The CUNY Institute For Demographic Research (CIDR)
Will Be Offering 3 Afternoon Workshops on
SPATIAL TOOLS and ANALYSIS

Dates: Workshop 1, Friday, 27 April 2012
                  Workshop 2, Friday, 4 May 2012
                  Workshop 3, Friday, 11 May 2012
Time: 1:00 PM – 5:30 PM (4 hours of instruction)
Location: Baruch College, CUNY, New York (137 E. 22nd Street)
Eligibility: Open to all. Each workshop will build upon the other, but students will pre-existing mapping skills may elect to enroll in Workshop 2 or 3 only.
Fee: $300 per workshop (or $750 for all three)
Instructors: Professor Deborah Balk and Professor Frank Donnelly
Pre-reqs: Students must bring their own laptop. Students will learn using open-source QGIS. See details on software requirements below.

This course is primarily intended for data and policy analysts who want to gain familiarity with the basics of map making and spatial analysis. This course will teach you how use open-source GIS software to make basic maps, calculate geographic variables for use in other analysis programs, and use basic geospatial processing operations and analysis. After completing these workshops, you will be able to demonstrate competency with an open-source, freely available GIS package and gain basic familiarity with ArcGIS. You need not sign up for all three workshops, but if you wish to take Workshop 2 or 3, you must have competency in material taught in earlier workshops. Examples of the content of each workshop follows.

Workshop 1: Make a Map	Workshop 2: Geospatial Calculations	Workshop 3: Geospatial Analysis
• Add data to GIS software and navigate a GIS interface • Create thematic maps using the principles of map projections, data classification, symbolization, and cartographic design • Convert text-based data to a GIS data format • Join tables • Find spatial data	• Perform basic geoprocessing operations for preparing vector GIS data • Work with point data • Create point data from X-Y data • Create centroids from vector data • Learn how to use GIS software to calculate geographic variables (e.g., distances, area) • Learn basics of raster data formats	• Learn how to query your spatial data to find locations of interest • Conduct basic geographic analyses using standard GIS tools and vector data (e.g., creating buffers) • Conduct a site-selection analysis • Analyze patterns in spatial data (e.g., Nearest Neighbor Analysis, Moran's 1)

Software requirements: QGIS is downloadable from http://www.qgis.org/ and runs on Linux, Unix, Mac OSX, and Windows. **Students must install it on their laptop prior to the first workshop.** Given the nature of GIS work, small netbook-style laptops are not appropriate due to their screen size and lack of processing power. Students will also be given a free student license of ArcGIS at the first workshop. (About ArcGIS: It will not be the primary software of instruction; the student version is a non-renewable one-year license, which requires a Windows environment. While the student license includes a wide range of functions, it does not have the full functionality.)

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For more information, please contact: Ms. Diana Stagner, at dstagner@baruch.cuny.edu