

Geographic Information Systems (GIS) class outline

Monday, July 22, 2002

8:30 – 11:15am

What is Crime Mapping (A PowerPoint Presentation)

- What are the necessary components for a successful GIS?
- What are the benefits and output products of a GIS?
- Sample uses of the GIS in Criminal justice
- How to get started

11:15 12:30pm Lunch

12:30 – 2:00pm

Introduction to ArcView 3.2 (Demonstration with short exercises)

- Describing the components
- The layout of the software
- Starting and saving projects and views
- Customizing the view

2:15 – 4:30pm

Geocoding (Demonstration and structured exercises)

- Internal and external items that can be used in crime analysis
- How to take tabular data and get it into a GIS.
- How to improve the geocoding process

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Displaying data (Demonstration and structured exercises)

- Displaying within a GIS.
- Pinmaps & other methods for displaying your data
- Aggregated data by boundary or density
- Symbols (size based on volume and custom symbols)
- Dispersion of points and other methods of viewing data

11:15 12:30pm Lunch

12:30 – 3:00pm

Displaying data (Demonstration and structured exercises) - continued

3:15 – 4:30pm

Conducting Queries (Demonstration and structured exercises)

Pulling out specific information from your data
Query by date, time, or specific incident
Building on queries

Analysis

Searches for data (how to collect specific data)
Rectangular searches
 Inside a boundary
 Near a street
Irregular searches

Buffering

Near one object around several objects such as all schools
Very popular when plotting sex offender or drug possession/sales information

How to analyze the data

Discussion of report writer that is included in the GIS program
Conducting further analysis in other software such as Microsoft Excel or Access

Layouts

How to present your data
Customizing your map layout
Bringing external data such as badges and logos into the layout
Saving items for your custom layout

Using Extensions and free software

Redistricting

Building new beats from reporting areas based on specific criteria
Discussion on natural boundaries and other items that would impact your decision
Demonstration of various extensions or tools that can be used to enhance the GIS and crime analysis function

Building boundaries

Build boundaries by joining smaller areas together
Building boundaries by following the street network