

Urban Big Data Centre (UBDC) Summer Training Programme 2016

'Introduction to Network Analysis in ArcGIS'

Course instructor: Dr David McArthur, UBDC, University of Glasgow

Course duration: 1 day (Wednesday 3rd August 2016, 9:30am – 4:30pm, lunch break included)

Course location: Jura teaching lab, Level 4 Annexe, Glasgow University Library

Audience: Social scientists, students, practitioners

Pre-requisite knowledge: 'Introduction to Geographic Information Systems (GIS) Using ArcGIS' course or equivalent knowledge

Course summary:

Network analysis is a particularly useful class of analysis, which can be performed with a Geographic Information System (GIS). Network analysis allows us to analyse problems which are connected to the transportation of goods or people across a network. Using these methods we can consider questions such as: What is the shortest route between two points? What is the service area for a facility? Where should bus stops be placed along a route in order to maximise ridership? This course will cover how to get routing data, import it into ArcGIS and then perform analysis. This course builds on your existing GIS knowledge with a focus on network analysis for understanding spatial data and making informed, data-driven decisions that can be applied to urban planning and policymaking.

Course content:

- Getting Integrated Transport Network (ITN) data from the OS
- Converting ITN data into readable form
- Other sources of network data and how to process them
- Routing analysis
- Location allocation
- Calculating service areas
- Calculating origin-destination cost matrices