20 (5%)	Project Presentation:	50 (11%)
Project Paper:	80 (20%)	Project Paper:	200 (44%)
Total:	**400**	**Total:**	**450**

Requirements for Students of Different Levels

Graduate students enrolled in the course are required to emphasize research design and writing, and grading is weighted to stress these aspects of the course. Graduate students are expected to formulate research projects that are based on their current research in anthropology, and should strive to produce a research paper that is publication quality. To that end, graduate student papers should outline the context of the research project within their subdiscipline, include the appropriate level of citation, and also emphasize the limitations of their chosen methods and the results. Graduate student papers should adhere to the style guidelines listed above.

Policies

Exam and absences can only be excused with a written note from a health care provider. A delay in handing in the exercises or the project paper will result in point deduction.

Required Text and Readings

Readings will be selected from the following texts, and according to the attached syllabus. Readings must be completed prior to each class period.

Aldenderfer, Mark and Herbert D. G. Maschner (eds)
   1996   *Anthropology, Space and Geographic Information Systems*. New York. Oxford University Press.

Cromley, Ellen K. and Sara L. McLafferty
   2002   *GIS and Public Health*. New York. The Guilford Press.

Heywood, Ian, Sarah Cornelius, and Steve Carver
   2006   *An Introduction to Geographic information Systems.* New York. Prentice Hall.

Ormsby, T., Napoleon, E., Burke, R., Groessl, C., Feaster, L.

2008   *Getting to Know ArcGIS Desktop: The Basics of ArcView, ArcEditor, and ArcInfo Updated for ArcGIS 9* (includes trial-version CD of ArcGIS for home use). ESRI Press, Redlands, CA.

Steinberg, Steven J and Sheila L. Steinberg
2006   *Geographic Information Systems for the Social Sciences: Investigating Space and Place*. Thousand Oaks. Sage Publications.

Course Schedule and Required Readings

Week	Topics	Reading Assignment	Assignment
Week 1	Course Overview Examples of Spatial Analysis in Anthropology	Aldenderfer Ch. 1 Heywood Ch. 1 Ormsby et al. Ch. 1-2	Exercise 1 Quantitative spatial analysis
Week 2	Archaeology and spatial analysis Biological anthropology and spatial analysis	Aldenderfer Ch. 10, 11 Cromley Ch. 7, 8 Ormsby et al. Ch. 3-4	Exercise 2 Spatial relationships
Week 3	Sociocultural anthropology and spatial analysis Primates studies and spatial analysis	Aldenderfer Ch. 2, 3 Heywood Ch. 10 Ormsby et al. Ch. 5-7	Exercise 3 Research Design and implementation
Week 4	Case studies: data sources and simple analyses	Steinberg Ch. 5, 6 Ormsby et al. 8-9 Cromley Ch. 3	Exercise 4 Integrating datasets
Week 5	Spatial Data models and practical analyses Midterm Exam	Heywood Ch. 3	None
Week 6	Representing deposits, people, and monkeys— raster vs. vector	Heywood Ch. 7 Ormsby et al. 10-11	Exercise 5 GIS analysis I
Week 7	Hiearchical clustering , buffering, statistical tests	Heywood Ch. 6 Ormsby et al. 12-13	Exercise 6 GIS Analysis II Class Project Proposal Due
Week 8	GPS data recording and integration	TBA	Exercise 1 GPS data acquisition and post processing

Week 9	Creating maps for research research design	Heywood Ch.7, 8 Ormsby et al. 17-18 Aldenderfer Ch. 14 Steinberg 3,4	Exercise 8 Output
Week 10	Lab time for projects	No readings	
Finals Week	Poster Presentations of Projects		None