Maps and the Geospatial Revolution

Anthony C. Robinson (arobinson@psu.edu)
Penn State University

Course Outline – December, 2013

Lesson 1: The Geospatial Revolution

• How We Navigate
• Making Decisions
• Sharing Stories
• The Changing Nature of Place
• What is Geography?
• Maps to Tell Stories, Maps to Provide Context
• The Earth is Round and Maps are Flat
• Video Assignment: Geospatial Revolution, Episode 1 (Full Episode)
• Lab Assignment: Ecoregion and Population Mapping (Population Dynamics and Scale)
• Discussion Assignment: Privacy in the Geospatial Revolution
• Quiz # 1

Lesson 2: Spatial is Special

• Thinking like a Geographer (by thinking Aspatially)
• Spatial Relationships
• Understanding Scale
• What About Time?
• Video Assignment: Geospatial Revolution, Episode 2, Chapter 3 (Powering Business)
• Lab Assignment: Exploring Change in Historical Data (Data Quality & Time)
• Discussion Assignment: Scale, Time, and Certainty – When do they Matter?
• Quiz # 2

Lesson 3: Understanding Spatial Data

• Where Are We Now?
• The Earth From Above
• Who Makes Spatial Data?
• Describing Spatial Data
• Video Assignment: Geospatial Revolution, Episode 4, Chapter 4 (Mapping Power to the People)
• Lab Assignment: Mapping Earthquakes (Data Handling and Symbolization)
• Discussion Assignment: Mapping Disasters – What Works, and What Doesn’t?
• Quiz # 3
Lesson 4: Doing Spatial Analysis

- Overlay (and Beyond!)
- Making Surfaces
- Mapping Rates vs. Mapping Totals
- Video Assignment: Geospatial Revolution, Episode 4, Chapter 3 (Tracking Disease)
- Lab Assignment: Social Media Map Analysis (Creating and Comparing Surfaces of Tweets)
- Discussion Assignment: What Can Be Mapped Using Geospatial Social Media?
- Quiz # 4

Lesson 5: Making Great Maps

- Who Want A Map? Where Will It Be Seen? What Is Its Purpose?
- Designing a Layout
- Symbolization
- Choosing Colors
- Data Classification
- Text on Maps
- Video Assignment: Geospatial Revolution, Episode 4, Chapter 1 (Monitoring a Changing Climate)
- Lab Assignment: Storytelling with Maps (ArcGIS Online for Novices, StoryMaps for Advanced Users, QGIS or any other desktop GIS for Expert Users)
- Discussion Assignment: Critiquing the Best (and Worst) Maps for Storytelling
- Final Exam