

Rutgers University – Newark

Data Analysis

47:202:302 :71

Spring 2019

ENG: 311

Monday 2:30 -3:50pm and Wednesday: 1:00pm – 2:20pm

Instructor: Binneh s Minteh
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I: Course Overview

This course examines the various types of data used within criminal justice and the fundamentals of statistics and analysis. Provides an analysis of the appropriate use of data, the limits of various methods, how data is collected, and how to interpret findings. Policy implications of data will also be discussed.

Prerequisite: Satisfactory completion of *21:62:202:301 and the basic undergraduate math requirement.* (4 credits)

B.S., Criminal Justice Program Learning Goals

Upon completion of the B.S. in Criminal Justice at Rutgers University-Newark, students should be able to:

- 1) Describe the development and functions of major criminal justice institutions (e.g., police, courts, corrections, and juvenile justice), the activities of actors within these institutions, and how they relate to one another as well as the broader social, political, and economic world.
- 2) Describe the mechanisms, correlates, theoretical underpinnings, and situational contexts of crime, criminal behavior and opportunity, and techniques for prevention and treatment.
- 3) Apply and analyze theories related to the policies and practices of the criminal justice system and its major institutions.
- 4) Demonstrate the ability to gather, explain, and apply empirical research in the field of criminal justice.

5) Obtain a comprehensive knowledge about the process of conducting criminal justice research, and develop the skills to conduct criminal justice research with appropriate methodologies.

Student Learning Objectives/Outcomes

By the end of the semester, Students will be able to:

- Define the main characteristics of research designs
- Distinguish the levels of measurements and types of variables
- Choose, apply and correctly interpret summary measures (e.g., mean)
- Visualize distributions of continuous and categorical variables
- Calculate and interpret measures of association (e.g., correlation)
- Understand the principles of statistical inference
- Test hypotheses using bivariate analytic techniques
- Conduct basic statistical analyses by hand and using computer software.

Required Course Material

Ronet D. Bachman and Raymond Paterno (2016) *Statistics for Criminology and Criminal Justice*, Fourth Edition, Sage, ISBN: 978-1506326108

Course Requirements:

Students are required to read assigned readings and participate in classroom discussions in a manner that reflects familiarity with the readings and previous class sessions. Students are required to access the course website regularly to stay informed about any changes in lecture topics, assigned readings and other course announcements.

Course Structure:

The course will incorporate diverse learning activities including lectures, PowerPoint presentations, and group discussions.

Classroom learning is a group activity that depends upon everyone's full participation in order to succeed. I expect students to: be prepared to begin class on time, silence or turn off and put away cell phones and other electronic devices, read and be prepared to discuss homework, submit assignments on time, and assist your classmates. You can expect that I will: be on time and prepared for every class, be available via email and appointments to answer questions, make every class engaging and valuable, and respect your contributions to class.

II: Course Schedule

Week	Date	Topics and Assignment Deadlines
1	Jan 23	Course Introduction
2	Jan 28 /30	Chapter 1: The Purpose of Statistics in The Criminology Sciences
3	Feb 4/6	Chapter 2: Levels of Measurement and Aggregation
4	Feb 11/13	Chapter 3: Understanding Data Distributions
5	Feb 18/20	Chapter 4: Measures of Central Tendency
		Exam 1
6	Feb 25/27	Chapter 5: Measures of Dispersion
7	March 4/6	Chapter 6: Probability, Probability Distributions , and an Introduction to Hypothesis Testing
8	March 11/13	Chapter 7: Point Estimation and Confidence Intervals
		Exam II – Midterm Exam
		Spring Recess : March 16 ,2018 – March 24, 2018
9	March 25/27	Chapter 8: From Estimation to Statistical Tests: Hypothesis Testing For One Population Mean and Proportion
10	April 1/3	Chapter 9: Testing Hypothesis with Categorical Data
11	April 8/10	Chapter 10: Hypothesis Tests Involving Two Population Means or Proportions
12	April 15/17	Chapter 11: Hypothesis Testing Involving Three or More Population Means: Analysis of Variance
13	April 22 /24	Chapter 12: Bivariate Correlation and Regression
14	April 29	Chapter 13: Controlling For a Third Variable : Multiple Olds Regression
	May 1	Exam III
15	May 6	Chapter 14: Regression with a Dichotomous Dependent Variable: Logit Models
		Final Exam TBA

III: Grading

Grading: 500 points

Course Components	Possible Points
Attendance/ Participation (10%)	50
Exam I (15%)	75
Exam II – Midterm Exam (20%)	100
Exam III (15%)	75
Final Exam (40%)	200

Letter Grade
A 90 - 100%
B+ 85 -89%
B 80-84%
C+ 75-79%
C 70-74%
D 70%
F 60%

Readings. Students are expected to complete all assigned readings *before* each class meeting. Class lectures and discussions will provide a venue to share insights gained from the assigned readings and to ask questions about issues of concern from the readings. Students also are responsible for reading all supplemental material assigned or provided.

Attendance and Participation

Attendance and participation constitute an integral part of your grade. Two or more unexcused absences will affect a portion of your grade. As such, students' attendance and active participation are both desired and expected. Failure to attend a class or leaving class before its conclusion will constitute an absence, unless a documented excuse is provided. *If you miss more than two (2) classes without a documented excuse, your ability to pass this class will be placed in serious jeopardy.* Also, it is important to note that lateness will not be tolerated. You will be considered late if you arrive after class has started. *Please note that three (3) tardy days equate to one absence.*

Exams

There will be **Four Exams** administered throughout the semester. Students who fail to complete the exam on the prescribed dates **WILL NOT** be permitted to take the exam unless extenuating circumstances exists (i.e. medical attention, family emergency, etc.). Proper documentation **MUST** be provided before the student is able to take a make-up examination.

- **Exam I**
- **Exam II – Midterm Exam**
- **Exam III**
- **Final Exam**

Final Exam

This is a cumulative final exam that will be administered in class during the scheduled Final Exam period. In this exam students will respond to Multiple Choice, True or False and Short Questions.

IV. Course Policies

Classroom Rules

All members of this class are required to conduct themselves in an appropriate and professional manner. Laptops are permitted only if disengaged from the internet and other electronic devices should be stored away unless you specifically seek the instructor's permission. In this class, we may have discussions that challenge our taken for granted assumptions about crime and justice. Students should be prepared to engage honestly and openly about this material and perhaps even examine their own beliefs about the issues. While I am hopeful that the course materials will spark interesting discussion, personal insults or other types of demeaning, disrespectful, or threatening comments toward other class members about their experiences, backgrounds, or statements will NOT be tolerated. No eating and use of cell phone is allowed in the classroom.

Academic Integrity

As a member of the Rutgers University community you are not to engage in any academic dishonesty. You are responsible for adhering to basic academic standards of honesty and integrity as outlined in the Rutgers University Policy on Academic Integrity for Undergraduate and Graduate Students <http://studentconduct.rutgers.edu/academic-integrity>

Your academic work should be the result of your own individual effort, you should not allow other students to use your work, and you are required to recognize and reference any material that is not your own. Violations of the university's policy will result in appropriate action.

Academic Resources

The Writing Center: The Writing Center offers writing tutoring and writing workshops to all undergraduate students currently enrolled in classes on the Rutgers, Newark campus. To request more information, sign up for tutoring or to register for workshops, visit Conklin Hall 126, or online at: <http://andromeda.rutgers.edu/~nwc/>

Rutgers Blackboard System

All of the materials and assignments for this course can be accessed on, and downloaded from, the Rutgers' Blackboard Course site: <http://blackboard.newark.rutgers.edu/>. Your login information is the same username and password you use to access your Rutgers student information. If you utilize an email address that is different from the one that Rutgers assigns you, please change your email address on blackboard. Emails will be sent to the class through Blackboard. Students are responsible for any messages sent via the Blackboard message system.

Students with Disabilities

Rutgers University is committed to providing equal educational opportunity for persons with disabilities in accordance with the Nondiscrimination Policy of the University and in compliance with § 504 of the Rehabilitation Act of 1973 and with Title II of the Americans with Disabilities Act of 1990. For additional information please visit the website <https://ods.rutgers.edu/> or contact the representative for the Newark Campus.

Allen Sheffield

Director of ADA Services and Academic Support

Robeson Campus Center, Suite 352

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Phone: 973.353.5300

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Psychological and Counseling Services

If you experience psychological or other difficulties as a result of this course, or because of other issues that may interfere with your performance in the course, please contact the university's psychological and counseling service center (<http://www.counseling.newark.rutgers.edu>; 973-353-5805), which is located in Blumenthal Hall, room 101. The center offers a variety of free, confidential services to part-time and full-time students who are enrolled at Rutgers.

If you are interested in finding out more about

- Accelerated Master's Program (B.S. /M.A.)
- Criminal Justice National Honor Society (Alpha Phi Sigma)

Please refer to the School of Criminal Justice website <http://rscj.newark.rutgers.edu/>

Follow us, to stay up to date! @SCJ_apps

