The **goal** of this course is to introduce students to geographic information systems (GIS), while engaging students to think geographically about many critical issues society currently faces. The course will include an introduction to what geographic information systems are, what the software is like, and how to analyze spatial data across numerous disciplines. The course aims to illustrate how using spatial data and available technology to gain a geographical perspective on the world.

This course fulfills a Technology Requirement in the Touchstone General Education Program. Specifically, the course addresses the following:
- Information platform – as related to GIS software
- Technical communication – as related to spatial analysis
- Presenting verbal and visual information – as related to mapped information
- Data manipulation – as related to GIS
- Researching – as related to geographic issues
- The Foundations of Technology – as related to GIS
- The Impact of Technology – as related to Geography

This course also addresses the following Winthrop University Level Competencies:
- Competency 1: Winthrop graduates think critically and solve problems
- Competency 3: Winthrop graduates understand the interconnected nature of the world and the time in which they live.
- Competency 4: Winthrop graduates communicate effectively.

**Student Learning Outcomes:**
- Students will understand what a GIS is and how to use one effectively.
- Students will manage data from various sources and edit as necessary.
- Students will be able to analyze the spatial nature of complex issues/concerns and present that information via a GIS.
- Students will develop cartographic skills to communicate complex data easily and effectively.
- Students will utilize the software to analyze a complex problem and determine a conclusion.
Course Requirements

Required:
USB drive – 2GB or larger
No required text.

Course Website:
Blackboard will be utilized for this course. If you need assistance with Blackboard, below is a link that has various instructions and troubleshooting guides: http://www2.winthrop.edu/webct/Blackboard_Training_Tutorials.html.

Attendance:
Regular attendance is required. Please respect others by being on time and staying for the entire class. Please turn all cell phones off during class. If an exam is scheduled for a particular class, students will not be permitted to take the exam if they are 15+ minutes late for class - a grade of zero will be given. Please see the undergraduate catalog for the University Attendance Policies.

Format:
This course will be a combination of lecture and lab-based work. Roughly the first hour of every class session will be lecture focusing on GIScience concepts, history, and analysis, followed by lab time focused upon applying these concepts through the use of software.

Assignments:
There will be various assignments throughout the course. Each assignment is based upon learning esri’s ArcGIS software and will include the production of a map-type document. The assignments will need to be turned in prior to the start of class through the course’s blackboard site. No late assignments will be accepted. Assignments found under my door will not be accepted. It is your responsibility to ensure that I receive your assignment.

Portfolio:
As a final product, students will compile their lab work and submit one portfolio of all work at the end of the semester, including the course project. The portfolio will only be accessible to the professor and student. The portfolio will include a current resume (this will not be taught, but should be included for reference), along with executive style summaries and maps from each lab and project, as revised and edited based upon professor feedback.

Exams:
You will be given two exams in this course, a midterm exam and a final exam that is required of all students and given at the designated time during exam week. Content for the mid-term exam is based upon all materials used in class including the lectures, textbook, videos, website materials, etc. The final will be an oral exam presenting the
student’s project. Make-up tests will only be granted in extreme cases. Please contact the instructor as soon as possible if you miss a test.

**Project:**
The students will have the opportunity to pull together a project of their choice. This project will focus on one research question, chosen by the student, and include obtaining relevant data, displaying that data, and doing preliminary analysis on the data to determine a conclusion to their research. The student will present this topic, question, analysis and conclusion during their final exam period. This project will also be included in the student portfolio.

**Grading:**
- Assignments - 20 %
- Midterm Exam - 20 %
- Portfolio - 30 %
- Project - 30 %

Final grades will be based upon the scheme above and calculated to overall percentages so that:

- A – 94 – 100%
- A– – 90 – 93%
- B+ – 87 – 89%
- B – 83 – 86%
- C+ – 77 – 79%
- C – 73 – 77%
- D+ – 67 – 69%
- D – 63 – 66%
- F – 0 – 59%
- D– – 60 – 62%

**Syllabus**
Please note that this syllabus can be changed at any time. Any changes will be announced in class.

**Other Course Policies**

**Academic Integrity:**
As noted in the Student Conduct Code: “Responsibility for good conduct rests with students as adult individuals.” The policy on student academic misconduct is outlined in the “Student Conduct Code Academic Misconduct Policy” in the Student Handbook (www.winthrop.edu/studentaffairs/handbook/).

**Use of handheld devices in class:**
All cell phones and other electronic devices must be turned OFF (not on silent mode or vibrate) and put away (not on your desk). The use of computers without prior approval is not allowed. Students texting in class, or otherwise using their cell phones, will be asked to leave. A second offense will result in a 10% reduction in your FINAL grade. A third offense will result in an F in the course. If you are caught with your cell phone out during an exam, you will be asked to leave and will receive a zero (0) on the exam. If you wish to record the lecture you must consult with the professor prior to recording any lectures. For the full policy please see the College of Arts and Sciences policy at the following link: College of Arts and Sciences policy
Disability Services:
Winthrop University is dedicated to providing access to education. If you have a disability and require specific accommodations to complete this course, contact the Office of Disability Services (ODS) at 803-323-3290. Once you have your official notice of accommodations from the Office of Disability Services, please inform me as early as possible in the semester.

If you have questions about accessibility statements or other accommodation issues, please contact ODS. Information about services and accommodations is also available on the ODS website: http://www.winthrop.edu/disabilities/.

Safe Zones Statement:
The professor considers this classroom to be a place where you will be treated with respect as a human being – regardless of gender, race, ethnicity, national origin, religious affiliation, sexual orientation, political beliefs, age, or ability. Additionally, diversity of thought is appreciated and encouraged, provided you can agree to disagree. It is the professor’s expectation that ALL students consider the classroom a safe environment.

Academic Success Center
Winthrop’s Academic Success Center is a free resource for all undergraduate students seeking to perform their best academically. The ASC offers a variety of personalized and structured resources that help students become effective and efficient learners. The services available to students are as follows: peer tutoring, academic skill development (test taking strategies, time management counseling, and study techniques), group and individual study spaces, and academic coaching. The ASC is located in University College on the first floor of Dinkins Hall, Suite 106. Please contact the ASC at 803-323-3929 or success@winthrop.edu. For more information on ASC services, please visit www.winthrop.edu/success.
## COURSE TOPICS:

<table>
<thead>
<tr>
<th>Class Date</th>
<th>Topic:</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 12</td>
<td>Overview</td>
</tr>
<tr>
<td>January 19</td>
<td>Introduction to GIS &amp; Cartography basics</td>
</tr>
<tr>
<td>January 26</td>
<td>History, Vector v. Raster, Metadata</td>
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<tr>
<td>February 2</td>
<td>Coordinate Systems &amp; Projections</td>
</tr>
<tr>
<td>February 9</td>
<td>Data Collection &amp; Queries</td>
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<tr>
<td>February 16</td>
<td>Data Creation</td>
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<tr>
<td><strong>February 23</strong></td>
<td><strong>Mid-term Exam</strong></td>
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<tr>
<td>March 1</td>
<td>Geoprocessing</td>
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<tr>
<td>March 8</td>
<td>Spatial Analysis</td>
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<tr>
<td><strong>March 15</strong></td>
<td><strong>No Class - Spring Break</strong></td>
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<tr>
<td>March 22</td>
<td>Raster Analysis</td>
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<tr>
<td>March 29</td>
<td>Data Quality &amp; Metadata</td>
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<tr>
<td>April 5</td>
<td>Cartography</td>
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<tr>
<td>April 12</td>
<td>Advanced Topics &amp; Modeling</td>
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<tr>
<td>April 19</td>
<td>Project Work Session</td>
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<tr>
<td>April 26</td>
<td>No Class – Study Day</td>
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<tr>
<td><strong>April 29 (8:00am)</strong></td>
<td><strong>Final Exam</strong></td>
</tr>
</tbody>
</table>

* Please note the Final is on a Friday morning at 8:00am.

## Important Dates:

- **First Day of Classes:** January 11, 2016
- **Add/Drop Period Ends:** January 15, 2016
- **Last Day to Withdraw:** March 9, 2016
- **Spring Break:** March 14-18, 2016
- **Last Day of Classes:** April 25, 2016
- **Final Examinations:** April 27 – May 3, 2016