Course Title:	**GIS and Government Applications** **GE0370 (4 Credit)**
Prerequisites:	*none*
Class Meeting Time & Location:	Various times and locations to be determined

Instructor: **Ryan Kirk**, Dept of History and Geography, Dept of Environmental Studies
rkirk2@elon.edu (e-mails will be responded to within 24 hours)
Office: 112A Lindner Hall
Work: 336-278-6477; Cell: 612-280-7157

Office hours: M   3-4:00 p.m.   **T   4:15 – 5:15 p.m. (in the McMichael 320 lab)**
W   11:00 – 12:00.   Th   10:30 – 11:30 p.m.
(*or by appointment*)

Course Web site: We will use **blackboard** extensively for communication, submission of assignments, and grading.
For help getting established on blackboard see:
https://blackboard.elon.edu/ → look for the "BB Help" tab at the top of the page

Required Text: No required text. All readings will be as pdfs.

Course Overview: This course is an applied course designed to learn the myriad ways in which GIS supports the functioning of government organizations. Through individual and group research and applied GIS projects.

Course Objectives: 1) Extended competency with the ArcGIS software suite
2) Exposure to the breadth of ways GIS is used in government applications
3) Resourcefulness in geospatial problem solving
4) Improve writing, critical analysis, communication, and research skills

General Course Structure: This course will be designed around a series of research tasks and applied GIS projects. It will be a flexible structure with students working individually or small groups, and with regular individual sessions with the instructor.

Grades: Grades will be determined by the following:

Participation	15%
Research Assignments (5 @ 4% each)	20%
Literature Reviews (2 @ 10% each)	20%
Interim Progress Reports (3 @ 5% each)	15%
Final Project Report	30%

Attendance & Participation Policy: As this is a project driven course, <u>attendance will not be required</u>. However, given the size and nature of this course, you must be in regular contact with the instructor as part of the participation grade.

The participation grade rewards demonstration of the following characteristics:
a) <u>Preparedness:</u> The student comes prepared for class sessions, having completed readings and addressed assigned questions or research topics.
b) <u>Initiative:</u> The student takes a lead in group-related work and seeks out ways for advancing our success of the course.
c) <u>Contributive:</u> The student regularly contributes to discussions and group projects, both in and out of class sessions.
d) <u>Professionalism:</u> The student arrives on time, is respectful in discussions, and assists other students where possible.

Research Assignments (5): The research assignments will be individualized based on the extent of your previous GIS experiences. Some research assignments will relate to government applications, while others will focus on the GIS software. All will require a written summary of your findings, and, depending on the circumstances, might also consist of a demonstration of software functionality.

Literature Reviews (2 @ 10% each): Literature reviews will consist of research and synthesis on a specific application of GIS within government systems. They should be 2000-2500 words in length (5-8 pages) with at least 10 citations. At least 7 of the citations must be from books or peer-reviewed journal articles. The objectives of the lit reviews are for you to 1) explore a

specific application in detail; 2) synthesize recent research on the application, and 3) develop arguments for how this application would be worthwhile as a taxpayer funded project.

Interim Progress Reports (3 @ 5% each): The progress reports will be you way of communicating to the instructor what you have accomplished in your group projects and what you have learned about GIS and the role of GIS in government applications. There are no length requirements (I would think somewhere between 2-4 pages would be appropriate), but you should be specific and reflective. Grades will be determined as 50% thoughtfulness of the reflection, 30% depth and breadth of the reflection, and 20% clarity and writing quality of the report. You can draw from all of our various components: guest speakers, your readings, your research, and course discussions.

Final Project: The final project will consist of a series of group projects to aid local government research in the Haw River watershed. This is a spatial unit for which Elon has a strong research history, but also an area that crosses several jurisdictional boundaries, so we will explore how GIS can be a way to integrate information and needs across jurisdictions. The two primary projects will be to 1) aid the Alamance County Parks and Rec department, and 2) aid data uncertainty regarding agriculture and riparian vegetation associated with the Jordan Lake Rules. The final project will consist of a group paper, an organized set of developed data, and a separate individual reflection.

Grading Policies:

Overall grading is criterion-referenced, in which grades are designed to measure how well students perform relative to predetermined standards. Grades follow the traditional scale and the traditional thresholds are guaranteed: (e.g., > 93% = A, 90-93% = A-, etc). No individual assignments will be curved, but the final grades may be curved upwards (never downwards) at the discretion of the instructor based on how class performance and grade distributions match expectations. I will work hard to communicate grade status throughout the semester as well as give indications of any potential final curve.

Bonus Points may be added on any of the assignments at the discretion of the instructor, based on any of the following criteria that indicate an "above-and-beyond" effort or quality-level: 1) professional presentation, 2) clarity of argument/presentation, or 3) thoroughness of argument/presentation. Thus, a grade greater than 100% is possible.

Grades on each assignment can be contested to the instructor up to 2 weeks after the assignment is returned for errors or perceived injustice. Send an e-mail or bring a written statement to office hours containing sound reasons why a grade should be changed.

Incomplete grades are assigned at the discretion of the professor when, due to extraordinary circumstances, e.g., hospitalization, a student is prevented from completing the work of the course on time. Requires a written agreement between the professor and student *before* the final exam.

Submitting Assignments: Due dates for assignments are listed on the course schedule (below). **Lab and written assignments are due by Friday 5 p.m. on the assigned week.** Assignments are to be submitted in electronic format barring explicit directions to the contrary or previously arrangement. Assignments will be submitted electronically via Blackboard. A separate sheet for instructions and requirements will be provided.

Late Assignments: Extensions on assignments may be granted if requested in advance with appropriate justification. **Without an approved extension, assignments may be submitted up to 3-days late for 80% partial credit, or up to 7-days late for 60% partial credit**. Assignments will not be accepted later than 7 days after the due date without an approved extension. Exams and quizzes may be rescheduled if arrangements are made at least 1 day prior to the date, but no quizzes or exams can be made up with prior notification or documented emergency.

Academic Integrity Policy: Students are expected to abide by the Elon Academic Honor Code (available at http://www.elon.edu/e-web/students/handbook/honorcpp.xhtml). Alleged violations will be dealt with according to University policy.

Special Assistance: Please inform the professor of any special needs for accessibility and learning, and appropriate measures will be taken to aid success in the course. If you are a student with a documented disability who will require accommodations in this course, please register with Disabilities Services in the Duke Building, Room 108 (278-6500) for assistance in developing a plan to address your academic needs.

How to succeed in this course
This is an applied and open-ended class, so the top criteria for succeeding will be to commit to hard work and taking initiative under conditions of uncertainty and a willingness to be resourceful in finding solutions both in and out of class. Please be in regular contact with me for suggestions and feedback if you have any uncertainty.

Note: this schedule is vague by design, and we will build the specific details in as we evolve our group dynamic. The deadlines will most likely be rigid, but we will remain flexible as needed.

Schedule

Week	Dates	Activity	Due Items / Notes
Week 1	Sep 1-3	Introduction	
Week 2	Sep 6-10	Researching GIS applications in local governments Identify applied projects & groups	Research Assignment #1
Week 3	Sep 13-17	Basic GIS skills for those who are new to GIS or those who want a refresher; Exploring advanced functionality for those with more experience	Research Assignment #2
Week 4	Sep 20-25	Continued GIS training Begin Data development for group projects	Research Assignment #3
Week 5	Sep 27-Oct 1		Interim progress report #1
Week 6	Oct 4-8		Research Assignment # 4
Week 7	Oct 11-15		Lit Review # 1
Week 8	Oct 20-22		Research Assignment # 5
Week 9	Oct 25-29		Research Assignment # 6
Week 10	Nov 1-5		Interim progress report #2
Week 11	Nov 8-12	Project Work	
Week 12	Nov 15-19		Lit Review # 2
Week 13	*Thanksgiving*	Project Work	
Week 14	Nov 29-Dec 3	Project Work	
Week 15		Course wrap-up	**There is no final exam; final projects will be due by an agreed upon date and time during the finals week period.**