Course Name: GIS Applications for Planning and Policy Analysis
Course Number: PMAP 4421
No. of credits: 3
Instructor: Ann-Margaret Esnard (aesnard@gsu.edu)
Professor, Department of Public Management and Policy
Lectures/Labs:
Location: Sparks Hall 135
Day/time: Mondays, 4:30-7:00 p.m.
Office hours: Mondays 1-3:30 p.m. & by appointment

Course Description
Geographic Information System (GIS) technology is widely used for planning and policy analysis in
government agencies, and in the private and non-profit sectors. This introductory course provides
students with a good conceptual foundation in data types & sources, coordinate systems, map design,
spatial analysis and GIS applications. Students also learn the basic functions of ArcGIS software to
integrate data from a variety of sources, conduct basic spatial analysis and produce quality map
products.

This course addresses the following knowledge and skills:
  - Methods and Tools
  - Research Skills
  - Written, Oral and Graphic Communication Skills
  - Numerical Reasoning and Computation Skills
  - Forms of Decision Making

Text and Flash Drive:
  - Flash drive with at least 5 GB storage space

Lab assignments:
Lab assignments are designed by the instructor to reinforce how you can use GIS data and apply ArcGIS
functionality for policy and planning-related scenarios. When possible, students will begin lab assignments
in class and will have one week (on average) to complete the assignment (see syllabus for due dates). **Hard copies of all lab assignments are due at the beginning of the class session on the due date.**

Note: Please purchase a binder to keep all handouts, lab assignments and instructions.
Syllabus (version 1-6-2016; Subject to Change) Spring 2016

**Brightspace:**
Brightspace will be used to distribute course content, lecture material, powerpoint presentations and more. ALL students are expected to use this resource on a regular basis for course materials and announcements.

**Time Commitment**
This is a three credit hour class. You can expect to make the time commitment of 4-6 hours outside class time, *on average.*

**Evaluation/Grading**
Student performance will be evaluated on the basis of successful completion of lab assignments, a lab quiz, an end-of-term exam, attendance and participation. The grades will be calculated as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
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<tbody>
<tr>
<td>Six (6) Assignments (including completion of GTKArcGIS exercises)</td>
<td>60%</td>
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<tr>
<td><em>End-of term exam based on lecture and required readings</em></td>
<td>15%</td>
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<tr>
<td>Mid-term lab quiz to cover assignments up until 3/7</td>
<td>20%</td>
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<tr>
<td>Class attendance &amp; participation</td>
<td>5%</td>
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Grades will be assigned as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>95-100</td>
</tr>
<tr>
<td>A-</td>
<td>90-94</td>
</tr>
<tr>
<td>B+</td>
<td>86-89</td>
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<tr>
<td>B</td>
<td>83-85</td>
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<tr>
<td>B-</td>
<td>80-82</td>
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<tr>
<td>C+</td>
<td>77-79</td>
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<tr>
<td>C</td>
<td>73-76</td>
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<tr>
<td>C-</td>
<td>70-72</td>
</tr>
<tr>
<td>D</td>
<td>60-69</td>
</tr>
<tr>
<td>F</td>
<td>0-59</td>
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Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State. Upon completing the course, please take time to fill out the online course evaluation.

**Policies/Rules:**

**Late lab assignments:** Late assignments will only be accepted up to one week late unless there is a serious medical or family emergency. Any late assignment will receive a maximum grade of 70%. Otherwise, you will receive a “F” for the outstanding lab assignment(s).

**Plagiarism:** Plagiarism is unacceptable and you are subject to failing the course. Always make sure to cite your sources. Lab assignment write-ups, lab quiz and end of term exam should be completed independently.
Syllabus (version 1-6-2016; Subject to Change) Spring 2016

**Make-up Exams and Incompletes:** Make-up exams and Incomplete or “I” grades are permitted in only RARE circumstances. Familiarize yourself with the University’s course withdrawal procedures and particularly, the *GSU Hardship Withdrawal Policy*. 

**Attendance:** If you miss two or more classes (without a *serious* excuse) you will receive 0% for class attendance. The Professor has the right to require documentation and proof for serious excuses.

**Tardiness:** If you are late to two or more classes (without a *serious* excuse), you will receive 0% for class participation. The Professor has the right to require documentation and proof for serious excuses.

**Withdrawal from the class:** Students wishing to withdraw from the course must officially withdraw prior to the date established by the University in order to avoid being given a grade of F. Familiarize yourself with the University’s course withdrawal procedures and particularly, the *GSU Hardship Withdrawal Policy*. 

**Code of Academic Honesty:** GSU guidelines on academic honesty will be enforced in this course, and you should be familiar with the *GSU Student Code of Conduct and Policies*. It is your responsibility to ask questions if you are unclear about what is appropriate. Academic dishonesty violations will result in a minimum penalty of a ‘0’ on the assignment or test.

**Disability policy statement:** Students who wish to request accommodation for a disability may do so by registering with the Office of Disability Services. Students may only be accommodated upon issuance by the Office of Disability of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which accommodations are sought.

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## AT A GLANCE: PMAP 4421: GIS Applications –

<table>
<thead>
<tr>
<th>Dates</th>
<th>Lecture Topics</th>
<th>Lab Topics/ Assignments</th>
<th>Homework Due</th>
</tr>
</thead>
</table>
| 1/11  | • Syllabus/ Course overview  
       • What is GIS & its evolution  
       • GIS Applications  
       • Questionnaire | Working with datasets from your textbook  
Assignment #1 ArcGIS Basics: ArcMap Making maps for presentation | Folder organization |
| 1/18  |                | NO CLASS – MLK DAY      |              |
| 1/25  | • Map design and visualization | Work on Assignment 1 | |
| 2/1   | • Scale, Coordinate Systems, Projections & Metadata | • Map Projection  
       • Projecting data  
       • Understanding Map Projections  
Assignment #2 Map Projection | Assignment #1 due at the beginning of class |
| 2/8   | • Mapping Data Overview  
       • Data Clearinghouses | Demos: finding and downloading and from data clearinghouses  
Work on Assignment 2 (if there is time) | |
| 2/15  | • Combining databases & attribute tables | Assignment #3: Joining and relating tables | Assignment #2 due at the beginning of class |
| 2/22  | • Classification Schemes  
       • Census data & Demographic Mapping | Assignment #4: Classifying features, Choropleth mapping | Assignment #3 due at the beginning of class |
| 2/29  | • Basic spatial relationships | Work on Assignment 4 (if there is time) | |
| 3/7   | • Working with parcel and tax assessment data | Assignment #5: Property use and value analysis  
Work on Assignment 5 (if there is time) | Assignment #4 due at the beginning of class |

**Spring Break (3/14-3/18)**

3/21  Lab Review & demos Assignment #5 due at the beginning of class

3/28  NO CLASS

4/4   QUIZ (based on lab exercises and assignments up until 3/7)

4/11  • Address Matching/Geocoding Assignment #6 Address Matching  
      Work on Assignment 6

4/18  • GIS Applications  
      • Course Review/wrap-up

4/25  TAKE HOME DUE BY 7:00 PM IN BRIGHTSPACE -DROPBOX FOLDER
### GTKArcGIS EXERCISES/ READINGS

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Lecture Readings</th>
<th>Lab Readings</th>
</tr>
</thead>
</table>
| 1/11 | Course Syllabus & Overview; Intro to GIS and Its Evolution; GIS Applications | GTKArcGIS Chapters 1, 2  
Powerpoint presentation if applicable | |
| 1/18 | NO CLASS – MLK DAY |  |  |
| 1/25 | Map design and visualization | Powerpoint presentation and other lecture material (if any) |  |
| 2/1 | Scale, Coordinate Systems, Projections & Metadata | Powerpoint presentation and other lecture material (if any)  
Lab Readings: GTKArcGIS – Chapter 6, HELP |  |
| 2/8 | Mapping Data Overview & Data Clearinghouses | Powerpoint presentation and other lecture material (if any)  
Relative paths & ArcCatalog | GTKArcGIS – Chapters 5, 11a |
| 2/15 | Combining databases & attribute tables | GTKArcGIS Chapter 16 (same as lab readings)  
Powerpoint presentation and other lecture material (if any) | GTKArcGIS – Chapter 16 |
| 2/22 | Classification Schemes & Demographic Mapping | Powerpoint presentation and other lecture material (if any)  
Lecture Readings (PDFs will be posted on Brightspace): | GTKArcGIS – Chapter 8 |
| 2/29 | Basic Spatial Relationships and Summary Tables | Powerpoint presentation and other lecture material (if any) | GTKArcGIS – Chapter 15, 17 |
Syllabus (version 1-6-2016; Subject to Change) Spring 2016

3/7  Working with parcel and tax assessment data
Lecture Readings
  • Powerpoint presentation and other lecture material (if any)

3/14-3/18  Spring Break- NO CLASS

3/21  Lab Review & Demo

3/28  NO CLASS

4/4  QUIZ based on lab exercises and assignments up until 3/7

4/11  Address matching/geocoding
Lecture Readings
  • Powerpoint presentation and other lecture material (if any)

  Lab Readings: GTKArcGIS – Chapter 14

4/18  GIS Applications & course review/wrap-up
Lecture Readings:
  • Powerpoint presentation and other lecture material (if any)

  Take home exam handed out/ posted by this date

4/25  End-of-term Exam due by 7 p.m.