Objectives:
This course is designed to teach the skills necessary to read, reorganize, transform, clean, archive, and export simple or complex data. The primary tool used in the class is the SAS system. Structured Query Language (SQL) in both SAS and Microsoft Access receives a strong emphasis.

Topics:
The SAS Environment – using SAS interactively
Reading Data
Reading More Complex Data - e.g. reading a Web page
Transforming Data
Reorganizing Data
Hierarchical Files – e.g. Census Public Use Microdata Samples (PUMS)
Joining and Concatenating Files SQL and Data steps
Designing your data structures
Custom output, e.g. Web pages, XML
Parameterizing Programs / Macros – Iterating procedures
More SAS Data Step Techniques, Perl regular expressions
Data Interchange – moving data among software packages, operating systems, XML
Data Cleaning
A brief tour of some other topics
   Archiving Data
   Survey design
   Multidimensional databases
   Online Analytical Processing (OLAP servers), Pivot Tables
   Visualizing data, Geographic Information Systems – GIS
   Data Warehousing

Course structure: approximately 50% lecture/demonstration and 50% hands-on lab.

Auditing Policy: Faculty and permanent Staff are welcome to sit in as space permits.
    Please contact Larry or Mickey