

ANTHROPOLOGICAL GIS  
ANT-3930  
SPRING 2013

Lecture, Section 1199 and 1198: Tuesday, Period 3-4

Location: TUR B354

Seminar, Section 1198 & 1199: Thursday, Period 3

Location: TUR 1208H

Instructor: Scott Macrae

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Office Hours: Monday, 7 & 8

**Summary Description:** The primary goal of this course will be to provide a cursory introduction to past and contemporary applications of Geographic Information Systems (GIS) within the discipline of anthropology and archaeology. In addition, this course will provide students with the necessary fundamental knowledge to operate ArcGIS. Finally, students will be able to explore in more detail a singular application of ArcGIS pertaining to their interests in anthropology.

**Course Objectives:** This course will be comprised of two components, lectures and labs.

The anthropological uses of GIS have generated a number of applications, represented in a growing body of literature. Lectures will introduce the history and development of GIS and remote sensing as well as an overview of its many contemporary applications in the disciplines of anthropology and archaeology. Weekly labs will include ESRI modules during the first nine weeks of classes to provide students with the fundamental operational knowledge of ArcGIS. After the completion of these modules, lab discussions will shift towards specific applications of ArcGIS within the fields of anthropology and archaeology. These discussions and assigned readings will be tailored to address topics of interests that have been identified through student abstracts for final poster presentations. By the end of the course students should have acquired a sufficient knowledge of ArcGIS to produce a poster presentation and discuss a specific application of GIS within their field of interest.

Student learning Outcome:

- Students will develop fundamental skills for using ESRI ArcGIS to address common practices such as inventory, map-making, spatial analysis, and publication.
- Student will explain the vast applications of ArcGIS within the fields of anthropology and archaeology
- Students identify the current uses and directions of anthropological applications of GIS

**Prerequisites:** This course does not presume any knowledge of, or experience with, GIS. Although as a computer based course specifically ArcGIS a Windows operating system, students need to possess knowledge of Windows operational systems. In addition student must have an cursory knowledge of anthropological and archaeological research methods, data acquisition, and research

problems. As much of the focus of the class will be on archaeological applications and case studies knowledge of the discipline is highly recommended.

**Required Reading:** While the work load may appear strong the required texts are an easy read and essential for developing a solid foundation in Anthropological GIS. Weekly case studies will not exceed more than one article per week when required.

### Required Text

Conolly, James, and Mark Lake

2006 *Geographic Information Systems in Archaeology*. Cambridge University Press.

Ormsby et al. (an excellent guide for using ArcGIS)

2008 *Getting to Know ArcGIS Desktop, Second Edition (Updated for ArcGIS 10)*. ESRI Press

\*This book includes a 180 day trial of ESRI ArcGIS Desktop software.

### Weekly Case Studies

To be announced and made available via E-Learning.

### Course Outline:

DATE	TOPIC	READING
Week 1: Jan 8	Introduction	C & L: CH 1
: Jan 10	Module 1	ESRI: CH 4
Week 2: Jan 15	Map Projections and Coordinate systems	C & L: CH 2
: Jan 18	Module 2	ESRI: CH13
Week 3: Jan 22	Geographical Data Models	C & L: CH 3
: Jan 24	Module 3	ESRI: 20
Week 4: Jan 29	Introduction to the Geodatabase	C & L: CH 4
: Jan 31	Module 4	ESRI: CH14
Week 5: Feb 5	Data Exploration	C & L: 7
: Feb 7	Module 5	ESRI: CH 5-7
Week 6: Feb 12	Getting Information: Querying Data	TBA
: Feb 15	Module 6	ESRI: CH 8-9
Week 7: Feb 19	Data Acquisition and Quality	C & L: CH 5
: Feb 22	Module 7	ESRI: 15-16
Week 8: Feb 26	Displaying and Publishing Data	C & L: CH 12
: Feb 28	Module 8	ERSI: 18, 19
Week 9: March 5	<b>SPRING BREAK</b>	
: March 7	<b>SPRING BREAK</b>	
Week 10: March 12	Vector and Raster Data Analysis	C & L: CH 6, 8, 9
: March 15	Module 9 and 10	ESRI: 10-12 <b>Abstract Due</b>
Week 11: March 19	Advanced Analysis 1: Cost Surface and Paths	C & L: CH 11
: March 21	Discussion	TBA
Week 12: March 26	Advanced Analysis 2: Viewsheds and Catchment	C & L: CH 10

:March 29	Discussion	TBA
Week 13: April 2	Advanced Analysis 3: Predictive Modeling	C & L: CH 13
: April 5	Discussion	TBA
Week 14: April 9	Advanced Analysis 4: Remote Sensing and Visual Representation	TBA
: April 12	Discussion	TBA
Week 15: April 16	The Future of Anthropological GIS Guest Lecture: James Conolly <i>via Skype</i>	
: April 19	<b>Poster Presentations</b>	
Week 16: April 23	<b>Poster Presentations</b>	

**Evaluation:** Since this course is as an introduction to GIS and will require hands on activities, attendance is **mandatory**. Classes will be comprised of three components. First, lectures in which GIS applications will be discussed. Second, labs will require the completion of ten weekly modules. Third, labs will shift towards the discussion of weekly case studies and specific applications of GIS. Attendance and participation each week will comprise 45% of the grade. Attendance will be noted during both lectures and labs. Participation will be indicated through active involvement in class discussion. In addition, the weekly completion of ten modules will account for an additional 20%. The remaining grades will be based on the completion and presentation of a final project. The final project, on a topic of the students choosing, will include an abstract with bibliography (10%) as well as the poster submission and presentation (25%).

Grades will be based on:

	Percentage of Grade	Number of units	Points per unit
Attendance and Participation	45%	30	1.5
ESRI Modules	20%	10	2
Abstract and Bibliography	10%	1	10
Poster Presentation	25%	1	25

\* The total number of points accumulates to 100 for the entire semester.

Grades assigned as follows:

A	≥ 90%
A-	87-89.9%
B+	85-86.9%
B	80-84.9%
B-	77-79.9%
C+	75-76.9%
C	70-74.9%
C-	67-69.9%
D+	65-66.9%
D	60-64.9%
D-	57-59.9%
E	< 56.9%

Please note policies for calculating grade point averages. Please see <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>. Also note that a grade of C- does not count for credit in major, minor, Gen Ed, Gordon Rule, or college basic distribution credit (for further information regarding minus grades go to: <http://www.isis.ufl.edu/minusgrades.html>).

**Grade Dispute Policy:** Concerns about grades should be addressed within 48 hours from when they are posted. All grades will become final after the 48 hour.

**Make-up Assignment Policy:** Make-up assignments will be administered for students who miss the regularly scheduled modules due to a University approved excused absence such as illness, serious family emergencies, religious holidays, court-imposed legal obligations, and participation in official university activities. Documentation is required to substantiate your absence.

**Academic Honesty, Student Responsibilities, Student Conduct Code:** Students are required to do their own work. The penalty for cheating or plagiarizing will result in an automatic zero for that exam or assignment and the incident will be reported to university administration for disciplinary action. The student is responsible to review the UF Student Responsibilities Guidelines, available online at [www.registrar.ufl.edu/catalog/policies/students.html](http://www.registrar.ufl.edu/catalog/policies/students.html).

**Disability Accommodations:** Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor. Further information can be found at [www.dso.ufl.edu/drp](http://www.dso.ufl.edu/drp).

**Student Conduct:** All students must comply with the Student Conduct Code which can found at [www.dso.ufl.edu/studentguide/studentconductcode.php](http://www.dso.ufl.edu/studentguide/studentconductcode.php). Any behavior that interferes with either the instructor's ability to conduct the class or the ability of other students to benefit from the instructional program will not be tolerated. **Please turn off cell phones** and all other electronic devices before class. Laptops may only be used to take notes. Disruptive students will be asked to leave.

**UF Counseling and Other Services:** Resources are available on campus for students having personal or goal oriented problems.

1. Counseling and Wellness Center, Radio Road, 352-392-1575
2. Reading and Writing Center, SW Broward Hall, 352-392-2010
3. Career Resource Center, Reitz Union, 392-1601

**Disclaimer:** The instructor reserves the right to make adjustments to the schedule and lecture topics during the course of the semester. Any changes will be announced in class and on the E-Learning website.