

EPBI 414 – Class outline and calendar for Fall 2008

Week of Aug. 25 (Monday) & 27 (Weds.) – UNIX 1

- Introduction to UNIX
- Introduction to joe (UNIX text editor)
- Tutorials 1-6 in *UNIX tutorial for beginners*, available at <http://www.ee.surrey.ac.uk/Teaching/Unix/>
- UNIX HW #1

Week of Sept 1: UNIX 2 and SAS Session 1

- No Class Monday (Labor Day)
- Review UNIX and use of joe.
- Tutorials 4-6 in *UNIX tutorial for beginners*
- UNIX HW#2

Week of Sept. 8th – SAS Session 1

- SAS 1: Use of SAS, data structures, DATA and PROC steps, step boundaries, processing concepts, SAS files: *.sas, *.log, *.lst and placement into WORK (temporary) and permanent libraries
- Input (list input, column input, positional input with implicit formatting, positional input with explicit formatting, PROC PRINT, PROC CONTENTS)
- Complete lecture and lab: Variable types, SAS data sets, libraries, accessing internal and external data sets, PROC SORT, MEANS, and FREQ SAS/Unix coding workshop in Unix/lab
- SAS Homework #1

Week of Sept. 15th – SAS Session 2

- System options and environment, DATA step: SET statement, creating and redefining new variables, functions, LABEL, KEEP, DROP, RENAME. Data Management I – intro to merging
- Weds: Complete lecture and lab
 - SAS Extra topic: How to code for t-test, comparing means across two groups and Pearson/Spearman non-parametric comparison of distributions.
- SAS Homework #2

Week of Sept. 22nd – SAS Session 3

- More on operators and functions: DATA step: logical operators; subsetting data: where, if, if-then, if-then-else. PROC CHART
- Weds: SAS 4 (Extra topic: missing data), and lab
- SAS Homework #3

Week of Sept. 29th – SAS Session 4

- SAS 4: DATA step syntax: IF – THEN / DO – END / ELSE, Missing data, Recoding, Labeling and formatting SAS Variables and Values for Output, LABEL, LENGTH and FORMAT statements, FORMAT libraries, TITLE and FOOTNOTES on output; PROC PLOT
- Weds.: Complete lecture, review homework, and lab
- SAS Homework #4

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Week of Oct 6th - SAS Session 5

- SAS 5: Getting some SAS help, new DATA step syntax, PROC FREQ, Interpreting PROC FREQ cross tabulation tables. PROC CORR, WHERE statement in PROCs for subset analysis.
- Weds. PROC TABULATE. Lab session.
- SAS Homework #5 (Last homework set before final exam) Due Friday – will return by Monday

Week of Oct 13th - SAS Session 6

- Turn in SAS HW#5 – Review HW
- SAS 6: Introduction to SAS for Windows: accessing data, keys, environment, navigation, pull down features, importing and exporting data.
 - Introduction to Output Display System (ODS).

Week of Oct. 20th - MIDTERM EXAM

- No class Monday (Fall Break)
- Wednesday:
 - Part 1 of midterm exam for first hour (in-class) covering on material up to and including SAS 6
 - Part 2 of midterm exam given as take home assignment, due Monday, Oct 27th

Week of Oct. 27th - SAS Session 8

- Introduction to SAS for Windows
- Data Management 2:
 - RETAIN (text pp. 88-89)
 - Trick: using RETAIN to reorder variables in a data set
 - IN = option
 - Two applications
 - Output & Delete (observations in DATA step)
- Longitudinal data
- HW 6: will include FIRST., LAST. and PROC TABULATE from Sessions 6 & 7

Week of Nov. 3rd - SAS Session 9

- Advanced Character Functions (text pp. 234-235)
- Advanced Data Set Merging
 - Use of IN= in merging data sets
 - Matched merging:
 - One-to-one, one-to-many, many-to-many (text pp.160-169)
 - Merging Data Set – Common Problems
- Data Management 3: LAG function
- Tips working with new, numeric, character data,
- Twenty most common programming mistakes
- ODS- Output Display System (on separate slide set)

Week of Nov. 12th - SAS Session 10

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- Intro to PROC SQL
 - (ref: Kirk Lafler, Software Intelligence Corporation, SUGI handouts)
 - Additional handout on matching case data using SQL
 - Comparing merging with DATA steps and merging with PROC SQL
- Handout- DATA statement efficiency
 - (ref: S.D. Riba, JADE Tech, Inc. SUGI 27 white papers)
- Introduction to MACROS
- HW 7 (last one)

Week of Nov. 17th - SAS Session 11

- Iterative processing & Arrays
- PROC REPORT
- PROC COMPARE to compare 2 datasets
- Automatic variable `_n_`

Week of Nov. 24th - SAS Session 12

- PROC DATASETS
 - Library manipulation and maintenance
- Intro to SPSS

Week of Dec. 3rd -

Monday, Dec 3rd : Review session

Weds., Dec. 5th : Final Exam In-Class /

Receive Take-home Final Exam

Completed Take-home Final Exam is due Monday, Dec. 10th at 12 noon.