# Florida State University College of Criminology and Criminal Justice Ph.D. Comprehensive Examination in Research Methods and Statistics, Fall, 2019 October 30, 2019: 8:30 am to 12:45 pm

## Day 1 of the Exam

### **INSTRUCTIONS**

Answer one question from each of the two sections below. Please notify the proctor when you are finished. Please note: Once a student takes possession of the examination at the start of the exam period, this constitutes an attempt at taking the exam, regardless of whether the student completes the exam, hands in any answers, or remains for the full exam period.

### I. RESEARCH DESIGN

- 1. Self-selection into environments represents a threat to any statistically significant associations between environments and behavioral outcomes. Discuss the ways that researchers attempt to rule out selection. Design a research project where you specify how you would reduce the possibility that your findings could be explained away in terms of self-selection.
- 2. In "The Methodological Adequacy of Longitudinal Research on Crime," Gottfredson and Hirschi (1987) argued that longitudinal studies of the causes of crime and delinquency are unnecessary and add little to what we can learn from cross-sectional studies. Evaluate this argument by discussing the advantages and disadvantages of both longitudinal and cross-sectional research. Provide examples of research questions in criminology and criminal justice that would be most appropriate for longitudinal research and those that would be most appropriate for cross-sectional research.

#### II. DATA GATHERING METHODS

- 3. Nonresponse can be a serious issue for survey research. Explain why this is such a serious concern. Describe several potential reasons for both unit nonresponse and item nonresponse. List as many ways as you can think of to reduce each type of nonresponse.
- 4. Criminological research often utilizes large-scale survey data, while experimental and qualitative/ethnographic designs are less common. First, discuss some of the advantages and disadvantages associated with large-scale survey data. Next, describe ways in which other types of research (e.g., experimental designs, qualitative/ethnographic work) are most often used in the field. Finally, explain which of these types of research ought to be more or less influential as the field of criminology progresses.

# Florida State University College of Criminology and Criminal Justice Ph.D. Comprehensive Examination in Research Methods and Statistics, Spring, 2019 October 31, 2019: 8:30 am to 12:45 pm

## Day 2 of the Exam

### **INSTRUCTIONS**

Answer one question from each of the two sections below. Please notify the proctor when you are finished. Please note: Once a student takes possession of the examination at the start of the exam period, this constitutes an attempt at taking the exam, regardless of whether the student completes the exam, hands in any answers, or remains for the full exam period.

### III. STATISTICS

- 1. We often construct indexes and scales to measure our key concepts. Describe at least two reasons why a researcher might want to construct an index or scale. Now imagine that you need to construct a neighborhood disadvantage index or scale. Provide a detailed description of two distinct methods that you could use to construct such a measure. What are the advantages and disadvantages of each method?
- 2. Criminological theories often predict that the relationship between X and Y will be mediated or moderated by a third factor, Z. Define what is meant by mediation and moderation, provide a criminological example of mediation and how it differs from moderation. Finally, identify the most appropriate statistical approaches for assessing mediation and moderation.

#### IV. DATA INTERPRETATION

- 3. Interpret the findings of the attached article by *Steffensmeier et al.* (1995). This means that you should tell what the results mean with respect to the goals of the researchers and what they were trying to find out, just as if you were writing the Results and Discussion/Conclusion sections of the journal article. Do not merely repeat in words what is already shown in numbers in the tables. What conclusions would follow from the results? What problems with the methods might undermine or weaken these conclusions?
- 4. Interpret the findings of the attached article by *Gauthier and Graziano* (2018). This means that you should tell what the results mean with respect to the goals of the researchers and what they were trying to find out, just as if you were writing the Results and Discussion/Conclusion sections of the journal article. Do not merely repeat in words what is already shown in numbers in the tables. What conclusions would follow from the results? What problems with the methods might undermine or weaken these conclusions?