




background. I would be happy to provide suggestions for supplementary reading material that will prepare you for concepts and topics that we will discuss in class. The focus of PSYC 537 concerns the understanding and of analyses for nested data structures (rather than detailed comprehension of the underlying mathematics). Class participation and successful completion of the course assignments presupposes fundamental knowledge of multiple regression.



<b>COURSE REGISTRATION</b>	
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You are personally responsible for checking your registration status before the end of the course-add period (Wednesday, January 26, 2022). Please verify and confirm your registration status as, according to University policy, I am unable to facilitate a course addition after this date you have been attending class. Also note that Monday, February 28, 2022 is the last day for officially withdrawing without academic penalty. University policy states that failing to attend lectures does not constitute official withdrawal.

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significance of level-1 vs. level-2 predictors, etc.) sections, (b) capacity for critical thinking and novelty, and (c) writing, attention to detail, and adherence to APA style.

Finally, as each of you will have very different research questions and will thus employ different models, I have refrained from recommending any single example in the published literature for you to consult regarding content and formatting for this assignment. As the term unfolds and I familiarize myself with your data/questions, feel free to consult me for specific examples of published articles that are closely tailored to your own project. These articles can serve as templates as you work on your final assignment.

**Your final written assignment is due on THURSDAY, APRIL 14, 2022.**

### Grading

I have purposely employed several forms of evaluation in recognition that each of you has individual learning styles. Your grade for the course will be based on both written and spoken contributions, providing you the best opportunity to demonstrate your many abilities. Further, to minimize anxiety associated with individual projects that count toward a large percentage of your grade, I have specifically chosen to parse evaluation into smaller components. Your workload should not increase, but rather be more evenly dispersed across the term.

1. Class participation/discussion = 10%
2. Presentation of research findings = 30%
3. Written assignment 1 = 10%
4. Written assignment 2 = 10%
5. Final written assignment using APA style = 40%

Graded course requirements will be weighted and aggregated to yield a percentage score. The final letter grade in the course will be based on total percent score rounded up at values of .5 or greater (e.g., 89.5 will be rounded up to 90, but 89.4 will not). Final grades will be assigned according to the following scale: 90-100% = A+; 85-89 = A; 80-84 = A-; 77-79 = B+; 73-76 = B; 70-72 = B-; 65-69 = C+; 60-64 = C; 50-59 = D; 0-49 = F.

<b>WEEKLY TOPICS AND ASSIGNED READINGS</b>	
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**JANUARY 10**  
**First Meeting**

Hox, J.J. (1995). *Applied multilevel analysis* (pp. 1-8). Amsterdam: TT-Publikaties.

Luke, D.A. (2004). *Multilevel modeling* (pp 1-9). Thousand Oaks, CA: Sage Publications.

Peugh, J.L. (2010). A practical guide to multilevel modeling. , 85–112.

Singer, J.D., & Willett, J.B. (2003). A framework for investigating change over time. In  
(pp., 3-15). New York: Oxford University Press.

Singer, J.D., & Willett, J.B. (2003). Exploring longitudinal data on change. In  
(pp., 16-44). New York: Oxford University Press.

Weinfurt, K.P. (2000). Repeated measures analyses: ANOVA, MANOVA, and HLM. In L.G. Grimm, & P.R.  
Yarnold (Eds.), (pp. 317-362). Washington D.C.: APA.

## **FEBRUARY 7**

### **Multilevel Modeling: Level 1 Models**

Singer, J.D., & Willett, J.B. (2003). Doing data analysis with the multilevel model for change. In (pp., 75-137). New York: Oxford University Press.

Singer, J.D., & Willett, J.B. (2003). Treating TIME more flexibly. In (pp., 138-188). New York: Oxford University Press.

Sliwinski, M., & Mogle, J. (2008). Time-based and process-based approaches to analysis of longitudinal data. In S. Hofer, & D. Alwin (Eds.), . (pp. 477-492). Thousand Oaks, CA: SAGE Publications, Inc.

## **FEBRUARY 21**

**No Class (Family Day/Reading Break)**

## **FEBRUARY 28**

**Multilevel Modeling: Level 2 Models**

Peugh, J.L. (2010). A practical guide to multilevel modeling. , 85–112.

Singer, J.D., & Willett, J.B. (2003). Introducing the multilevel model for change. In (pp., 45-74). New York: Oxford University Press.

Singer, J.D., & Willett, J.B. (2003). Doing data analysis with the multilevel model for change. In (pp., 75-137). New York: Oxford University Press.

***\*\*Please note that assignment 1 (level 1 model) is due today, Monday, Feb 28 (10%).***



Snijders, T.A.B., & Bosker, R.. (1999). *Multilevel analysis: An introduction to basic and advanced multilevel modeling* (pp. 99-109). Thousand Oaks, CA: Sage Publications.

## **MARCH 14**

### **Multilevel Modeling Using Other Software Programs**

***\*\*Please note that assignment 2 (level 2 model) is due Monday, March 21<sup>st</sup> (10%)***

## **MARCH 21**

### ***Class Presentations (30%)***

*due Thursday, April 14<sup>th</sup>*

### **Some Additional Topics in Multilevel Modeling (\*time permitting\*)**

Hall, C.B., Lipton, R.B., Sliwinski, M., & Stewart, W.F. (2000). A change point model for estimating the onset of cognitive decline in preclinical Alzheimer's disease. *Journal of the American Academy of Geriatrics*, 48(12), 1555-1566.

Kreft, I. & de Leeuw, J. (2000). *Introducing multilevel modeling* (pp. 119-126). Thousand Oaks, CA: Sage Publications.

Maas, J.M. & Hox, J.J. (2005). Sufficient sample sizes for multilevel modeling. *Behavior Research Methods*, 37(1), 86-92.

Preacher, K.J., Zyphur, M.J., & Zhang, Z. (2010). A general multilevel SEM framework for assessing multilevel mediation. *Journal of Educational Psychology*, 92(3), 209-233. doi: 10.1037/a0020141. PMID: 20822249.

Singer, J.D., & Willett, J.B. (2003). *Modeling change using covariance structure analysis*. In *Handbook of quantitative longitudinal research* (pp., 266-304). New York: Oxford University Press.

Snijders, T.A.B., & Bosker, R. (1999). *Multilevel analysis: An introduction to basic and advanced multilevel modeling* (pp. 207-238). Thousand Oaks, CA: Sage Publications.

Thorvaldsson, V., MacDonald S.W.S., Fratiglioni, L., Winblad, B., Kivipelto, M., Laukka, E.J., Skoog, I., Sacuiu, S., Guo, X., Östling, S., Börjesson, A., Gustafson, D., Johansson, B., & Bäckman, L. (2011). Onset

and rate of cognitive change before dementia diagnosis: Findings from two Swedish population-based longitudinal studies. , 154-162.

***\*\*Please note that assignment 2 (level 2 model) is due today, Monday, Mar 21 (10%).***

### **MARCH 28**

***Class Presentations (30%)***

***due Thursday, April 14<sup>th</sup>***

### **APRIL 4**

***Class Presentations (30%)***

***due Thursday, April 14<sup>th</sup>***

***\*\*Please note that this is our final class (Thursday, April 7<sup>th</sup> is the last day of classes for the Spring 2022 term).***

### **THURSDAY, APRIL 14**

***\*\*Please note that your final assignment (Method and Results sections) is due today (40%). Please feel free***

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<b>PLAGIARISM AND CHEATING</b>	
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<b>WELLNESS STATEMENT</b>	
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A note to remind you to take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress.