

# *Seminar in Quantitative Methodology*

## *Fall 2014*

<b>Class</b>	<b>Time</b>	<b>Room</b>		
Sociology 5320	Thurs. 6:00 – 8:50pm			
<b>Professor</b>	<b>Office</b>	<b>Phone</b>	<b>Email</b>	<b>Office Hours</b>
Dr. Ted Curry	LA 116	747-6527	<a href="mailto:trcurry@utep.edu">trcurry@utep.edu</a>	Thurs 4:30- 5:30

### **REQUIRED READINGS**

DeVellis, Robert F. 2012. Scale Development: Theory and Applications (3<sup>rd</sup> ed.). Los Angeles: Sage Publications. ISBN: 1412980445

Fowler, Floyd. J., Jr. 2008. Survey Research Methods (4<sup>th</sup> ed.). Los Angeles: Sage Publications. ISBN: 1412958415

Israel, Mark and Iain Hay. 2006. Research Ethics for Social Scientists. Los Angeles: Sage Publications. ISBN: 1412903904

Maxim, Paul S. 1999. Quantitative Research Methods in the Social Sciences. New York: Oxford.

Blackboard: there are a number of readings listed in the syllabus which are available on Blackboard.

### **CLASS INFORMATION**

**PURPOSE:** This class is intended to provide graduate students with advanced training and knowledge regarding a variety of quantitative “methods” by which social scientists gain knowledge about society. Specifically, students will learn how to understand, interpret, and critically evaluate information obtained from quantitative methods, as well as the sampling procedures these methods employ. Students will also take the step from being critical

“consumers” of information to begin learning how to be “producers” of information through class projects that will require students to identify research problems of interest to them and then design their own methods for studying them. At all points, the class will focus on the adequacy of measurement in the social sciences. Students will also become familiar with, and critique, the scientific method, which has guided the development of quantitative social science methods – including theory development and hypothesizing. The skills students gain in this class will be among the most important in their graduate student careers – whether they pursue academic or non-academic employment. Moreover, this class will provide the cornerstone for developing a research method for any original quantitative research students might pursue, including their thesis.

### REQUIREMENTS

1. **Attend:** Attendance is required. Missing more than two classes will result in a loss of one letter grade to the final course grade, regardless of the reason for absence. Further absences may result in an administrative withdrawal.
2. **Participate:** Students must be ready and willing to participate in classroom discussions. Students must be prepared to *answer* and *debate* questions posed by the professor and fellow students. Students must be prepared and willing to *ask* questions in class about the material or which are otherwise of interest to them. Remember, the only dumb question is the one you didn’t ask and the only dumb comment is the one you didn’t make. Class participation will account for 100 points of the final grade. Students who do not regularly participate in class will receive a very low grade for this part of the course—possibly a zero (0).
  - In order to be able to participate meaningfully, students must complete the assigned readings. Being unprepared for class is simply unacceptable at the graduate level.
  - Students will receive class participation evaluations every three weeks.
3. **Proposal Assignments:** Students will turn in five separate writing assignments. More specific instructions are at the end of the syllabus.
4. **Final Exam:** A final take-home exam will entail answering several essay questions addressing the most crucial and weighty methodological issues we tackle during the semester. Combined, the answers will be 5-7 pages, typewritten.

### GRADES

Grades are based on the following:

<b>Class Participation:</b>	100 points
<b>Proposal Assignments:</b>	300 points
<b>Final Exam:</b>	100 points
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Total	500 points

Letter grades are assigned according to the following scale:

A	=	89% and above
B	=	79% - 88%
C	=	69% - 78%
D	=	59% - 68%
F	=	Below 59%

- **Notice** that my grading scale is “curved” 1% in your favor. For example, in most courses a 79% is a “C” whereas in my class it is a “B.” This is to avoid the situation where someone misses receiving a higher grade by a very small margin -- because in my class you miss receiving a higher grade by a full percentage point, plus the “very small margin.” I apply the grading scale uniformly to all students, and I do not “round up” (for example, an average of 78.9% is a “C”). Remember, **your grade is an accomplishment, not a gift.**

### **CLASS AND UNIVERSITY POLICIES**

**ATTENDANCE:** Attendance is required. Missing more than three classes will result in a loss of one letter grade. Further absences may result in an administrative withdrawal.

**CHEATING / PLAGIARISM:** The most serious violation of academic standards, plagiarism refers to using the work, ideas or knowledge of other people as your own -- this includes all forms of exam cheating, borrowing from published sources without citation, and using the ideas of others without citation. The penalty for plagiarism is failure (a grade of “F”) in the class and a letter reporting your behavior to the appropriate university authorities. If you are at all confused about what constitutes plagiarism, please see your professor.

**CLASSROOM BEHAVIOR:** Unprofessional behavior (e.g., sleeping, talking, reading material unrelated to class, repeated tardiness) will not be tolerated. It is okay to quietly make brief comments to each other about the day’s material, but anything more than that is distracting to the rest of class and the professor. Cell phones, beepers, watch alarms, etc. must not activate during class. Exceptions will be made for important matters – please notify the professor if this is the case.

**TARDINESS:** If, for whatever reason, you find yourself unable to be in class before the scheduled start time on a regular basis, then you will need to either drop the class or make arrangements to rectify the situation.

**STUDENTS WITH DISABILITIES:** Reasonable accommodations are available for students who have a documented disability. Please notify the professor during the first week of class of any accommodations needed for the course. Late notification may cause the requested accommodations to be unavailable.

## TENTATIVE COURSE SCHEDULE

The professor reserves the right to make changes to the course syllabus.  
Any changes will be announced ahead of time in class.

DATE	READINGS and ASSIGNMENTS
Aug 29	<p>An introduction to “knowing,” methods of knowing and science</p> <p><u>Assignment:</u> Evaluating utep’s teaching evaluations</p> <p style="text-align: center;"><i><u>Proposal Assignment #1 (begin working)</u></i></p>
Sep 5	<p>The scientific method &amp; theory formalization</p> <p><u>Readings:</u> Maxim: Preface, Chs. 1-2; Blackboard: Martino; Curry</p> <p>Theory Example??</p>
Sep 12	<p>Causality</p> <p><u>Readings:</u> Maxim: Ch. 3; Blackboard: Agnew</p> <p>Class Participation Grade 1</p> <p style="text-align: center;"><i><u>Proposal Assignment #1 Due at noon</u></i></p> <p style="text-align: center;"><i>CLASS DISCUSSION OF ASSIGNMENTS</i></p>
Sep 19	<p>Statistical inference</p> <p><u>Readings:</u> Maxim Ch 4; Blackboard: Baller and Richardson</p>
Sep 26	<p>Sampling: Basic statistics</p> <p><u>Reading:</u> Maxim: Ch. 5</p> <p style="text-align: center;"><i><u>Proposal Assignment #2 Due at noon</u></i></p> <p style="text-align: center;"><i>CLASS DISCUSSION OF ASSIGNMENTS</i></p>

- Oct 3**            **Sampling: Designs and special problems**  
Readings: Maxim: Chs.6-7;  
Class Participation Grade 2
- Oct 10**           **Latent variables & “The Elaboration Model”**  
Readings: DeVellis Chs. 1-2; Blackboard: Grasmick & McGill; “The  
Elaboration Model”  
**Concept Example?? From theory above?? Or transnationalism,  
gender?? Develop nominal and operational definitions in groups.**
- Proposal Assignment #3 Due at noon***  
***CLASS DISCUSSION OF ASSIGNMENTS***
- Oct 17**           **Experimental designs & Critiquing experimental research**  
Readings: Maxim: Ch. 9; Blackboard: Greitemeyer; Bushman &  
Gibson; Sherman & Berk
- Oct 24**           **Validity & Measurement theory**  
Readings: DeVellis Ch. 4; Maxim Ch. 9  
Class Participation Grade 3
- Oct 31**           **Reliability & Classical test theory**  
Readings: DeVellis Ch. 3; Maxim Ch 10  
***Proposal Assignment #4 Due at noon***  
***CLASS DISCUSSION OF ASSIGNMENTS***
- Nov 7**            **Guidelines in scale development**  
Readings: DeVellis Ch. 5; Blackboard: Rostosky et al.  
**Scale Example?? Develop items based on operationalizations above.**

**Nov 14**      **Factor analysis & Confirmatory factor models**  
Readings: Devellis Ch. 6; Maxim Ch. 11; Blackboard: “MWEF article”  
Class Participation Grade 4  
**Scale Example??**

*Proposal Assignment #5 Due at noon*

*CLASS DISCUSSION OF ASSIGNMENTS*

**Nov 21**      **Data collection methods and measurement errors & Missing data**  
Reading: Maxim Chs. 12-13

**Nov 28**      **Thanksgiving Break: No Class**

**Dec 5**      **Ethics & Politics**  
Reading: Israel & Hay Chs 1-9

**Dec 6**      **Research Controversy: Same-sex parenting and children’s outcomes**  
Reading: Blackboard: Marks, Regnerus, Amato, Eggebeen, Osborne, Marks b,  
Regnerus b, Gay parenting study is severely flawed  
Class Participation Grade 5

**Final Exam handed out.**

## PROPOSAL ASSIGNMENTS

### **DUE DATES**

- All assignments are due by noon on the due date specified. This is a firm deadline; you must submit a paper by this time. If need arises, then submit a rough draft. Late papers lose 10% each day.
- All students will email a copy of their assignment to the professor and all of the other students in their group.
- Please include your initials or last name in the name of your file (e.g., TRC assign#1) so that we all can better keep track of the files.
- Files must be submitted in MS-WORD.
- That day's class will include a discussion and critique of students' papers by his/her fellow group members.
  - Thus, all students are required to come to class with a printed copy of all fellow group members' papers, to have read each paper, and be ready for discussion.
  - Students who are not so prepared will be counted as absent for that day (see class policy on absences)
- Revisions: Based on class discussions, students have two days to submit a revised draft to me if they wish.
  - Please submit a hard copy to me to grade by noon on Monday in my mailbox.
  - Inadequately executed assignments (below 80%) will require revisions and lose 20%.

### **FORMAT & STYLE REQUIREMENTS**

1. All written assignments must be typed with double-spacing throughout, size 12 font, and approximately 1-inch margins.
2. Indent the first sentence of all paragraphs.
3. Spelling and grammar count. I encourage you to use a spell-checker, proofread your own work carefully (perhaps even read it aloud), and have another person read your work before turning it in.
4. Non-sexist language: for example, use the plural "they" rather than he (or even she) when discussing examples in the abstract; refer to "humans" or "humanity" rather than "man" or "mankind."
5. Cogency: write clear and concise sentences and paragraphs that are important to your topic. Build up to meaningful conclusions using coherent logic and reason.
6. Objectivity: strive for an objective tone in your writing. If you are too obviously biased or one-sided it detracts from your credibility.
7. Probabilistic reasoning: talk about relationships in the social world as tendencies or patterns, rather than absolutes or constants. An example: "Unemployed people tend to commit more crimes" is better (and more accurate) than "Unemployed people are criminals."

8. Cite previous research to back up all of your “facts,” statistics, or other assertions about reality to make them more believable. An example: Urban youths commit crime at a higher rate than youths in rural areas (Smith, 1990). *This is especially important for those assertions that are most essential for the logic you use to lead up to your hypotheses.*
9. Use only scholarly sources for your literature review. This primarily means journal articles, but also includes books written by scholars. Dictionaries and encyclopedias cannot be used, and textbooks and newspapers should be used rarely, if at all.
10. Include a reference list with the required number of sources. Remember, all references appearing in the text must be included in the reference list and vice-versa. I encourage you to use ASA style for references, but APA is also acceptable. See our class web page for more details.
11. Include a meaningful title for all of your papers. You can keep the same title throughout or change it as you see fit.
12. Avoid using quotes. The only time you should quote is when someone says something that is particularly brilliant or the person is very famous. Otherwise, put the quote into your own words and cite the author(s) appropriately. You should almost never use a “block quote.”
13. **DO NOT PLAGIARIZE:** see description and policy in syllabus. See your professor if you have any questions.

## **OVERALL GOALS**

- The assignments in this course are, with a few exceptions, intended to build on each other – much as the skills and knowledge you develop in this course will build as the course progresses.
- Basically, the assignments will unfold in the following manner: find a social theory of interest to you that is amenable to empirical tests using quantitative methods (preferably one that is part of your thesis research); develop an understanding of this theory by locating and reading scholarly research that describes and tests this theory; deduce specific hypotheses from this theory that interest you; develop a “method” to test these hypotheses using a survey design.
- Along the way you will write a “**statement of the problem**” which is basically the introductory section of a journal article where the authors discuss what their research is about, why their research is useful and important for the scholarly community, and the current state of knowledge about the theory with a discussion of the existing literature. With each additional assignment, you will re-write and improve upon your statement of the problem (in addition to doing the work each assignment requires).
- The survey design paper will produce a rough “**research proposal**” (analogous to your thesis proposal) which consist of a thorough statement of the problem, a discussion of the hypotheses to be tested and of the method you intend to use to observe the variables in your hypotheses.
- You should use the front half of any well written article from a scholarly journal as a guide.
- **NOTE:** You will not actually collect or analyze data for this class.

## **EVALUATION OF WRITTEN WORK**

- I will make copious written comments on your paper assignments. These comments will pertain to your ability to meet the substantive requirements of the assignment, as well as your grammar and the clarity of your writing. Making these comments is extremely time consuming for me. Therefore, I expect that you will learn from my comments and improve both your ideas and the quality of your writing over the course of the semester. You must correct errors and other shortcomings I point out for subsequent assignments.
- Assignments that fail to meet requirements will receive an R&R and lose 20%. Include your original paper if you are required to do an R&R.

## **CONSULTATION & COLLABORATION**

- As you are working on these assignments, please feel free to contact me with any questions you might have. Whether you run into roadblocks or simply want to verify that you understand the assignment and are on the right track, get in touch with me (and the sooner the better).
- Except where specified, feel free to discuss the assignments with others. They may be able to give guidance on a variety of matters. But when it comes to understanding and meeting the specific objectives of the assignment, your professor is your best bet.

## **PROPOSAL ASSIGNMENT #1: THEORY IDENTIFICATION**

1. Based on your current research interests (including your thesis), identify and summarize any deductive social theory that interests you.
  - If you have taken the undergrad or graduate social theory classes you will be expected to do very well on this assignment.
  - You can begin with some of the social theory masters, such as Marx, Durkheim, Mead, Merton, or Homans, or you can work with more modern and specific theories that focus on outcomes of interest to you.
2. For your paper:
  - Simply identify the name of your theory and briefly summarize it in a paragraph or two. Identify the original author(s) of the theory or one or more scholars who are currently associated with your theory.
3. This theory will likely be the one you will use for subsequent assignments (and maybe your thesis as well), so look carefully at the descriptions below of these future assignments.
4. Your theory should be at the individual unit of analysis, or amenable to this unit to facilitate subsequent assignments. See me if needed to address this issue.
5. This assignment is not graded.

### **PROPOSAL ASSIGNMENT #2: LITERATURE REVIEW**

1. Discuss what a literature review is and how to perform one—this should include discussions of database searches, snowballing, and use of the library’s catalog.
2. Turn in a reference list using ASA or APA style with at least five citations relevant to your theory, at least three of which are empirical tests of your theory.
3. Describe your searching methods.
4. Your sources must be from scholarly journals and books, preferably by sociologists. Other sources may be used, but will not count toward the required total number of sources for this and all other assignments.
5. REMEMBER: all citations in text must be in the reference section and vice-versa.
6. This assignment is not graded

### **PROPOSAL ASSIGNMENT #3: THEORY STATEMENT (100 POINTS)**

- 2-3 pages (not including reference section)
1. **Theory statement**
    - Summarize your theory in a paragraph.
  2. **Literature Review**
    - Using at least eight citations (both in text and reference section) review the literature on your theory.
    - At least four of these citations must be empirical tests of the theory that employ quantitative research methods.
  3. **Bivariate Hypothesis**
    - Identify one bivariate hypothesis from the theory – preferably one that is of central importance.
    - Explain the features of this bivariate relationship using Maxim’s five criteria (pp. 34-35).
  4. **Nominal And Operation Definitions**
    - Develop and justify nominal and operational conceptual definitions of both variables. These definitions must be based on prior research and/or your own scholarly ability (dictionary definitions are not acceptable).

### **PROPOSAL ASSIGNMENT #4: RESEARCH HYPOTHESES (100 POINTS)**

1. **Statement of the Problem (1-3 pages)**
  - Working from your theoretical statement (part #1 of the previous assignment) and my feedback, write your first statement of the problem draft.
  - This will entail discussing what your research is about, why it is useful and important for the scholarly community to know about, and the current state of knowledge regarding your topic, as well as clarifying your explanations and writing style and adding additional citations to both text and reference section.

- Bring the total number of citations to at least ten, with at least eight of them being empirical.
- 2. Hypotheses (1 page)**
- Identify 2-4 related hypotheses from your theory.
  - For each hypothesis, identify the dependent and independent variables, the direction of effects between these variables (unless one is nominal), and the unit of analysis.
  - Identify potential sources of spuriousness and other variables you would need to “control” if you were to test these hypotheses.
- 3. Measurement (1 page)**
- Present nominal and operational conceptual definitions for all dependent, independent and control variables.
- ❖ **Do not include a discussion of Maxim’s five criteria for this assignment or any subsequent assignment.**

**PROPOSAL ASSIGNMENT #5: SURVEY DESIGN (100 POINTS)**

- 1. Statement of the Problem (2-3 pages)**
- Continue improving your statement of the problem.
  - This will entail clarifying your arguments and writing style and adding additional citations to text and reference section – as well as identifying and discussing the specific hypotheses you test below.
  - Bring the total number of citations to at least twelve, with at least ten of them being empirical.
- 2. Survey Design (3-4 pages)**
- A. Identify the specific hypotheses you will test.
- B. How will you locate and sample subjects?
- C. Measurement
- Develop and justify nominal and operational conceptual definitions of all variables.
  - From your operational definitions, develop survey questions (including answer formats) that you will use to measure all of your variables.
  - Use the concepts of “rules of correspondence” and “epistemic correlations” to connect:
    - a. Operational definitions to nominal definitions
    - b. Your observational method to the operational definitions of your variables
  - If you are using a scale or index to measure a concept, mention that you will add scores on the individual items together to create a summary score for each subject on your concept.
  - You should be using prior studies to measure abstract variables—be sure to cite these sources.
  - REMEMBER: all dependent, independent, and control variables must have a method for measurement.