RUTGERS UNIVERSITY
School of Arts and Sciences

01:202:307 Criminal Justice Research Methods
Spring 2018

**** Preparation for the first day of class: bring a statistic, graph, or research finding to share with the class. All you need to bring is the url for a website with the information. You can bring anything that has something to do with crime, law enforcement, or related concerns, from any state or country, and from any time period. ****

Class Meetings:	Mondays and Wednesdays 1:40 – 3:00pm
Classroom:	Tillet 204
Instructor:	Professor Anne Piehl
	407 New Jersey Hall or A345 Lucy Stone Hall
	anne dot piehl (at) rutgers (dot) edu
Office Hours:	Wednesdays 3:00-4:00pm, A345 Lucy Stone Hall
	Fridays by appointment, 407 New Jersey Hall

Course Description: This course introduces tools of quantitative reasoning and statistics that can be used to address problems in basic research and policy within the social sciences, particularly in the criminal justice field. The primary objectives of the course are to build familiarity with the fundamentals of probability and statistical analysis, central concepts of research design, and norms of ethical behavior in research.

Instruction in this course is primarily "by doing." Students will work collaboratively to identify and solve problems, using the resources of an Active Learning classroom. There is no required textbook for the course. Instead, class preparation consists of instructive videos or reading short articles. Students are expected to come prepared to class, ready to invest effort to learn from others and to help others learn. Class attendance without active participation will not be possible

Prerequisites: This course is limited to degree students who have completed 01:202:201 or 21:202:103 or 50:202:201 or 47:202:103. While this course does not assume any background in probability or statistics, students are encouraged to have completed at least one term of college-level math.

Satisfying the goals of the course satisfies the Core Curriculum goal **QQ:**

Student is able to… **Formulate, evaluate, and communicate conclusions and inferences from quantitative information.**

Learning Outcomes: This course aims to help students achieve learning goal (1c) of the program in Criminal Justice to develop competence in research methods. It also helps students achieve learning goal (2) by developing critical thinking, and is essential predicate for learning goal (3), the production of independent scholarship. (For the full description of the program's learning goals, see http://nbcjm.rutgers.edu/academics/program-info/learning-goals.)

The specific goals for this course are:

- to build familiarity with ideas and concepts of empirical investigation and modeling;
- to develop technical skills for describing, analyzing, and presenting quantitative data;
- to appreciate the role of judgment in drawing inferences from data and analysis.

Method of Evaluation: Course grades will be determined as follows:

Quizzes: 50%
- 8-10 short quizzes, in class
- 20-30 minutes long
- Poor attendance/participation results in loss of 2 points on next quiz

Active participation in class 20%
- including prepping for class discussion/sharing assignments

Final Exam: 30%
- during scheduled exam period

Makeup for quizzes and exams will be given if, and only if, all of the following conditions are met:

- you miss an exam because of illness, injury, or family emergency
- you notify me within 24 hours after the quiz
- you document the legitimacy of the absence.

If religious holidays interfere with class attendance (that is, there are class meetings on dates on which you refrain from secular activities), you must notify me in advance.

I will follow the registrar's final exam policy. See http://nbregistrar.rutgers.edu/facstaff/examrules.htm. Let me know as soon as possible if you have qualifying final exam conflicts so that alternative arrangements can be made.

Textbook and readings: There is no required text for the course. Readings and other course prep materials (primarily videos) will be announced and linked at the course website.

No special software is required. Most in-class exercises will be conducted using Excel or various online calculators.

Academic Integrity: Any attempt to cheat on an exam or course assignment will be prosecuted. You may review the University's Academic Integrity policy at the following website: http://academicintegrity.rutgers.edu/academic-integrity-policy/

Recording Policy: Audio visual recording, transmission and distribution of class meetings is forbidden without explicit, prior permission of the professor instructor and notification of other students in the class.

Course Outline: (see course website for specific schedule).

Part I. Describing Data

Measurement & Study Design
Representing, and Describing Data
Central Tendency
Dispersion

Part II. Introduction to Probability

Sampling
Basic Probability & Compound Probability
Conditional Probability

Part III. Statistical Inference

Binomial Distribution
Chi-Squared Distribution
Normal Distribution
t- Distribution
Confidence Intervals

Part IV. Measures of Association

Correlation Coefficients
Bivariate and Multivariate Regression

Part V. Causal Inference

Experiments
Quasi Experiments
Statistical Control
Generalizability