Introduction to GIS in Public Health

COURSE DURATION
This is an on-line, distance learning course and material will be available from:
June 1 – June 30, 2017

INSTRUCTOR
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COURSE DESCRIPTION
This course will introduce the fundamentals of geographic information systems (GIS) using the leading commercial desktop GIS software (ArcGIS), with particular emphasis on applications in public health and epidemiology. The material will cover basic representation of spatial features in GIS (point, line, polygon, raster), data management, projections and coordinate systems, data import/export, attribute and spatial selections, major types of spatial analyses, relational joins, address geocoding, cartography, and map production. Special attention will be paid to generation of material for use in public health/epidemiology analyses and publication.

This course is eligible for an EPIC scholarship. Visit the scholarship application page for more information.

COURSE OBJECTIVES
By the end of this course, participants will be able to:

- Load, view, and symbolize map data in ArcMap
- Perform several types of spatial analyses using ArcGIS
- Create cartographic products with ArcMap
- Generate data to support public health/epidemiology studies

PREREQUISITES
Skills
Students need to have strong computing skills in order to follow the fast pace of this course. Knowledge of MS Excel and the Windows Explorer (file manager) are essential. Working knowledge of MS Access or other SQL-compliant database will be a plus. Working knowledge of a statistical package will be helpful but not essential. Programming skills are not required.
Technical requirements

**Hardware:** Students will need to have access to a Windows-based machine, either a PC running Windows natively or a Linux PC or Mac running Windows in a virtualization or dual-boot environment.

**Software:** Students need to either have ArcGIS installed, or they will need to obtain a 1 year timeout student license (which they can obtain from Dr. Hurvitz, the instructor) or a 60-day timeout trial license (see [http://www.esri.com/software/arcgis/arcgis-for-desktop/free-trial](http://www.esri.com/software/arcgis/arcgis-for-desktop/free-trial)).

**COURSE READINGS**

5. Mapping the 1854 London Cholera Outbreak

**INSTRUCTOR**

Philip Hurvitz is a research assistant professor at the University of Washington in the Department of Health Design and Planning. He has over 20 years of combined GIS teaching and research experience. He has taught GIS at the undergraduate and graduate levels, and has run over a dozen hands-on GIS workshops focusing on fast-tracking practical GIS skills. His work currently focuses on the relationship between the composition and configuration of the built environment on health-related behaviors. This course will focus on technical issues at the nexus of public health/epidemiology and urban planning.