



Course Syllabus, Fall Semester 2009

URBP 278: Introduction to GIS Applications for Urban Planning

A graduate-level Geographic Information Systems-focused course in the Department of Urban & Regional Planning at San José State University

Official Course Catalog Information

Section 01 - Tuesdays 7:15 p.m. - 10:00 p.m. Washington Square Hall, Room 208	
Graduate-Level Course Title: <i>Geographic Information Systems Planning Applications</i>	Course URBP 278-01, Class Number 44826 Examination of geographic information systems (GIS) applications to urban and regional planning topics.

Instructor's Office Hours and Contact Information; Course Web Site

- ◆ Instructor: Rick Kos, AICP
- ◆ Office Hours in WSQ 216-E:
 - Mondays 4:00 - 5:00 p.m.
 - Tuesdays 5:00 - 7:00 p.m.
 - Wednesdays 11:00 a.m. - 1:00 p.m.
 - By appointment
- ◆ Email (*preferred method of communication outside of class*): rickkos@mindspring.com or online chat: rickkos
- ◆ Department Phone: (408) 924-5875 Fax: (408) 924-5872
- ◆ Course web site: <http://gis-planning-applications.pbwiki.com>

Overview of the Course

Geographic Information Systems, GIS, is a rapidly-evolving technology involving the study of spatial (geographic) location of features on the Earth and the relationships between them. Because the work of urban planners fundamentally involves the study of location and spatial relationships, today's employers increasingly expect graduates of urban planning programs to possess a working knowledge of GIS. Environmental Systems Research Institute's (ESRI) suite of GIS software - ArcGIS in particular - has become the industry standard and is used by a majority of government agencies and private firms engaged in GIS activities. Specifically, employers are seeking professionals armed with a grasp of geospatial data types (vector, aerial imagery, satellite imagery, geodatabases, etc.), spatial analysis techniques and GIS project management skills in order to effectively study a host of multi-faceted urban planning issues.

San José State University's Urban and Regional Planning Department offers two courses specifically devoted to GIS: the course you are taking now, and a follow-up course in the Spring semester: *Advanced GIS for Urban Planners*. Both courses aim to build sought-after GIS skills through a comprehensive, real world-focused course of study in GIS. The



classes are taught mainly as a combined lecture and computer laboratory course using ESRI's ArcGIS 9.3.1 software and a variety of hands-on exercises.

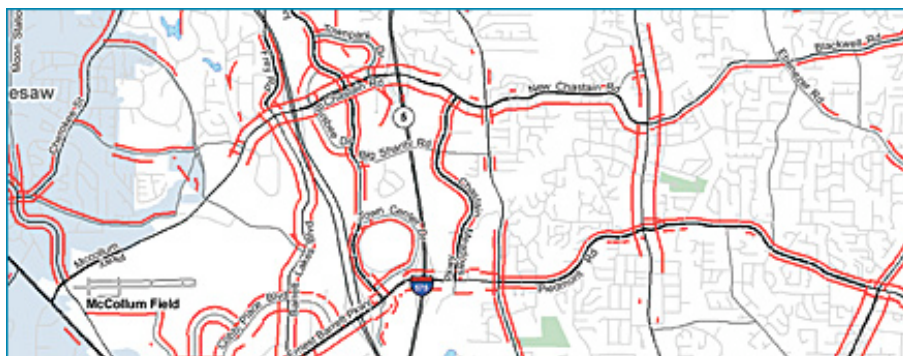
The majority of students interested in taking either elective course typically do not intend to pursue careers dedicated specifically to the use of GIS; rather, they wish to learn just enough about the

technology so it can be one of many tools available to them during their urban planning careers. As such, the GIS courses offered by the Urban and Regional Planning Department are as practical in nature as possible, favoring case studies and the hands-on use of ArcGIS software over theory and abstraction, and with a particular focus on the acquisition and analysis of real-world geospatial data typically used by urban planners.

The course strives to provide a balance between the "how-to" of using ArcGIS 9.3.1 and the "why" of GIS, by explaining the roles GIS technology plays in analyzing local and regional (even global) problems. During the first two-thirds of the course, you will learn the specific steps necessary to navigate ArcMap and ArcCatalog, acquire and manage geographic data layers, develop effective cartographic techniques, and query the data to answer typical planning-related questions. For some exercises, you will use real GIS data from Bay Area cities, "warts and all", in order to learn how to overcome typical problems encountered by GIS practitioners. The last third of the course will focus on the development, execution and presentation of a final GIS project on a topic that interests you. Since the visual communication of quantitative data is a vital skill for urban planners, this project will help you further develop your GIS skills by framing an urban planning issue that excites you, developing a set of high-quality GIS maps to illustrate the issue, and presenting a focused, 7-minute summary of your methodology and findings to your colleagues. A key goal of the final project is to provide you with a portfolio piece to present to current and future employers as evidence of your GIS abilities.

During the semester, you will be encouraged to think about integrating GIS into your other San José State coursework and Master's project. I am looking forward to helping you learn ArcGIS 9.3.1 this semester! There are many avenues for assistance and to accelerate your understanding of GIS: in-class exercises and personal guidance from me, at least five office hours per week, and the ability to reach me via e-mail (I typically reply to clearly-worded messages very quickly).

My primary goal is to ensure that by completing the course you will possess the fundamental GIS skills valued by today's employers.



Course Learning Objectives

Students completing *URBP-278: Introduction to GIS Applications for Urban Planning* will be able to:

- I. Describe how urban planners typically use GIS as a tool for analysis and the display of quantitative data to solve urban planning problems
- II. Utilize the core components and functionality of ArcGIS 9.3.1
- III. Describe a variety of geospatial data types, data sources and metadata management techniques
- IV. Create, manipulate and query geospatial data
- V. Symbolize and classify geospatial data, understanding available choices and the implications of each
- VI. Critique others' cartographic styles and implement effective cartographic and display techniques

The following section lists each objective above, followed by specific topics and skills that will be covered during the semester.

I. Describe how urban planners typically use GIS as a tool for analysis and the display of quantitative data to solve urban planning problems. Examples include:

- Applicability of GIS to the primary areas of urban planning (land use, transportation, housing, conservation, environmental justice, etc.)
- Accessing, analyzing and presenting demographic data from the U.S. Census Bureau
- Creating maps of zoning districts, General Plan land use designations, hazards and other local features
- Calculating areas and lengths (e.g. parcels, streets, jurisdictional boundaries, wetlands, farmland, habitat areas...)
- Community buildout calculations and future land use alternatives analysis
- Proximity analysis (which features are closest, which features intersect, which features are within a distance of, which features share a common location...)
- Selection of features by tabular attribute and/or spatial location
- Creating reports that summarize geographic data using tables, graphs and other display techniques
- Preparation of maps for community meetings, Environmental Impact Reports and General Plans

II. Utilize the core components and functionality of ArcGIS 9.3.1

- Define the primary functions of a GIS (data capture, data storage, tools for querying data, tools for analyzing data, tools for displaying data, export functions)
- Explain the basic functionality of ArcMap, ArcCatalog and ArcToolbox
- Explain how MXD files are structured and how to repair broken links to component map layers
- Steps for creating and managing spatial bookmarks
- Measuring distances and calculating area
- Saving MXDs with relative paths vs. absolute paths
- Joining and relating tabular data
- Spatial joins between multiple features
- Basic geoprocessing -- buffering, unions, intersections, dissolves
- Editing data layers with the Editor toolbar (e.g. changing locations of vertices, using the Sketch tool)
- Customizing ArcMap (adding toolbars, creating toolbars, dockable toolbars)
- Understanding Data View vs. Layout View
- Working with multiple data frames in one Map Document
- Using map templates
- Creating and using Layer Files (.LYR) and Layer Packages (.LPK) to store and share data and symbology

III. Describe a variety of geospatial data types, data sources and metadata management techniques

- Understanding the definition and importance of metadata
- Using ArcCatalog as the primary management tool for creating, reading, searching and sharing metadata
- Using United States Census data
- Shapefiles, personal geodatabases, file geodatabases
- Vector data and raster data
- Understanding the individual file components of a shapefile (DBF, SHP, SHX and others)
- Locating GIS data sources in Internet data portals (local, state, federal)
- Working with Text (TXT), Excel (XLS), Comma-delimited (CSV) files
- PRJ files for storing coordinate system information
- XML files for storing metadata documentation
- Raster data types (TIF, GeoTIFF, JPG, GIF, PDF, AI, MrSID, etc.)
- Moving, copying and sharing data within ArcCatalog and with other users
- Geographic vs. projected coordinate systems

IV. Create, manipulate and query geospatial data

- Converting Excel (XLS) files to DBF and adding to ArcMap, or working with Excel files natively
- Understanding the “anatomy” of data tables (records, attribute fields, cells, formulae)
- Opening, sorting and adding data fields
- Arranging columns
- Summarizing data columns
- Editing and adding records
- Creating definition queries
- Viewing selected records and creating a layer of selected features
- Creating new shapefiles and geodatabases using ArcCatalog

V. Symbolize and classify geospatial data, understanding available choices and the implications of each

- Understanding thematic map types (choropleth, isarithmic, flow, multivariate, dot density, graduated symbol, graduated color, cartogram) and when to choose a particular type to convey information
- Understanding data measurement scales (nominal, ordinal, ratio, interval)
- Understanding data classification methods (natural breaks, quantile, equal interval, standard deviations) and reinforcing the ability to read a histogram
- Dynamic labels, interactive labels and annotation (both map-based and geodatabase-based)
- Knowing when to normalize quantitative data

VI. Critique others' cartographic styles and implement effective cartographic and display techniques

- Understanding the map needs of various audiences (e.g. public, stakeholders, technical staff, decision-makers)
- Learning techniques to “tell the story” of the map effectively, quickly and responsibly
- Ensuring the inclusion of all standard map elements: title, data sources, scale bar, north arrow, legend, etc.
- Ensuring that all data sources are properly cited on maps
- Creating visual balance in maps; employing techniques of visual hierarchy
- Determining the most effective cartographic choices (color, labels, line weights, etc.)
- Developing awareness that not everyone is comfortable reading or using maps
- Developing awareness that maps are a powerful medium for conveying information and the attendant implications for the map designer; developing awareness that biases can be introduced by the map designer

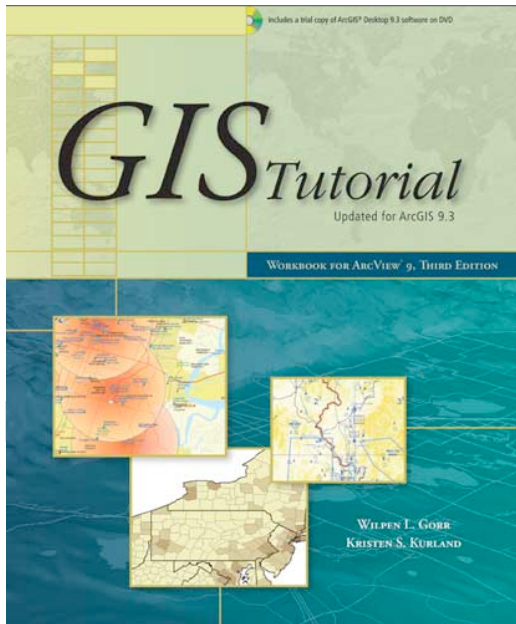
Prerequisites

No prior knowledge of GIS is required to take this course; however, there is a lot of material to cover and this will be a fast-moving and fairly technologically-advanced course. As such, there are a few basic prerequisites:

- ◆ Competence with the Windows XP or Vista operating system, including the storing, copying and management of multiple data types; managing multiple windows and applications; and discipline to save work frequently.
- ◆ Familiarity with data entry, sorting, editing and filtering using Microsoft Excel.
- ◆ A strong motivation to learn, explore and have fun with computer applications is essential. This course will require a significant amount of independent work and relies heavily on student initiative.
- ◆ An e-mail account that you plan to check frequently. You will be asked to provide your email address on the first day of class in order to facilitate communications with the instructor.

Required Textbooks and Software

In keeping with the joint focus of this course on (1) developing ArcGIS skills and (2) the development of effective cartographic techniques, two textbooks are required and are listed below. The first, *GIS Tutorial, Third Edition* will serve as a reference throughout the course and provides detailed, step-by-step instructions in the use of ArcGIS. The second book, *Designing Better Maps: A Guide for GIS Users*, provides a great number of useful and effective design techniques and considerations which you will incorporate into your final course project in order to produce professional-quality maps.



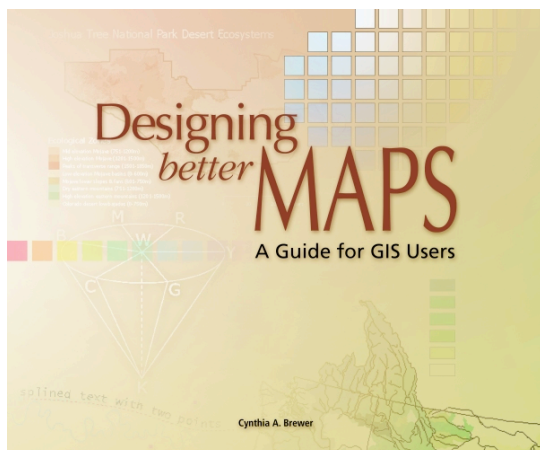
The books may be purchased online (at sites such as Amazon.com) or directly from the publisher (ESRI Press) or from the Spartan Bookstore on campus (recommended). Note that if you purchase a used textbook online, you are responsible for obtaining the book from the seller in a timely manner.

Required Textbook #1:

GIS Tutorial Updated for ArcGIS 9.3, Third Edition
by Wilpen L. Gorr and Kristen S. Kurland

****Make sure to purchase the Third Edition for ArcGIS 9.3****

If you purchase a used version of the book that does NOT include a CD for ArcGIS and tutorial data, it's okay - you'll be provided with a CD in class.



Required Textbook #2:

Designing Better Maps: A Guide for GIS Users
by Cynthia A. Brewer

Required Software: *ArcGIS 9.3.1 and Extensions*

This software is installed on each WSQ208 lab and department lounge computer. Also, each student will receive a free copy of ESRI's ArcGIS 9.3.1 software for use on a personal computer; it is a fully-functioning version and will expire one year after installation. Please note that ArcGIS software only runs on Windows 2000, XP or Vista. In order to run ArcGIS in Windows on an Intel-based Mac, virtualization software is needed such as Apple's BootCamp, SWSoft's Parallels, or VMware Fusion. You are responsible for installing and maintaining your software on a personal computer.



Map of Contaminated Sites and Land Uses, City of Houston Department of Planning & Development

Recommended Hardware, Portable Media and Supplementary Software

The computer laboratory in WSQ208 and “mini-lab” (in the Planning Department lounge area) are available to you to complete in-class assignments and homework. If you plan to use your personal computer to complete assignments started in class, a USB Flash Drive with at least 2 GB of capacity and/or a rewriteable CD-ROM or DVD is strongly recommended for saving your in-class work and transferring it to your personal computer. It is HIGHLY recommended that your personal computer have at least 2 GB of RAM installed, since ArcGIS is a very memory-intensive application. Ideally, more than 2 GB of RAM (if your computer supports it) is recommended.

To take full advantage of the course resources, each student should have access to a computer with an Internet connection and have access to the following software: Microsoft Internet Explorer (or Firefox), Adobe Acrobat Reader (available for free at www.adobe.com), Microsoft Word, Microsoft Excel, and Microsoft Powerpoint.

Fundamentals for Success in this Course

I will make every effort to help you succeed in this course so that you can use GIS confidently and successfully in your future career endeavors. Naturally, it is your responsibility to complete all assignments and to take advantage of the many learning opportunities this semester. Your final grade will reflect your overall commitment to learning; higher grades correlate with efforts that exceed expectations. Here are some tips to help you succeed this semester:

- ★ Maintain a fast pace: This will be a fast-moving and technologically-advanced course, but concepts and instructions will be explained as clearly as possible. If a student wishes to evaluate his or her readiness for this course at the outset, please see me as soon as possible.
- ★ Computer competencies: Competence with the Windows XP or Vista operating system is expected, including the storing, copying and management of multiple data types; managing multiple windows and applications; and techniques for saving work frequently. Familiarity with data entry, sorting, editing and report generation using Microsoft Excel is also expected.
- ★ Enjoyment of Learning: A strong motivation to learn, explore and have fun with computer applications is essential. This course will require a significant amount of independent work and relies heavily on student initiative.
- ★ Seek Help Effectively: Since GIS practitioners and urban planners are problem-solvers at their core, it is important that you adopt a problem-solving mindset in this course. Asking for assistance this semester is encouraged and signals to me that you are engaged in your work, motivated by excellence and effectively challenged by the assignments. Asking for help will never be perceived as a liability in my class. However, when seeking assistance, it is important for you to (1) clearly communicate the problem and (2) demonstrate that you have attempted to solve the problem on your own and are ready to clearly articulate your attempts. Also, I am very happy to help you with your work outside of the classroom during office hours or via email. If we work together via email, it is vital that you send me as much information as possible to help diagnose the problem. It is **not** sufficient to write to me and vaguely state, "I can't get this to work" and expect useful assistance without also including relevant screen captures and a description of the solution steps you've tried. In general, I will be very responsive to queries that meet these criteria and much less so for "lazy queries", which I will not have time to address. This approach mirrors professional practice since supervisors expect valued employees to be proactive in solving problems.
- ★ Focus and Respect: I fully understand the temptations and distractions we all face today with email, web sites and IMs vying for our attention, but lab computers may not be used for getting other work or e-mail done. Out of respect for everyone in a focused learning environment, I will be ruthless in getting everyone to turn computer monitors off when not being used for course exercises. If you have to "get something else done" during the class period, please do it elsewhere. Cell phones need to be in silent mode, or turned off.
- ★ Professional Conduct: I conduct this course in a manner that mirrors professional practice in order to help you develop valuable workplace skills. We all need to be in agreement that the following standards will apply:

Instructor Responsibilities

- ★ To create a physically and intellectually safe and stimulating environment for learning
- ★ To assist students as much as possible with their individual and collective learning goals
- ★ To help resolve conflicts that hinder learning by answering student questions clearly and promptly, or to research answers and reply to the student as soon as possible
- ★ To treat students with respect and kindness, using encouragement and humor to foster learning
- ★ To arrive prepared and organized, with clear learning objectives and a schedule for each class period
- ★ To evaluate and grade student work fairly and accurately while providing constructive feedback

Student Responsibilities

- ★ To attend each class session and to arrive punctually, bringing all needed materials
- ★ To treat other students and the instructor with absolute respect, supporting fellow students whenever possible with their learning objectives, and minimizing distractions in class
- ★ To complete all assignments on time and professionally according to requirements listed in this syllabus
- ★ To fully read and understand all aspects of this syllabus and to carry out the requirements therein
- ★ To actively and consistently participate in class discussions and question-and-answer sessions
- ★ To demonstrate self-reliance and self-direction in setting and completing learning objectives
- ★ To accept responsibility for working collaboratively in the learning process

Course Outline

The following course outline describes the general approach we will take this semester, but please bear in mind that specific details are subject to change with reasonable notice. I will communicate changes via email or in class. The course is generally divided into three parts:

- **PART 1** (August 25 - October 20) ArcGIS 9.3.1 in-class tutorials and practice homework assignments
- **PART 2** (October 27 - November 17) Applied GIS for land use, transportation and environmental analysis
- **PART 3** (November 24 - December 15) Final Independent or Small Team GIS Project and Presentation

Date and Topic	Lecture and In-Class Lab Work	Assignments and Readings
<p style="text-align: center;">August 25</p> <p>TOPICS:</p> <ul style="list-style-type: none"> - Introductions - Course and Syllabus Review - Create ESRI Global Account - Video: "Geospatial Revolution" - GIS Overview 	<p><u>Lecture:</u> GIS Overview</p> <p><u>Lab:</u> Students will engage in a guided, hands-on exercise to build familiarity with ArcGIS 9.3.1 (ArcMap, ArcCatalog and ArcToolbox).</p>	<p><u>Homework A Assigned:</u> Site Suitability Analysis using Manual Means; Evaluation of a GIS Project. <i>Due 7:15 p.m., Sept 1.</i></p>
<p style="text-align: center;">September 1</p> <p>TOPICS:</p> <ul style="list-style-type: none"> - Information Design using GIS: turning data into information into knowledge for decision-making - ArcMap Overview 	<p><u>Lecture:</u> Information Design and ArcMap Overview</p> <p><u>Lab:</u> GIS Tutorial 1, Introduction to ArcMap</p> <ul style="list-style-type: none"> - Map Layers - Zoom and Pan - Magnifier Window - Overview Window - Spatial Bookmarks - Measure Distances - Identify Features - Selecting Features - Find Features - Feature Attribute Tables - Labeling Features - Relative Paths - Saving Maps 	<p><u>Homework A Due:</u> 7:15 p.m.</p> <p><u>Tutorial 1 Assigned:</u> GIS Tutorial Assignment 1-1 (Statistics on U.S. Housing) and Assignment 1-2 (Erin Street Crime Watch). <i>Due 7:15 p.m., Sept. 15</i></p> <p><u>Homework B Assigned:</u> Thematic Maps Reading; Finding Examples of Thematic Map Types. <i>Due 7:15 p.m., Sept. 8</i></p> <p><u>Required Reading for Next Week:</u> Brewer, pgs. 1-9</p>

Date and Topic	Lecture and In-Class Lab Work	Assignments and Readings
<p style="text-align: center;">September 8</p> <p>TOPICS:</p> <ul style="list-style-type: none"> - Review Brewer reading assignment - Thematic Map Types - ArcGIS Online Overview 	<p><u>Refresher:</u> Tutorial 1 skills</p> <p><u>Lecture:</u> Thematic Map Types</p> <p><u>GIS Tutorial 2: Map Design</u></p> <ul style="list-style-type: none"> - Create Choropleth Maps - Create Group layers - Create Threshold Scales for Dynamic Display - Create Choropleth Maps Using Custom Attribute Scales - Create Pin (Point) Maps - Create Hyperlinks - Create Tool Tips 	<p><u>Homework B Due:</u> 7:15 p.m.</p> <p><u>Tutorial 2 Assigned:</u> <i>GIS Tutorial Assignment 2-1 (Pittsburgh School Enrollment) and Assignment 2-2 (K-12 Population vs. School Enrollment).</i> Due 7:15 p.m., Sept. 15</p> <p><u>Homework C Assigned:</u> Map Design Critique and Preliminary Final Project Ideas. Due 7:15 p.m. Sept. 15</p> <p><u>Required Reading for Next Week:</u> Brewer, pgs. 10-17, 30-37</p>
<p style="text-align: center;">September 15</p> <p>TOPICS:</p> <ul style="list-style-type: none"> - Review Brewer reading assignment - GIS Outputs - Map Design Considerations - ArcGIS Explorer Overview 	<p><u>Refresher:</u> Tutorial 2 skills</p> <p><u>Lecture:</u> Map Design Considerations, Graphic File Types</p> <p><u>GIS Tutorial 3: GIS Outputs</u></p> <ul style="list-style-type: none"> - Use Interactive GIS - Produce Print Layouts - Create a Custom Map Template and Map Series - Create a Custom Map Template for Multiple Maps - Add Reports to Layouts - Export Layouts as Files - Generate Other Outputs 	<p><u>Homework C Due:</u> 7:15 p.m. <u>Tutorials 1 & 2 Due:</u> 7:15 p.m.</p> <p><u>Tutorial 3 Assigned:</u> <i>GIS Tutorial Assignment 3-1 (Orange County Population School Enrollment) and Assignment 3-2 (Walking Map of Pittsburgh Historic Districts).</i> Due 7:15 p.m., Sept. 29</p> <p><u>Homework D Assigned:</u> California Census Data Mapping. Due 7:15 p.m. Sept. 29.</p> <p><u>Homework E Assigned:</u> ArcGIS Explorer. Due 7:15 p.m. Sept. 29</p> <p><u>Required Reading for Sept. 29:</u> Brewer pgs. 18-29; 41-59</p>
<p>September 22 - CLASS CANCELLED due to Faculty Furlough Day OFFICE HOURS ALSO CANCELLED FOR TODAY. (You can still reach Rick via email or online chat.)</p>		

Date and Topic	Lecture and In-Class Lab Work	Assignments and Readings
<p style="text-align: center;">September 29</p> <p>TOPICS:</p> <ul style="list-style-type: none"> - Review Brewer reading assignment - Working with Geospatial Data from Outside Sources - Geodatabases Overview - Coordinates Systems and Projections - Introduce Final Course Project (draft Project Description will be due October 20) 	<p><u>Refresher</u>: Tutorial 3 skills</p> <p><u>Lecture</u>: GIS Data Portals, Tips and Tricks for Working with Geospatial Data; Geodatabase Overview and In-Class Exercise</p> <p><u>GIS Tutorial 5: Importing Spatial and Attribute Data</u></p> <ul style="list-style-type: none"> - Sources of Maps and Data - Vector Spatial Data Formats - Convert a Coverage to a Shapefile - World and U.S. Projections - State Plane Coordinate System - Stored metadata - Attribute data <p>Investigate tutorial exercises 5-1 and 5-2 together in class</p>	<p><u>Homework D & E Due</u>: 7:15 p.m. <u>Tutorial 3 Due</u>: 7:15 p.m.</p> <p><u>Homework F Assigned</u>: Evaluate Geospatial Data Sources and add Findings to the Course Wiki. <i>Due 7:15 p.m. Oct. 6</i></p> <p><u>Required Reading for Next Week</u>: Brewer pgs. 63-88</p>
<p style="text-align: center;">October 6</p> <p>TOPICS:</p> <ul style="list-style-type: none"> - Review Brewer reading assignment - Creating New GIS Data and Editing - Georeferencing 	<p><u>Refresher</u>: Tutorial 5 skills</p> <p><u>Lecture</u>: Creating New GIS Data and Editing</p> <p><u>GIS Tutorial 6: Digitizing</u></p> <ul style="list-style-type: none"> - Create New Polygon Shapefile - Digitize and Edit Polygon Layers - Vertices - Drawing and Editing Tips - Digitizing a Point Layer - Digitizing a Line Layer - Spatial Adjustment - Transforming Features to an Aerial Photo 	<p><u>Homework F Due</u>: 7:15 p.m.</p> <p><u>Tutorial 6 Assigned</u>: GIS Tutorial Assignment 6-1 (Digitizing Police Beats) and Assignment 6-2 (Tracking Campus Information). <i>Due 7:15 p.m., Oct. 20</i></p> <p><u>Homework G Assigned</u>: Georeferencing. <i>Due 7:15 p.m., Oct. 13</i></p> <p><u>Homework H Assigned</u>: Collect San Francisco GIS Data and create a Base Map. <i>Due 7:15 p.m., Oct. 20</i></p> <p><u>Required Reading for Next Week</u>: Brewer pgs. 91-112</p> <p><u>Reminder</u>: Draft Course Project Descriptions are due October 20</p>

Date and Topic	Lecture and In-Class Lab Work	Assignments and Readings
<p style="text-align: center;">October 13</p> <p>TOPICS:</p> <ul style="list-style-type: none"> - Review Brewer reading assignment - Geocoding Address Data 	<p><u>Refresher:</u> Tutorial 6 skills</p> <p><u>Lecture:</u> Geocoding</p> <p><u>GIS Tutorial 7:</u> Geocoding</p> <ul style="list-style-type: none"> - Geocode Data by ZIP Code - Geocode to Streets - Preparing Data and Street Maps - Interactively Locate Addresses - Perform Batch Geocoding - Correct Street Layer Addresses - Use Alias Tables 	<p><u>Homework G Due:</u> 7:15 p.m.</p> <p><u>Tutorial 7 Assigned:</u> GIS Tutorial Assignment 7-1 (Geocode Household Hazardous Waste Participants) and Assignment 7-2 (Geocode Ethnic Business to Pittsburgh Streets). <i>Due 7:15 p.m., Oct. 27</i></p> <p><u>Homework I Assigned:</u> Geocoding using San José GIS Data and BatchGeocode.com (note: plan ahead - long assignment!) <i>Due 7:15 p.m., Oct. 27</i></p> <p><u>Required Reading for Next Week:</u> Brewer pgs. 115-140</p> <p><u>Reminder:</u> Draft Course Project Descriptions are due next week</p>
<p style="text-align: center;">October 20</p> <p>TOPIC:</p> <ul style="list-style-type: none"> - Review Brewer reading assignment - Geoprocessing - ModelBuilder 	<p><u>Refresher:</u> Tutorial 7 skills</p> <p><u>Lecture:</u> Geoprocessing and ModelBuilder Overview</p> <p><u>GIS Tutorial 8: Spatial Data Processing</u></p> <ul style="list-style-type: none"> - Extract Features to Create a New Shapefile - Clip Streets to Match a Polygon Boundary - Dissolve Polygons Based on ZIP Code - Append Polygons into One Shapefile - Create a Model that Uses the Clip and Union Tool 	<p><u>Draft</u> Course Project Description Due: 7:15 p.m.</p> <p><u>Tutorial 6 Due:</u> 7:15 p.m.</p> <p><u>Homework H Due:</u> 7:15 p.m.</p> <p><u>Homework J Assigned:</u> Geoprocessing Using Sacramento County GIS Data. <i>Due 7:15 p.m. Oct. 27</i></p> <p><u>Required Reading for Next Week:</u> Brewer pgs. 143-162</p> <p><u>Reminder:</u> Final Course Project Descriptions are due November 3</p>

Date and Topic	Lecture and In-Class Lab Work	Assignments and Readings
<p style="text-align: center;">October 27</p> <p>TOPIC:</p> <ul style="list-style-type: none"> - Applying GIS skills to the study of the City of Mountain View, CA - Applying GIS skills to the depiction of Five Wounds-Brookwood Terrace Neighborhood survey data on maps 	<p><u>Refresher:</u> Tutorial 8 skills</p> <p>Review Mountain View GIS data and assign study teams:</p> <ul style="list-style-type: none"> - base map and cartography - land use analysis - transportation analysis - environmental analysis <p>Describe Five Wounds-Brookwood Terrace Project</p>	<p><u>Tutorial 7 Due:</u> 7:15 p.m. <u>Homework I Due:</u> 7:15 p.m. <u>Homework J Due:</u> 7:15 p.m.</p> <p><u>Required Reading for Next Week:</u> Brewer pgs. 165-181</p> <p><u>Reminder:</u> Final Course Project Descriptions are due next week</p>
<p style="text-align: center;">November 3</p> <p>TOPIC:</p> <ul style="list-style-type: none"> - Review Brewer reading assignment - Continue with Mountain View and Five Wounds-Brookwood Terrace Projects 	<p><u>Lecture:</u> Spatial Analysis</p> <p><u>GIS Tutorial 9: Spatial Analysis</u></p> <ul style="list-style-type: none"> - Create Buffers for Proximity Analysis - Conduct a Site Suitability Analysis - Apportion Data for Noncoterminous Polygons <p><u>Work Session:</u> Mountain View and Five Wounds-Brookwood Terrace Projects</p>	<p><u>Final</u> Course Project Description Due: 7:15 p.m.</p> <p><u>Next 2 Weeks:</u> Review Instructor Feedback on Course Project Description and Develop Strategy for Completion of Project</p> <p><u>Reminder:</u> Final Course Project Concept Map Due November 24, 7:15 p.m.</p>
<p style="text-align: center;">November 10</p>	<p><u>Refresher:</u> Tutorial 9 skills</p> <p><u>Work Session:</u> Mountain View and Five Wounds-Brookwood Terrace Projects</p>	<p><u>Reminder:</u> Final Course Project Concept Map Due next week at 7:15 p.m.</p>
<p style="text-align: center;">November 17</p>	<p><u>Presentation of Findings:</u> Mountain View and Five Wounds/Brookwood Terrace projects</p>	<p><u>Reminder:</u> Final Course Project Concept Map Due next week.</p>
<p style="text-align: center;">November 24</p>	<p>Final Course Project Work in Class <i>(In-Class Work Session 1 of 2)</i></p>	<p><u>Final Course Project Concept Map Due:</u> 7:15 p.m.</p> <p>Optional review in class:</p> <ul style="list-style-type: none"> - Draft Project Presentation Slides - Draft Project Written Report - Draft Project Map

Date and Topic	Lecture and In-Class Lab Work	Assignments and Readings
December 1	Final Course Project Work in Class <i>(In -Class Work Session 2 of 2)</i>	Optional review in class: - Draft Project Presentation Slides - Draft Project Written Report - Draft Project Map Required Review: - Project Presentation Slides due Friday, December 4, 9:00 p.m. Send to Rick via email - comments will be returned over the weekend
December 8 TOPICS: - GIS Career Paths Discussion - Course Project Presentations I	Student Presentations of Final Course Projects, Session I (using Pecha Kucha method) <i>All students required to attend</i>	Final Course Project Written Report and Project Map due 7:15 p.m for students presenting tonight
December 15 TOPICS: - Course Evaluation (SOTES) - Course Project Presentations II	Student Presentations of Final Course Projects, Session 2 (using Pecha Kucha method) <i>All students required to attend</i> End-of-Course Celebration!	Final Course Project Written Report and Project Map due 7:15 p.m for students presenting tonight

Approach to Grading for Assignments and Final Course Grade

I understand that grades are important to students on both a personal and professional level. They are a measure of your achievements in class and your progress towards meeting the course learning objectives. I also understand that there tends to be a great deal of “grade anxiety” in a university setting. The best way that I can help students with these matters is to be as clear as possible about grading criteria and weightings in this syllabus, so that you can plan accordingly. Please understand that I am a very thoughtful, careful, thorough and fair grader of student assignments and it is a responsibility that I do not take lightly. You are encouraged to review your graded assignments with me at any time to discuss my comments and suggestions for improvement.

I’ve been called a “tough grader”, and it’s true! High grades must be *earned* and all grades reflect my estimation of a student’s effort - just as our efforts in a professional work environment are judged accordingly and considered by supervisors for promotions and pay raises. For example, I reserve a grade of “A” only for exceptional work, as a way of honoring students who go “above and beyond” when completing course assignments. After all, the strict definition of an “A” grade is “exceptional” - not “average” or even “above average”. The guidelines in this section should help explain general grading criteria but, as an instructor, I reserve the right to use my professional discretion at all times, taking into account a student’s entire approach to the course: participation and alertness in class, consistent timely submissions of assignments, demonstrated and repeated willingness to assist other students with in-class assignments, and other factors. If you have any questions about this approach, you are more than welcome to talk with me privately.

Grades	Criteria and Interpretation
A-, A and A+	For assignments that clearly demonstrate excellence , workplace-quality professional presentation and obvious dedication to meeting course learning objectives, I reserve grades of A- and A. I very rarely issue an A+ grade unless student work exceeds my expectations on any and all levels. Put another way, you should <u>not expect</u> to receive an “automatic A” simply by completing assignments; these grades are set aside for students who go the extra mile. If you receive a grade in the A’s, it is my way of indicating that I am aware and proud of your extra effort. In instances where the work product is not of exceptional quality but the student has clearly demonstrated commitment in terms of extra time spent and/or seeking help with the assignment, earning a grade of A- is a strong possibility.
B-, B and B+	If work is above average in quality, thoroughness and presentation, I tend to issue a grade of B-, B or B+. I interpret these grades to mean “much better than ‘just good’”; in such instances the student has demonstrated more of a commitment to quality work than an assignment graded with a C. If you receive a grade in the B’s, you can be assured that your work was of very good quality and that I am pleased with your progress.
C-, C and C+	If student work is sufficient and acceptable , I issue a grade of C or C+ because these grades are reserved for work of average quality. I do not view a C or C+ as a terrible grade; it is an acknowledgment of average and acceptable effort, but that you could have done better.
D and F	I certainly hope not to issue any such grades this semester, but will do so for student work that is sub-par on all levels (D’s) or demonstrates the barest of minimal effort (F).
Zero	For assignments that are not submitted on the due dates listed in this syllabus and/or assignments which do not adhere to the late-submission policy described herein.

Final Course Grade Weighting

Your final grade for this course will be determined by your performance in the following weighted areas:

Component	Percentage of Final Course Grade	Notes
ArcGIS homework and tutorial assignments	55%	Five tutorial assignments (from the Wilpen/Gore textbook) and ten homework assignments (created by Rick) will be issued during the semester and will comprise 55% of your final grade for the course. Each tutorial or homework assignment will generally be due 1-2 weeks after it is issued, depending on the anticipated complexity of the assignment.
Five Wounds - Brookwood Terrace Survey Mapping Project	15%	Your grade for this component of the course will take into account your individual efforts as well as the contributions you made to your team. Grading details will be described in the project description (a separate handout).

Component	Percentage of Final Course Grade	Notes
Final project map, report and presentation	20%	The final course project is the culminating experience for this course and is a very important component of your final grade. Your project report and map will be an important addition to your portfolio of work at SJSU. Your grade will be determined by your efforts on the map, written report and presentation to the class in December. Grading criteria are described in this syllabus, and final project details will be provided in a separate handout.
Engagement in class	10%	Your participation will most definitely be noticed and evaluated - please speak up, get involved in discussions, ask questions, help your fellow students whenever possible, pay attention during class, be punctual to class, minimize absences and late assignment submissions, minimize technological distractions in class.....you know what to do!

Numeric Grading System

Grades on student work will be assigned as follows:

98% - 100%	A+	74% - 76%	C
94% - 97%	A	70% - 73%	C-
90% - 93%	A-	67% - 69%	D+
87% - 89%	B+	64% - 66%	D
84% - 86%	B	60% - 63%	D-
80% - 83%	B-	Below 60%	F
77% - 79%	C+		

This scheme will not be followed strictly since upward adjustment of the final grade will be made if performance on one activity is an outlier (e.g. exceptionally low) or if the pattern of scores shows a significant improvement. If such adjustments are made, they usually result in about a half-letter grade improvement. Students are encouraged to meet privately with the instructor early in the semester to discuss expectations.

Grading Criteria - Individual Written Reports and Assignments

The narrative below describes the main attributes of A, B, C, D and F work. These are general criteria for written student work and I will make necessary adjustments considering that GIS work typically takes the form of maps and other graphics. Still, the general sentiment of these criteria will be applied to all student work this semester, especially to your final project report.

"A" Report: The principal characteristic of the "A" report is its rich content and the seamless integration of high quality supporting illustrations – maps, drawings, photographs, sketches – with the text. The information delivered is such that the reader feels significantly taught by the author, sentence after sentence, paragraph after paragraph. The "A" report is also marked by stylistic finesse: the opening paragraph is engaging; the transitions are artful; the phrasing is light, fresh,

and highly specific; the sentence structure is varied; the tone enhances the purposes of the essay. Finally, the "A" report is carefully organized and developed. The author organizes the report so that it addresses the topic thoroughly. The report imparts a feeling of wholeness and clarity – it integrates the course readings, the lectures, the thoughts of the writer, as well as findings and interpretations derived from the systematic observation of the study area. This report leaves the reader feeling bright, thoroughly satisfied, and eager to reread the piece.

"B" Report: This report is significantly more than competent. Besides being almost free of mechanical errors, the "B" report delivers information that is substantial in both quantity and interest-value. Its specific points address the topic in question and are logically organized. It is well developed, and unified around a clear principle that is stated early in the essay. The opening paragraph draws the reader in; the closing paragraph is both conclusive and thematically related to the opening. The transitions between sections/paragraphs are for the most part smooth; the sentence structures are varied and pleasing. Illustrations – maps, drawings, photographs, sketches – are abundant, carefully prepared, and clearly expand on the concepts presented in the text. This report also integrates the citations, course readings, the lectures, as well as the thoughts of the writer and conclusions derived from field observations, although perhaps not as thoroughly as the A report. The distinction of the "B" report is typically much more than concise and precise than that found in the "C" report. Occasionally, it even shows distinctiveness –i.e., finesse and memorability. On the whole, the "B" report makes the reading experience a pleasurable one, for it offers substantial information with few distractions.

"C" Report: This report is generally competent. It meets the assignment, has few mechanical errors, and is reasonably well organized and developed. The actual information it delivers, however, seems thin and unsubstantiated by the literature. One reason for that impression is that the ideas are typically cast in the form of vague generalities. These generalities prompt the confused reader to ask marginally: "in every case?," "exactly how?," "why?," "according to whom?." Stylistically, the "C" report has other shortcomings as well: the opening paragraph does little to draw the reader in; the final paragraph offers only a perfunctory wrap-up; the transitions between paragraphs are often bumpy; the sentences besides being a bit choppy, tend to follow unclear logic; and the diction is occasionally marred by unconscious repetition, redundancy, and imprecision. The "C" report gets the job done, but it lacks intellectual rigor and hence does not address the topic in an in-depth format. It lacks care in the presentation and integration of graphic material.

"D" Report: Its treatment and development of the subject are rudimentary. While organization is present, it is neither clear nor effective. Sentences are frequently awkward, ambiguous, and marred by serious mechanical errors. Evidence is either misrepresented or not used at all, or it is scanty (showing little study of the readings, course readings, lectures or field observation). The whole report gives the impression of having been produced carelessly. Illustrations lack care and precision, and detract from the overall integrity of the report.

"F" Report: Its treatment of the subject is superficial, its theme lacks discernible organization. Stylistically, it is wanting. There is no evidence of reading, reflection, or of integration of the materials of the class and the field observations. The ideas, the organization, and style fall far below what is acceptable graduate level writing. It is often seriously incomplete and shows no evidence of familiarity with either the course material, the assignment instructions, or the study area.

Grading Criteria - Oral Presentations

The criteria below describe the main attributes of A, B and C presentations and will be applied to your individual presentation for your final project (in December) and to your team presentation for the Five Wounds project (in November). It is not anticipated that grades of D or F will be given.

- A: Cohesive, avoids jargon, accurate, professionally presented, entertaining, demonstrates exceptional organization
- B: Cohesive, some jargon, accurate, reasonably professional presentation, demonstrates reasonable organization
- C: Not cohesive, jargon in speech, accuracy questionable, boring, disorganized

(The preceding two sections of this syllabus were adapted in part from Dr. Julia Rodriguez-Curry's handout on "Grading Criteria," San José State University, Mexican-American Studies Department, 2003)

Participation in Class and Attendance

Student participation in class discussions is a vital component of this course and students should make every attempt to attend all classes and actively participate in discussions. In cases where a student misses a significant number of lectures or does not actively participate in discussions, this will impact the final course grade. According to University policy F69-24, "Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to ensure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading."

Completing Assignments on Time and Professionally

Assignments are due at the date and time specified in the course syllabus. In only rare instances will late assignments be accepted, as described below. Late assignments will receive a one letter grade deduction for each day an assignment is late. For example, if the assignment would normally receive a grade of "B" but is submitted one day late, it will receive a final grade of "C".

I realize that life happens. If a student expects not to be able to complete an assignment on time, it is important for the student to contact me at least 24 hours prior to the due date and, if appropriate, the other students in a group (for group project work). The student must also provide a date and time by which the late assignment will be submitted. If a student does not communicate an anticipated late assignment within this time frame or if the late assignment is not received on the date promised, the assignment will receive a grade of zero. The grading policies described earlier in the syllabus will still apply. A maximum of **two** late assignments which adhere to this policy will be accepted; all subsequent late assignments will receive an automatic grade of zero. Sorry, no exceptions to these policies will be granted, in fairness to the majority of students who submit their assignments on time.

Since this course focuses on the development of professional skills used by urban planners, the presentation of submitted materials will be considered as part of the assignment's grade. All assignments must include the student's name, date, course number, assignment number and other items as directed by the instructor. Neatness, clarity and organization do count. As in a professional setting, typed submissions are expected; handwritten assignments are not acceptable. Printing assignments on the clean sides of already-printed paper is neither professional nor acceptable (though the thought is appreciated, of course). Assignments not meeting these fundamental practices of professional presentation will generally receive a one-half to one-point deduction in the grade.

University, College or Department Policies

♦ Academic integrity statement (from Office of Judicial Affairs)

SJSU's Policy on Academic Integrity states: "Your own commitment to learning, as evidenced by your enrollment at San José State University, and the University's Academic Integrity Policy requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the Office of Judicial Affairs". The

policy on academic integrity can be found at <http://www.sjsu.edu/senate/S07-2.htm>

◆ **Plagiarism and Proper Citation of Sources**

Plagiarism is the use of someone else's language, images, data, or ideas without proper attribution. It is a very serious offense both in the university and in your professional work. In essence, plagiarism is both theft and lying: you have stolen someone else's ideas, and then lied by implying that they are your own.

Plagiarism on either draft or final work handed in to your instructor will lead to grade penalties and a record filed with the SJSU Office of Judicial Affairs. It may also result in your failing the course. If you are unsure what constitutes plagiarism, it is your responsibility to make sure you clarify the issues before you hand in written work. Faculty will from time to time submit student work to Turnitin.com to check for plagiarism.

Learning when to cite a source, and when not to, is an art, not a science. However, here are some common examples of plagiarism that you should be careful to avoid:

- If you use a sentence (or even a part of a sentence) that someone else wrote and don't identify the language as a quote by putting the text into quote marks and referencing the source, you have committed plagiarism.
- If you paraphrase somebody else's theory or idea and don't reference the source, you have committed plagiarism.
- If you use a picture or table you found in a web page, book, or report and don't reference the source, you have committed plagiarism.
- If your paper incorporates data someone else has collected and you don't reference the source, you have committed plagiarism.

San José State University has created a website tutorial on how to identify and avoid plagiarism that students are encouraged to visit. The site is available at <http://tutorials.sjlibrary.org/tutorial/plagiarism/index.htm>. In addition, the "Academic Dishonesty Procedures" are available in any SJSU Schedule of Classes.

It is important to properly cite any references you use in your assignments. The Department of Urban and Regional Planning uses Kate Turabian's *A Manual for Writers of Research Papers, Theses, and Dissertations*, 7th edition (University of Chicago Press, 2007, ISBN-10: 0-226-82336-9). Copies are available in the SJSU King Library. Additionally, the book is relatively inexpensive, and you may wish to purchase a copy (\$11.56 recently listed at Amazon.com). Please note that Turabian's book describes two systems for referencing materials: (1) footnotes or endnotes, plus a corresponding bibliography, and (2) in-text parenthetical references, plus a corresponding reference list. Either system is fine, but you need to be consistent with your referencing style.

If you still have questions after reading this section, feel free to talk to your me or your graduate advisor. There is nothing wrong with asking for help, whereas even unintentional plagiarism is a serious offense.

◆ **Campus policy in compliance with the Americans with Disabilities Act**

If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with the instructor as soon as possible, or visit during office hours. Presidential Directive 97-03 requires that students with disabilities register with the Disability Resource Center (DRC) to establish a record of their disability. Students requesting accommodation of disabilities must do so through the DRC at <http://www.drc.sjsu.edu/> or by calling (408) 924-6000. Accommodations will be provided only to those students who are registered with the DRC, and who have requested accommodation pursuant to policies of the DRC.

◆ **Academic Honesty**

Faculty will make every reasonable effort to foster honest academic conduct in their courses. They will secure examinations and their answers so that students cannot have prior access to them and proctor examinations to prevent students from copying or exchanging information. They will be on the alert for plagiarism. Faculty will provide additional information about other unacceptable procedures in class work and examinations. Students who are caught cheating will be reported to the Judicial Affairs Officer of the University, as prescribed by Academic Senate Policy S04-12.

◆ **Eating**

Eating and drinking (except water) are prohibited in the classroom. Students with food are likely to be asked to leave the classroom. Students who disrupt the course by eating and do not leave the classroom will be referred to the Judicial Affairs Officer of the University. There will be at least one, short scheduled break during the class period during which you may eat or drink in appropriate locations near the classroom.

◆ **Cell Phones & Other Audible Devices**

Students will turn their cell phones and other audible devices off or put them on vibrate mode while in class. They will not answer their phones in class. Students whose phones disrupt the course and do not stop when requested by the instructor will be referred to the Judicial Affairs Officer of the University. There will be at least one, short scheduled break during the class period during which students may take calls outside of the classroom.

◆ **Computer Use**

Using your laboratory computer during class time for non-course related activities is disrespectful and distracting to the instructor and to your fellow students. In the classroom, faculty allow students to use computers only for class-related activities. These include activities such as taking notes on the lecture underway, following the lecture on web-based PowerPoint slides that the instructor has posted, and finding Web sites to which the instructor directs students at the time of the lecture.

Students who use their computers for other activities or who abuse the equipment in any way, at a minimum, will be asked to leave the class and will lose participation points for the day, and, at a maximum, will be referred to the Judicial Affairs Officer of the University for disrupting the course. (Such referral can lead to suspension from the University). Students are urged to report to their instructors computer use that they regard as inappropriate (i.e., used for activities that are not class-related).

Odds and Ends

◆ **Adds/Drops**

The student is responsible for understanding the policies and procedures about add/drops, academic renewal, withdrawal, etc. found at <http://www2.sjsu.edu/senate/S04-12.pdf>

◆ **Incomplete Grade**

An incomplete grade will only be assigned for a documented, serious, non-academic reason.

◆ **Students Adding the Class after the First Day of Class**

Students who add the class after the first day of class are responsible for completing all work in the course on the same schedule as students who were registered from the first day of the semester.

◆ Level of Effort

This course requires approximately 5 to 7 hours of work per week outside of the normal class period, including the completion of tutorial assignments, instructor-designed homework assignments and other tasks as assigned. Students should expect to spend slightly more time per week for long-term projects such as the final course project and our analysis of Mountain View's GIS data and related projects.

About the Instructor: Rick Kos, AICP

I am very much looking forward to working with you this semester and expect that you will learn quite a bit in our 3-1/2 months together. We'll have some fun along the way, too. My goal is teach you a number of introductory and intermediate-level GIS skills clearly, with minimal jargon and maximum time using the software to help you remain competitive in today's labor market.

Throughout my career using GIS, I have never strayed far from my roots in urban and regional planning and this combination of experience is what I am excited to share with you. I take pride in providing personal, one-on-one attention to the needs of my students and strongly encourage you to take advantage of all opportunities to meet with me during class and during office hours.

A little about my background: my formal training is in environmental planning and urban design (B.S., Rutgers University, 1985) as well as regional planning and New Urbanism (Masters, University of North Carolina at Chapel Hill, 1993).

In the late 1980s I worked as a planner in Middlesex County, New Jersey, reviewing subdivision and site plan proposals for compliance with county regulations. In the 1990s, I served two rapidly-growing North Carolina municipalities in a dual role as town planner and GIS coordinator (the latter being a role I created for both towns), so I am equally conversant in the language of both disciplines. From 1996 - 2000, I served as Senior Town Planner for Huntersville, North Carolina - the fastest-growing town of its size in the state at the time. The New Urbanist principles mandated by the Town's development regulations applied to both greenfield and infill sites. Since the regulations were design-based (i.e. non-Euclidean), they required me to make frequent subjective judgments on the visual qualities of streets, the orientation of proposed buildings to public spaces, and the relationship of buildings and land uses to one another. I thoroughly enjoyed defending the principles of traditional town planning, often to developers and citizens that were not particularly receptive, at first, to deviations from the conventional suburban planning model.

After relocating to the Bay Area in 2000, I worked with the Metropolitan Transportation Commission in Oakland as a GIS Analyst. The *Bay Area Lifeline Transportation Map* that I completed for MTC was chosen from among thousands of entries for inclusion in ESRI's *2003 Map Book*. This annual publication showcases innovative uses of ESRI's GIS software to solve real-world problems. The Lifeline Map locates disadvantaged neighborhoods and thousands of geocoded essential destinations (e.g. grocery stores, daycare centers, clinics) within the 9-County region, along with existing public transit services. The spatial analyses enabled by this mapping work allowed transportation planners to locate gaps in transit service so that decision-makers could direct funding to alter bus schedules, connections and routing for improved neighborhood connectivity.

From 2003 to 2007 I served as GIS Manager for Design, Community & Environment, a 45-person planning and design firm in Berkeley. I managed all aspects of the firm's GIS practice and took great pride in keeping hundreds of data layers organized across multiple projects, ensuring that the firm's metadata was up-to-date, training staff to use

ArcGIS and ArcCatalog, and managing the production of hundreds of maps for General Plans and EIRs throughout California.

Currently, I am a digital cartographer with WorldLink, based in the Presidio of San Francisco. I am helping to create an engaging geobrowser application called Interactive Earth that is designed to excite school-age children about geography and in becoming world citizens. I am also a part-time GIS instructor with the GIS Education Center affiliated with City College of San Francisco. Additionally, I am co-authoring a book titled *GIS Tutorial in Economic Development* with Professor Mike Pogodzinski of the SJSU Economics Department. The book will be released in the spring of 2010 by ESRI Press.

I also engage in occasional freelance GIS projects. For example, I am now assisting the City of Mountain View, CA with GIS work related to the update of the city's 1992 General Plan. I also assist Raimi + Associates of Berkeley, CA with GIS work related to their mission of fostering healthy cities.

This will be my fifth semester teaching GIS at San Jose State and, I must admit, it is my favorite job of the many I've listed above.

Welcome, and let's have some fun with GIS! I'm here to help.

- Rick