் Complete 1a – 1f & 2a – 2c. Fill out the remainder of the form as applicable for items being changcங்

1.	Gene	eral Information.								<u> </u>
a.   Submitted by the College of:   Agriculture   Today's Date:   February 23, 2012										
b.	b. Department/Division: Family Sciences									
c.	Is there a change in "ownership" of the course?									
	If YES	S, what college/dep	artment will offer t	he course instead?	\ <u></u>					
d.	What	t type of change is b	eing proposed?	Major 👯 🗥	/linor <sup>1</sup> (place cu	rsor here for	r minor cha	nge definition	<u></u>	Comment [OSC1]: Excerpt from SR 3.3.0.G.2
e.	Conta	act Person Name:	Donna Smith	Email:	donnarsmith(	@uky.e	Phone:	<u>7-7733</u>		Definition. A request may be considered a minor change if it meets one of the following criteria: a. change in number within the same hundred series*:
f.	Requ	ested Effective Date	e: 🛛 Semester	Following Approval	OR Spe	ecific Term	ı²: [			b. editorial change in the course title or description which does not imply change in content or
2.	Desig	gnation and Descrip	tion of Proposed C	Course.						emphasis; c. a change in prerequisite(s) which does not imply
a.	Curre	ent Prefix and Numb	per: <u>FAM 790</u>	Proposed Prefix &	Number:	FAM 790				change in content or emphasis, or which is made necessary by the elimination or significant alteration
b.	Fuli T	itle: Advanced M Studies Rese	ethods in Family arch	Proposed Title:	Advanced Res	search Mei	thods in	Fami <u>ly Scie</u>	nces	of the prerequisite(s); d. a cross-listing of a course under conditions set forth in SR 3.3.0.E; e. correction of typographical errors.
C. Current transcript rice (if full title is more than 40 characters): RESEARCH						*for the specific purposes of the minor exception rule, the 600-799 courses are the same "hundred series," as long as the other minor change				
C.	ADV RESEARCH METHODS IN FAM requirements are complied with, IRC 1/15/09)									
d.	d.   Current Cross-listing:   N/A   OR   Currently Cross-listed with (Prefix & Number):									
	Proposed –   ADD³ Cross-listing (Prefix & Number):									
	Proposed – REMOVE <sup>3, 4</sup> Cross-listing (Prefix & Number):									
e.	e. Courses must be described by <u>at least one</u> of the meeting patterns below. Include number of actual contact hours <sup>5</sup> for each meeting pattern type.									
Curr		2,5 Lecture	Laboratory	,5 Recita	tion	Discussi	ion	Indep. S	tudv	
		Clinical	Colloquiun			Researc		Residen		
		Seminar	Studio	Other – Plea			J <del></del> -			
Prop	osed:	2,5 Lecture	Laboratory	, Recitat	ion	Discussi	ion	Indep. St	udv	
		Clinical	Colloquium	Praction	·····	Researci	·	Residenc		경 :
Seminar Studio Other – Please explain:										
f.	f.   Current Grading System:   Letter (A, B, C, etc.)   Pass/Fail									
		sed Grading System:			Pass/Fail			5 7		

<sup>&</sup>lt;sup>1</sup> See comment description regarding minor course change. *Minor changes are sent directly from dean's office to Senate Council Chair*. If Chair deems the change as "not minor," the form will be sent to appropriate academic Council for normal processing and contact person is informed.

<sup>&</sup>lt;sup>2</sup> Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

 $<sup>^3</sup>$  Signature of the chair of the cross-listing department is required on the Signature Routing Log.  $^4$ 

<sup>&</sup>lt;sup>4</sup> Removing a cross-listing does not drop the other course – it merely unlinks the two courses.

Generally, undergrad courses are developed such that one semester hr of credit represents 1 hr of classroom meeting per wk for a semester, exclusive of any lab meeting. Lab meeting generally represents at least two hrs per wk for a semester for 1 credit hour. (See SR 5.2.1.)

			)	3		
g.	g. Current number of credit hours: Proposed number of credit hours:					
h.	Currentl	y, is this course repeatable for	additional credit?	YES	NO 📝	
	Proposed	l to be repeatable for additiona	l credit?	YES 🗌	NO 🗹	
	If YES:	Maximum number of credit h	ours:			
	If YES:	Will this course allow multiple	registrations during the same semester?	YES _	NO 🗹	
i.	Advanced study of research methods using in family studies. Designed to prepare students for the development of their dissertation proposal.  Includes study of advanced statistical methods including MANOVA, MANCOVA, discriminant analysis, path analysis, canonical correlation, multiple regression, and LISREL.					
	Advanced study of quantitative research methods, including but not limited to complex study designs, model building and structural equation modeling, reliability and validity of measures, statistical power and effect size, mediator and moderator variables, and identifying appropriate statistical techniques for specific types of problems.					
j.	Current F	Prerequisites, if any: FAM	690 or equivalent			
	Proposed	Prerequisites, if any: FAM	690 and FAM 777, or equivalents			
k.	Current D	Distance Learning(DL) Status:	✓ N/A	Please Add <sup>6</sup>	] Please Drop	
	*If already approved for DL, the Distance Learning Form must also be submitted <u>unless</u> the department affirms (by checking this box) that the proposed changes do not affect DL delivery.					
i.	Current Supplementary Teaching Component, if any: Community-Based Experience Service Learning Both					
	Proposed Supplementary Teaching Component:					
3.						
		d to be taught off campus?		YES	NO M	
4.	Are significant changes in content/teaching objectives of the course being proposed? YES NO					
	If YES, explain and offer brief rationale:					
	The course was previously focused on dissertation proposal development and a narrow range of statsitical techniques. We have added a statstics course (FAM 777) to our curriculum, and are revising FAM 790 to focus more distinctly on advanced research methods.					
5.	Course R	elationship to Program(s).				
a.	Are there	e other depts and/or pgms tha	t could be affected by the proposed change?	YES 🗌	NO 🗹	
	If YES, ide	entify the depts. and/or pgms:			17 (12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
b.	Will mod	ifying this course result in a new	requirement <sup>7</sup> for ANY program?	YES 🔲	NO 🔽	
	If YES <sup>7</sup> , list the program(s) here:					
6.	Informat	ion to be Placed on Syllabus.				

<sup>&</sup>lt;sup>6</sup> You must *also* submit the Distance Learning Form in order for the course to be considered for DL delivery.

<sup>7</sup> In order to change a program, a program change form must also be submitted.

a.		changed to	If <u>changed to 400G-</u> or 500-level course you must send in a syllabus and <i>you must include the differentiation</i> between undergraduate and graduate students by: (i) requiring additional assignmen by the graduate students; and/or (ii) establishing different grading criteria in the course for graduate students. (See SR 3.1.4.)	
l	*			and the

# Signature Routing Log

## **General Information:**

Course Prefix and Number:

FAM 790

Proposal Contact Person Name:

Donna Smith

Phone: <u>7-7733</u>

Email: donnarsmith@uky.edu

### **INSTRUCTIONS:**

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

# Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature	
Family Sciences Faculty	Oct 17, 2011	Donna Smith / 7-7733 / donnarsmith@uky.edu		
Graduate Curriculum Committee, COA	March 30, 2012	Larry Grabau / 7-3469 / Larry.Grabau@uky.edu		
		/ /	다. 11학교 1 1 대 기 대 1 대 기 대	
		1 1	1 .37 (A. 45)	
		1 1		

## **External-to-College Approvals:**

Council	Date Approved	Signature	Approval of Revision <sup>8</sup>
Undergraduate Council			
Graduate Council	5/3/12	Brian Jackson	
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Co	nments:	
		7
		-1
		1
		- 1
		-9

Rev 8/09

<sup>&</sup>lt;sup>8</sup> Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

# Advanced Research Methods in Family Sciences FAM 790

Spring Semester, 2013

**Instructors:** 

Alexander T. Vazsonyi, Ph.D.

316 Funkhouser Building

Office Hours:

By appointment

Class Time:

Wednesdays, 2:30 - 5:00

Location:

TBA

## **Description:**

Advanced study of quantitative research methods, including but not limited to complex study designs, model building and structural equation modeling, reliability and validity of measures, statistical power and effect size, mediator and moderator variables, and identifying appropriate statistical techniques for specific types of problems. Pre-reqs, FAM 690 and FAM 777 or equivalents.

### Readings:

A list of assigned readings for each class meeting is attached. You will note that several readings are from material in the Sage Series on Quantitative Applications in the Social Sciences. These individual volumes may be purchased at the university bookstore. Students are responsible for collecting and copying all other readings. The instructors' copies will be kept in a box on top of a filing cabinet in 315 Funkhouser Building; students may sign out the copies for individual photocopying. Additional readings may be distributed later in class.

Listed below are the **Sage volumes** that will be used in this course:

Allison, P. D. (2002). Missing data. (Vol. 136).

Bourque L. B., & Clark, V. A. (1992). Processing Data: The survey example. (Vol. 85).

Carmines, E.G., & Zeller, R.A. (1979). Reliability and validity assessment. (Vol. 17).

Converse, J.M., & Presser, S. (1986). Survey questions: Handcrafting the standardized questionnaire. (Vol. 63).

Davis, J.A. (1985). The logic of causal order. (Vol. 55).

Hartwig, F., & Dearing, B. (1979). Exploratory data analysis. (Vol. 16).

Jaccard, J., Turrisi, R., & Wan, C.K. (1990). Interaction effects in multiple regression. (Vol. 72).

Kim, J. O., & Mueller, C. W. (1978). Introduction to factor analysis: What it is and how to do it. (Vol. 13).

### **Tentative COURSE REQUIREMENTS**

As part of your assignments, all analyses completed in SPSS must use syntax files as opposed to the pull down menus. This means that you will need to write the syntax yourself; this should not include pasting the syntax into the syntax editor once you have completed the analysis using pull down menus. The SPSS help menu on each PC includes the complete SPSS manual on syntax and associated options. Students will be required to include a printout of their syntax file(s) for projects and assignments.

Research Methods Critique Assignments. Four research articles or topics will be assigned over the course of the semester to allow students to apply their knowledge and understanding of methodological and substantive issues to specific problems. Students will be required to carefully evaluate the content of each article in light of course materials as well as other relevant information and to write a critical assessment (750 words or less) of each. Students will receive their assignments 1 or 2 weeks prior to the due dates. Critique 1 will be due on 2/2/2013, the second critique on 2/16/2013, the third critique on 3/22/2013 and the final one on 4/19/2013. Each critique is worth 10% of total grade (40% of course grade).

Data Analysis Project I: For this assignment, students will use data collected as part of the International Study of Adolescent Development. Each student will receive a data file that includes demographics and a number of individual items. There are two major parts and products based on the same data set, namely an individual assignment (Project I), and an assignment to be completed in pairs (Project II). All analyses should be conducted in SPSS 19 for Windows available in the computer labs. The first goal of the project will be for students to complete exploratory factor analyses on the total complement of items (details to be discussed in class). You will be required to complete the exploratory factor analysis, to evaluate scree plots, Eigenvalues, percent of variance explained in each factor, and communalities. Please consult the assigned chapter by Pedhazur and Schmelkin for this part of the assignment. In addition, you will be required to complete the same procedures for male and female youth as well as for middle and late adolescents. So, in effect, you will be completing five sets of exploratory factor analyses. You will be required to discuss your findings and interpretation (What do the items measure? How many factors? Did you name the factors? etc.) of the exploratory analysis in a narrative, not to exceed 4 pages (1,000 words, excluding tables, figures, references, and syntax), and you should be prepared to discuss/present findings in class.

In addition, based on your findings from exploratory factor analyses, and also part of Project I, you will be required to compute scale scores (means), to examine issues related to skew and kurtosis of the scale scores, and to provide reliability estimates (Cronbach's alpha) separately for the total sample, for males and females, and for middle and late adolescents. Please present these findings in tables following standard APA 6.0 stylistic guidelines. Carefully evaluate the face validity of your scales and provide a descriptive evaluation or narrative of these latter findings (Due March 1, 2013; 25% of course grade).

Data Analysis Project II: The goal of this assignment is to familiarize students with confirmatory factor analyses (CFAs). For this assignment, students will be required to work in pairs and to employ the same data set as discussed under Data Analysis Project II to "confirm" the empirically derived scales from Project II and to evaluate model fit with appropriate fit statistics (consult readings) for males, females, middle adolescents, and late adolescents. If students working in a pair derived different "scales" in Project II, simply decide on the results from one student to confirm in CFAs. To complete these analyses, students will use AMOS 19 available in campus computer labs. Students will be required to test the following series of models that will be discussed further in class: 1) unidimensional models at the item level, 2) unidimensional models at the scalar level, 3) multidimensional models at the item level, 4) multidimensional models at the scalar level using item parcels, and 5) a second order or higher order model (either with items or parcels).

You will be required to provide a concise write-up and discussion of your findings based on CFAs not to exceed 4 pages (1,000 words; excluding tables, figures, output, and references); please be prepared to discuss/present your findings in class (Due March 15, 2013; 25% of course grade).

Class participation, in-class presentations will be evaluated and make up the final 10% of your course grade.

# **Summary of Course Evaluation**

Research Methods Critiques (10 points each)	40 points
Data Analysis Project I	25 points
Data Analysis Project II	25 points
Class participation	10 points
Total	100 points

## Grading Scale (100 points possible)

A 90-100 B 80-89 C 70-79 D 60-69 F 0-59

#### **Excused Absences**

Students need to notify the professor of absences prior to class when possible. S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit "reasonable cause for nonattendance" by the professor.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused or unexcused) per university policy.

### **Verification of Absences**

Students may be asked to verify their absences in order for them to be considered excused. Senate Rule 5.2.4.2 states that faculty have the right to request "appropriate verification" when students claim an excused absence because of illness or death in the family. Appropriate notification of absences due to university-related trips is required prior to the absence.

### **Academic Integrity**

Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious

penalties, up to suspension from the university may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: <a href="http://www.uky.edu/Ombud">http://www.uky.edu/Ombud</a>. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Part II of Student Rights and Responsibilities (available online

http://www.uky.edu/StudentAffairs/Code/part2.html) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be.

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).

Please note: Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

# Accommodations due to disability

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address: jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

# **Tentative Class Schedule**

Week	Date	Topic (Project/assignment due dates)
1	1/19	Introduction to course and overview: Assigned readings and e- mail correspondence with instructor
2	1/26	Data exploration, transformation, and graphical representation
3	2/2	Measurement: reliability and validity issues; effect size; hypothesis testing; meta-analysis  *Research Methods Critique I (10%)
4	2/9	Survey methodology I: Statistical power; quasi- experimental studies, missing data
5	2/16	Survey methodology II: EFA, program evaluation
6	2/23	Mediators and moderators  Research Methods Critique II (10%)
7	3/1	Structural Equation Modeling I: Overview, path analyses  Data Analysis Project I (25%)
8	3/8	Structural Equation Modeling II: CFA, fully latent construct models
9	3/15	Structural Equation Modeling III: Latent Growth Curve Analysis <i>Data Analysis Project II (25%)</i>
10	3/22	Behavior Genetic Research Methodology  Research Methods Critique III (10 points)
11	4/5	Observational methods
12	4/12	Lives through time I: An overview
13	4/19	Lives through time II: Issues in the study of development Research Methods Critique IV (10 points)
14	4/26	Lives through time III: The analysis of change
15	5/3	Course Wrap-up

#### READINGS

### Week 1: Overview

- Brody, G.H., & Endsley, R.C. (1981). Researching children and families: Differences in the approaches of child and family specialists. *Family Relations*, 30, 275-280.
- Greenwald, A. G., Pratkanis, A. R., Leippe, M. R., & Baumgardner, M. H. (1986). Under what conditions does theory obstruct research progress? *Psychological Review*, *93*, 216-229.
- Greenberg, J., Solomon, S., Pyszczynski, T., & Steinberg, L. (1988). A reaction to Greenwald, Pratkanis, Leippe, & Baumgardner (1996): Under what conditions does theory obstruct research progress? *Psychological Review*, 95, 566-571.
- Kerr, N.L. (1998). HARKing: Hypothesizing after the results are known. *Personality and Social Psychology Review*, 2, 196-217.

# Week 2: Data Exploration and Transformation

Sage Volumes:

Carmines, E.G., & Zeller, R.A. (1979). Reliability and validity assessment. .

Hartwig, F., & Dearing, B.E. (1979). Exploratory data analysis. Beverly Hills, CA: Sage.

#### Week 3: Measurement

- Diamond, J. (1987). Soft sciences are often harder than hard sciences, *Discover Magazine, August*, 35, 38-39. Goodman, S. N., & Royall, R. (1988). Evidence and scientific research. *American Journal of Public Health*, 78, 1568-1574.
- Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. (pp. 1-11 & 146-168). Applied Social Research Methods Series (Vol. 49). Thousand Oaks: Sage.
- Prentice, D.A., & Miller, D.T. (1992). When small effects are impressive. *Psychological Bulletin*, 112, 160-164
- Rushton, J. P., Brainerd, C. J., & Pressley, M. (1983). Behavioral development and construct validity: The principle of aggregation. *Psychological Bulletin*, *94*, 18-38.

Sage Volume.

Carmines, E.G., & Zeller, R.A. (1979). Reliability and validity assessment. Beverly Hills, CA: Sage.

## Week 4: Survey Methodology I (statistical power, missing data)

Acock, A. (1997). Working with missing data. Family Science Review, 10(1), 76-102.

Cohen, J. (1992). A power primer. Psychological Bulletin, 112, 155-159.

- Duncan, T. E., Duncan, S. C., Biglan, A., & Ary, D.(1997). A comparison of model- and multiple imputation-based approaches to analysis with partial missingness. Paper presented at the Biennial Meetings of the Society for Research in Child Development, Washington, D.C.
- Graham, J. W., & Donaldson, S. I. (1993). Evaluating interventions with differential attrition: The importance of nonresponse mechanisms and use of follow-up data. *Journal of Applied Psychology* 78(1): 119-128.
- Ribisl, K. M., Walton, M. A., Mowbray, C. T., Luke, D. A., Davidson, W. S., & Bootsmiller, B. J. (1996). Minimizing participant attrition in panel studies through the use of effective retention and tracking strategies: Review and recommendations. *Evaluation and Program Planning*, 19: 1-25.

Sage Volumes:

Allison, P. D. (2002). Missing data. (Vol. 136). (Chapters 1-5).

Bourque L. B., & Clark, V. A. (1992). Processing Data: The survey example. (Vol. 85).

Converse, J. M., & Presser, S. (1986). Survey questions. (Vol. 63).

## Week 5: Survey Methodology II (EFA, program evaluation)

- Flannery, D. J., Vazsonyi, A. T., Liau, A., Guo, S., Powell, K. E., Atha, H., & Vesterdal, W. (2003). Initial behavior outcomes for Peacebuilders universal violence prevention program. *Developmental Psychology*, 39(2), 292-308.
- Gorsuch, R. L. (1997). Exploratory factor analysis: Its role in item analysis. *Journal of Personality Assessment*, 68, 532-560.
- Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach* (pp. 590-627). Hillsdale: Erlbaum.
- Rossi, P. H., Freeman, H. E., & Lipsey, M. W. (1999). *Evaluation: A systematic approach* (pp. 3-35). Thousand Oaks: Sage.
- Sechrest, L., & Figueredo, A. J. (1993). Program evaluation. *Annual Review of Psychology, 44*, 645-674. *Sage Volume:*
- Kim, J. O., & Mueller, C. W. (1978). Introduction to factor analysis. (Vol. 13).

### Week 6: Mediators and Moderators

- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- McClelland, G.H., & Judd, C.M. (1993). Statistical difficulties of detecting interactions and moderator effects. *Psychological Bulletin*, 114, 376-389.

Sage Volume:

Jaccard, J., Turrisi, R., & Wan, C.K. (1990). Interaction effects in multiple regression. (Vol. 72).

#### Week 7: SEM I (Overview, path analyses)

- Biddle, B.J., & Marlin, M.M. (1987). Causality, confirmation, credulity, and structural equation modeling. *Child Development*, 58, 4-17.
- Lavee, Y. (1990). Linear structural relationships (LISREL) in family research. *Journal of the Marriage and the Family*, 50, 937-948.
- Martin, J. A. (1987). Structural equation modeling: A guide for the perplexed. Child Development, 58, 33-37.
- Snyder, C. R., Harris, C, Anderson, J, R., Holleran, S. A., Irving, L. M., Sigmond, S. T., Yoshinobu, L., Gibb, J., Langelle, C., & Harney, P. (1991). The will and the ways: Development and evaluation of an individual-differences measure of hope. *Journal of Personality and Social Psychology*, 60, 570-585. *Sage Volume:*
- Davis, J.A. (1985). The logic of causal order. (Vol. 55).

#### Week 8: SEM II (CFAs & latent models)

- Corwyn, R. F. (2000). Rosenberg self-esteem scale. Journal of Research in Personality, 34, 357-379.
- Crowley, S. L., & Fan, X. (1997). Structural equation modeling: Basic concepts and applications in personality assessment research. *Journal of Personality Assessment*, 68, 508-531.
- Flannery, D. J., Vazsonyi, A. T., & Rowe, D. C. (1996). Caucasian and Hispanic early adolescent substance use: Parenting, personality, and school adjustment. *Journal of Early Adolescence*, 16, 71-89.
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling*, 9, 151-173.
- Vazsonyi, A. T., Hibbert, J., R., & Snider, J. B. (2003). Exotic enterprise no more? Adolescent reports of family and parenting process in youth from four countries. *Journal of Research on Adolescence*, 13(2), 129-160.

## Week 9: SEM III (Latent Growth Curve Analysis)

- Curran, P. J., & Muthen, B. O. (1996). Testing developmental theories in intervention research: Latent growth analysis and power estimation. Paper presented at the Prevention Science and Methodology Group Meeting, Tempe, AZ (May 22-24, 1996).
- Duncan, T. E., Duncan, S. C., & Hops, H. (1996). The role of parents and older siblings in predicting adolescent substance use: Modeling development via structural equation latent growth methodology. *Journal of Family Psychology*, 10, 158-172.
- Duncan, T. E., Duncan, S. C., Stryker, L. A., Li, F., & Alpert, A. (1999). An introduction to latent growth curve modeling: Concepts, issues, and applications (pp. 1-12, 13-32). Mahwah, NJ: LEA.
- Scheier, L. M., Botvin, G. J., Griffin, K. W., & Diaz, T. (2000). Dynamic growth models of self-esteem and adolescent alcohol use. *Journal of Early Adolescence*, 20, 178-209.

### Week 10: Behavior Genetic Research Methodology

- Goldsmith, H. H., Buss, K. A., & Lemery, K. S. (1997). Toddler and childhood temperament: Expanded content, stronger genetic evidence, new evidence for the importance of the environment. *Developmental Psychology*, 33, 891-905.
- Loyosa, S. H., Callor, S., Rowe, D. C., & Goldsmith, H. H. (1997). Origins of familial similarity in parenting: A study of twins and adoptive siblings. *Developmental Psychology*, 33, 1012-1023.
- Pike, A., & Plomin, R. (1997). A behavioural genetic perspective on close relationships. *International Journal of Behavioral Development*, 21(4), 647-667.
- Rowe, D. C. (2003). Assessing genotype-environment interactions and correlations in the postgenomic era. R. Plomin & J. C. DeFries (Eds) *Behavioral genetics in the postgenomic era* (pp. 71-86). Washington, DC: American Psychological Association.
- Rowe, D. C., & Teachman, J. (2001). Behavioral genetic research designs and social policy studies. In A. Thornton (Ed), *The well-being of children and families: Research and data needs* (pp. 157-187). Ann Arbor, MI: University of Michigan Press.

### Week 11: Observation Methods

- Bakeman, R. (2000). Behavior observation and coding. In H.T. Reis & C.M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 138-159). New York: Cambridge University Press.
- Barker, R.G. (1963). The stream of behavior as an empirical problem. In R.G. Barker (Ed.), *The stream of behavior* (pp.1-22). New York: Appleton-Century-Crofts.
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## Week 12: Lives through time I: An overview

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## Week 15: Course Wrap-up

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