PSY792F SEM

Week1 - Introduction

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Welcome

- Introductions
  - Mark Prince, PhD, MS
    - Clinical Psychology PhD
    - Applied Statistics MS
    - **Research interests**: Addictive Behaviors, Treatment, Mechanisms of Behavior Change, Application of Advance Methods
  - Lara Pantlin, MS
    - Cognitive Neuroscience MS
    - **Research interests**: Time processing, early prediction of schizophrenia, clinical neurophysiology, intervention efficacy, testing anxiety and performance, metacognition
- Tell us about yourself:
  - Name
  - Program/Year
  - What you study
  - What you want to get out of this course

Today's agenda

- Discuss expectations
- Review the syllabus
- Tutorial reading data into MPlus
- Take a baseline exam (not graded)

Approximate weekly class outline

- First Hour
  - Lecture
    - Assumptions
    - Technical issues
    - Types of questions appropriate for each topic
- Second Hour
  - Demonstrating how to run models
    - Formatting data
    - Writing code
    - Interpreting output
  - Write up
    - Walking through an example write up
- Third Hour
  - Time in class to run models on your own data or data I can provide

Expectations

- Arrive on time.
- Bring your lunch or a snack.
- Read what you need to.
- Practice these models with your own data.
- Ask questions.

A couple questions:

- Do you have any apprehensions/concerns about taking this course?
- Do you have data?
  - Are you planning to collect data soon?
- Do you have access to Mplus?

Dropbox

- We are going to be using dropbox for this course
- I have created a class folder with:
  - Dropbox Etiquette
    - Please review these points
  - Readings
    - There are tons of readings in there for your reference, only a couple are assigned each week
  - Lectures
    - I will put them in dropbox right before class
  - Code and Data
    - I will put these in the folders each week as we use them for example in class
  - Write ups
    - I will put these in each week as well
  - Personal Folders*
    - This is a place for you to store stuff for class or to share with me, if you want

Syllabus

- Key Points
- 3 Exams
- 1 Paper
- Readings
  - Do what you need for the exams.
  - Reference list
- Homework
  - I **strongly encourage** you to work on these models each week.

Grades

- 3 Exams
  - 80 Points each
  - Essay Questions
  - Output interpretation
- 1 Paper
  - 80 Points
  - Brief: Intro, Methods, Discussion
  - Thorough: Analysis Plan, Results, Tables, Figures

Final Grades

Total Points	Final Grade
307-320	A
293-306	A-
279-292	B+
265-278	B
251-264	B-
236-250	C+
223-236	C
200-222	C-
Less than 200 points is considered a failing grade	

Classroom Rules

- Be on time, stay the whole time
- If you need to use your phone, step out of the room (this includes texting)
- Use laptops for taking notes/running models
- No side conversations
  - If you have questions, pose them to the class
- Don’t distract me or others

Office Hours

- By Appointment
- Email is preferred

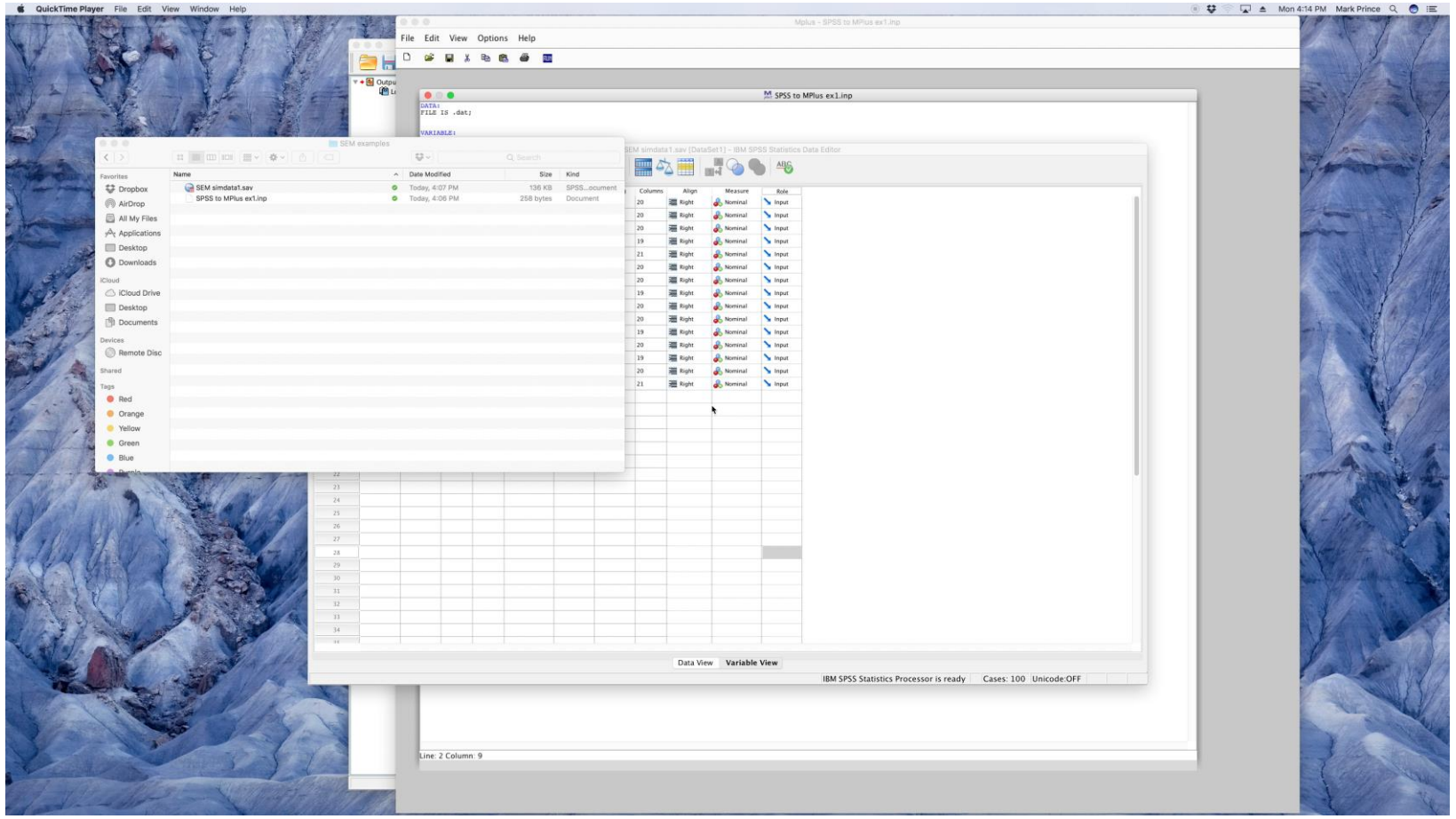
Software

- MPlus
  - All models we will run will require MPlus.
  - I will provide MPlus input/output for the models we run in class
  - A couple copies will be available in the computer lab (ask Donna)
  - Please work together and share.
    - There is no required text book, so you could consider pooling your resources to buy a copy to share.
- R
  - There are a few supplemental analyses that will be done in R, let me know if you have never used R before
- SPSS, R, Stata, SAS, …
  - Data management can be done in the software of your choosing.
  - Including:
    - Cleaning data
    - Transforming data from wide to tall and vice-a-versa
    - Viewing scatterplots, histograms, etc.
    - Outlier analyses

MPlus

- Tricks for reading in data
  - MPlus can read in data in a number of formats (see users guide)
    - I find that .dat works the best (this is a tab delimited file).
  - Code all missing data the same
    - I like to use -999
  - Save the .dat file **without** a row of headers
    - Save the variable names in a separate file
      - In SPSS I like to open analyze, descriptives, put all the variables in the dialog box, then hit paste – this will give me a variable list I can paste into MPlus
  - If you save the .dat file in the folder where you are saving your .inp file, you can just write File is *filename*.dat
  - If you save the .dat file in a different folder than your .inp file then you have to write out the whole path e.g., C:/dropbox/sem/*filename*.dat or whatever
    - *note: put in the name of your file where I wrote *filename*

Reading SPSS files into MPlus



Next Week:

- Make sure you have access to Mplus
- Read in the data file loaded on dropbox (in the code and data/practice data folder) called "Week1Intro.txt" into Mplus using the following code:

```
DATA:
FILE IS week1intro.txt;
!move the .txt file into your personal folder and save your .inp file in the same folder or write out the full path
!name directing mplus to the above file
VARIABLE:
NAMES ARE
x1 x2 x3 x4 x5 x6 x7 x8
x9 x10 x11 x12 x13 x14
x15 x16 x17;
```

- Next, try with your own data:
  - Make sure there are *no text headers* (so it should just look like a block of numbers – no strings)
  - Make sure your data is saved as a readable file type (.dat, .txt, .csv)
  - The NAMES ARE function is variable list in order (i.e., the headers of your columns)
  - You cannot read in data without the information in DATA and in VARIABLE
  - The data and the Mplus file must be saved in the same folder

Questions?

Baseline Exam

- Use the rest of class to complete the exam
- This will not be graded
- This exam is intended to help me understand everyone's level of understanding of regression and factor analysis
- Future exams will be in this format, with the addition of an output section to interpret.