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OIT WORKSHOPS
FOR RESEARCHERS

SPRING 2016

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REGISTER FOR FACE-TO-FACE WORKSHOPS

Qualitative and Text Analytics

Introduction to NVivo

Jan 12, Tues 10:00am – 12:00pm (Greve 520)

This course will give researchers enough knowledge to begin a project using NVivo. Researchers will be able to recognize the advantages and limitations of using NVivo for qualitative data analyses. By the end of the workshop, participants will know how to setup a project, import data, and code data. Participants will also understand the potential of NVivo as a tool for organizing, questioning, and reporting on the data so that users will be able to support and defend research findings. (The depth and breadth to which these topics will be covered will depend on the general level of computer literacy of the group coupled with their experience using NVivo software.)

Using Data Analysis Features of NVivo

Jan 14, Thurs 1:00pm – 2:30pm (Greve 520)

This workshop will demonstrate NVivo features that allow researchers to use data involving demographics along with quantitative and qualitative data. The workshop will cover how to import survey data and/or quantitative data and match cases. By the end of the workshop participants will be able to: conduct simple coding queries, organize sets of participants, auto code qualitative responses to a single node, use annotations and memos, text-search data to augment manual coding, conduct compound queries, export results and report results graphically, and model and report findings.

QDA Miner 1 (Basics)

Feb 9, Tues 10:00am – 12:00pm (Greve 520)

QDA Miner is software that helps you perform Qualitative Data Analysis of text from sources such as interviews, speeches, newspaper articles, or open-ended survey questions. This hands-on workshop will show you how to import or enter the text, search for keywords, code blocks of text, find patterns of codes, calculate inter-coder reliability, compare groups, and export your findings to other packages.

Qualtrics Web Survey Design 1

Jan 28, Thurs 10:00am – 12:00pm (Greve 520)
March 1, Tues 10:00am – 12:00pm (Greve 520)
March 9, Wed 1:00pm – 3:00pm (Online via Zoom)

In this hands-on workshop, you will create a web-based survey using Qualtrics. Basic question construction (single and multiple response questions, grid/matrix tables for Likert questions, text questions) will be covered as well as how to add in Display and Skip Logic, which allows the respondent to skip questions that do not pertain to them, therefore shortening their response time. An overview of the reporting tools and how to export data as an SPSS dataset will also be presented. You may bring your own laptop if you wish.
QUALITATIVE AND TEXT ANALYTICS (CONTINUED)

WordStat for Text Mining
Feb 11, Thurs 10:00am – 12:00pm (Greve 520)
WordStat is an easy to use package that performs all the fundamental tasks for text mining. It automatically extracts concepts from sources such as interviews, speeches, newspaper articles, or open-ended survey questions. In this hands-on workshop, you will learn how to determine the frequency and co-occurrence of terms, phrases, and concepts; create a categorization (coding) dictionary; analyze category patterns; compare groups; and export the findings to other packages. WordStat runs as an add-on to Stata and QDA Miner, but no knowledge of those packages is assumed.

SCIENCE AND ENGINEERING

ChemBioDraw Basics
Feb 25, Thurs 1:30pm – 3:30pm (Humanities 201)
A picture is worth a thousand words. The ability to easily create depictions of biological pathways and molecular structures is fundamental to the work of life science researchers. ChemBioDraw provides customizable drawing tools for common pathway diagrams as well as biological and chemical structures. It includes a large collection of templates for membranes, DNA/RNA, enzymes, receptors, ion channels, organelles, microorganisms, etc. This workshop will introduce the ChemBioDraw basics and demonstrate how to generate publication-quality graphics, even by non-artists. Hands-on tutorials will be conducted throughout the session. No prior knowledge of ChemBioDraw is required.

Image Processing Using ImageJ
Feb 4, Thurs 1:30pm–3:30pm (Humanities 201)
Feb 9, Tues 1:30pm–3:30pm (Online via Zoom)
This is an introductory workshop on computer processing of visual information using ImageJ. The topics to be covered include basic image processing techniques, such as image enhancement and segmentation. We will mainly use ImageJ for demonstration, but MATLAB Image Processing Toolkit and R image processing packages will also be briefly discussed. Preliminary knowledge of ImageJ is not required.

Linux 1
(Introduction to the Linux Command Line)
Feb 17, Wed 3:00pm – 5:00pm (Greve 520)
Feb 18, Thurs 3:00pm – 5:00pm (Greve 520)
Linux is a free and open source operating system. This hands-on workshop shows you how to use Linux from its graphical interface and its commands. Graphical user interfaces (GUIs) are meant to be intuitive, but you can perform some tasks only using commands. We will mention the graphical tools that you can use for some tasks; however, the focus will be on the commands.

Newton 1
(Introduction to Newton HPC)
Feb 24, Wed 3:00pm – 5:00pm (Greve 520)
Feb 25, Thurs 3:00pm – 5:00pm (Greve 520)
This workshop will introduce new researchers in computing-intensive fields to use of the Newton Program Linux cluster. It will involve hands-on examples of cluster computing, data distribution, parallel processing, and other techniques. Participants should have existing Linux command-line experience or should first attend the “Introduction to Linux” workshop.

SQLite 1
(Basics)
March 7, Mon 1:30pm – 3:30pm (Greve 520)
You will create a simple database and execute SQL commands. We will provide a few basic scripting interfaces which the participants will utilize, and do some simple edits in the workshop to get output. SQLite is easy to install and does not need a dedicated server. From the SQLite website: “SQLite is a software library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine. SQLite is the most widely deployed SQL database engine in the world. The source code for SQLite is in the public domain.”
Statistics

**JMP Basics**

- **Feb 11, Thurs** 1:30pm – 3:30pm (Humanities 201)
- **Feb 16, Tues** 1:30pm – 3:30pm (Online via Zoom)

**NEW WORKSHOP.** Students will learn the basics of using the JMP interface to accomplish the following tasks: Manage data effectively; explore data by using the software’s extensive graphical capabilities; create and manage data summary reports in JMP; and conduct basic data analysis. Hands-on examples will be provided throughout the session. Prior preliminary knowledge of JMP is not required.

**MATLAB Programming Basics**

- **Feb 3, Wed** 1:30pm – 3:30pm (Humanities 201)
- **Feb 23, Tues** 1:30pm – 3:30pm (Humanities 201)

MATLAB is the most popular software for solving problems in matrix algebra. This hands-on workshop will focus on the basic features of MATLAB’s working environment and programming techniques. Numerical computation and application will be discussed using practical examples. MATLAB is currently free to faculty, staff, and students.

**Research Services 1**

*(Research Software and Services Overview)*

- **Jan 27, Wed** 10:10am – 11:10pm (Humanities 201)

In this brief workshop, you will learn about the extensive range of free research software and services available to you from OIT. We can help you: do quantitative and qualitative analysis of data, text, and images; create web-based surveys; use high-performance computers; solve challenging math problems — and more! Full statistical consulting and qualitative analysis consulting services are included.

**R 1 (R Programming)**

- **Jan 29, Fri** 10:10am – 12:40pm (Humanities 201)
- **Feb 16, Tues** 10:10am – 12:40pm (Online via Zoom)

In this hands-on workshop, you will learn to use the R programming language to create vectors, factors, and data frames; how to manage your files and workspace; control R functions; read comma-separated data files; select variables and observations; create simple traditional plots; and perform basic statistical analyses.

**SAS Basics**

- **Feb 2, Tues** 1:30pm – 3:30pm (Humanities 201)

SAS is one of the most popular software packages for data analysis and visualization. It is a powerful tool that enables programmers to perform various tasks including information retrieval, data management, report writing and graphics, statistical analysis, and data mining. This workshop provides instruction on how to program effectively using SAS and understand basic concepts about SAS programs.

**SAS Data Analysis**

- **Feb 3, Wed** 10:00am – 12:00pm (Greve 520)

SAS is a popular package for data analysis and graphics. This workshop shows you how to run the most widely used statistics and graphics in SAS, as well as how to interpret the output. Topics include: importing data in SAS, SAS procedures statements, exploring your data, measuring the strength of association between two continuous variables, comparing two groups on categorical and continuous variables, t-tests, analysis of variance and regression using the general linear model, how to produce plots in SAS, and where to go to learn more.

**SPSS 1 (Basics)**

- **March 2, Wed** 10:00am – 12:00pm (Humanities 201)
- **March 11, Fri** 1:30pm – 3:30pm (Greve 520)

SPSS is a popular package for data analysis and graphics. This hands-on workshop takes you from starting the package through data coding, entry and cleanup, creating new variables, how to get output for different groups, how to request an analysis or a graph, manipulating the output, and where you can learn more. The hands-on lab session will employ the easy-to-use version for Microsoft Windows, but the menus are almost identical on Macintosh and Linux. Participants should have basic knowledge of Windows, Macintosh, or UNIX X-Windows.
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