RESEARCH METHODS AND DATA ANALYSIS IN CRIMINOLOGY
CRIM 315
SPRING 2022

Professor: Dr. Ryan Cotter
Email: rcotter@gmu.edu
Semester/Year: Spring 2022
Class Day/Time: Wednesday 7:20 pm – 10:00 pm
Class Location: Distance Learning
Office Hours: Email for appointment (Use Mason email for all correspondence)

COURSE DESCRIPTION

This course introduces students to the multifaceted subject of research methods and shows them why research is important in the field of criminology and criminal justice. We will cover foundations and fundamentals of social research, various research designs, sampling issues, interviewing, data analysis, and ethical issues in criminology and criminal justice research. The goals of this course are: 1) to introduce students to the scientific methods of research in criminology and criminal justice and show how they are used; 2) to deliver skills necessary to evaluate research done by others and make students critical consumers of information; and 3) to train students to actually do research through real-life application assignments. By the conclusion of this course, students will be able to:

- Create and refine research questions,
- Create and refine research hypothesis,
- Develop protocol to ensure research is ethical,
- Have an awareness of various research designs that may be utilized in research,
- Conduct basic data analysis with R/RStudio,
- Develop a research proposal to address a research topic of their choice,
- Present research findings in conventional format.

This course is designated as a Mason Impact Course. Mason Impact is a Provost initiative that prepares students to tackle significant global questions and challenges by investigating meaningful questions, engaging multiple perspectives, and creating new knowledge within the context of undergraduate research, civic engagement, entrepreneurship. If you are interested in finding out more about Mason Impact please visit https://provost.gmu.edu/initiatives/mason-impact.

Recommended Prerequisite: CRIM 100-Introduction to Criminal Justice.

REQUIRED TEXT

Bachman, R.D., & Schutt, R.K. (2020). *The Practice of Research in Criminology and Criminal Justice*. (7th Edition). SAGE Press. Thousand Oaks, CA. ISBN: 978-1-5443-3912-2. Additional readings may be posted on the Blackboard site (go to: mymason.gmu.edu). Please read each of these required readings prior to attending class each week.

CLASS PREPARATION

This course covers an extensive amount of material in 15 weeks. As such, it is extremely important that you complete all assigned reading prior to class. Any questions you may have about the reading materials should be brought up during class to facilitate discussion. Class time will be a combination of lecture, discussion, and demonstrations. I will frequently ask questions and conduct in-class activities. Through effective participation, each student contributes to the education of others in the class, as well as to his or her own education. Lectures will cover some material not discussed in the text. The text will cover some material not covered in the lectures. Students are responsible for all material presented in the lecture and covered in the text.

CLASS ETIQUETTE

Students are expected to behave appropriately during class. This class is meant to be an enriching, enjoyable learning experience for all of you. Your behavior should not be disruptive or distracting to the instructor or your classmates. This means adhering to the following class rules (not exhaustive):

- **Respect your fellow students** – their persons, belongings, ideas, work, and opinions. Keep an open mind and be respectful. You do not need to agree with other students, however, you are expected to openly respect other students opinions.
- **Embrace technology and use it wisely**. Technology (e.g., laptops, tablets, etc.) are allowed and encouraged for use in the classroom to assist students with course-related activities. During active class time, students should use technology only for class related activities (i.e., it is not acceptable to play games, use social media, etc. during class).
- **Come to class prepared to learn** – In order to be fully prepared, students should have completed all readings and assignments prior to class.
- **Help foster a safe learning environment** in which all students feel comfortable sharing their ideas and perspectives. This includes being respectful of other students' points of view, as well as their religious, political, and/or sexual orientation. Agreement in class discussion is not required, but mutual respect and consideration is required.
- **Be on time for all classes and exams**. Students are expected to be in class and seated prior to the designated start of the class. This facilitates the class starting on time and reduces distractions for other students and the instructor. Students late for exams will not be allowed to take the exam, however, will not receive additional time. Make up exams

will only be offered for students who have previously discussed their need for a different exam date with the instructor.

- **Notify the instructor if you need to miss an exam or assignment PRIOR TO the absence**. Missed assignments can only be made up if the instructor has been notified in advance unless there are extenuating circumstances. The instructor should be notified of any such circumstances immediately, and the student should be prepared to produce documentation of the situation.
- **Do not copy others' work**. All independent assignments must be solely the product of the student.
- **Honor the work of other authors**. Use citations for all course assignments. All citations should be in APA format. Cite all quotes, paraphrases, pictures, and ideas. This includes the published work of established scholars as well as the unpublished works of peers.
- **Be an active participant**. Active participation is an important element of this course.
- **Do not assume anything.** When in doubt, ask a question. Asking questions provides an opportunity for clarification and often quality class discussions.

LATE WORK AND MAKE-UP POLICY

Late work will not be accepted. If you are going to miss class, please hand in your work ahead of time. Work is considered "late" if it is not submitted by the beginning of the class period in which it is due.

Make-up assignments/exams will only be given for religious observances, scheduled University activities, or medical/family emergencies. The student is required to notify the instructor before religious observances or scheduled University activities and will be expected to complete the assignment at a time designated by the instructor. For emergencies, the student is required to notify the instructor as soon as practical.

ACADEMIC INTEGRITY

George Mason University has an Honor Code, which requires all members of this community to maintain the highest standards of academic honesty and integrity. Students are expected to abide by the GMU Honor Code, which prohibits lying, cheating, stealing, and plagiarizing (see https://oai.gmu.edu/mason-honor-code/ for detailed information). All graded work for this class (including homework assignments and exams) must be completed independently.

Instructors are required to report all violations of the Honor Code to the GMU Honor Committee. Suspected cases of plagiarism may be evaluated using anti-plagiarism software. Please be sure that the work you submit in this class is your own, and that you provide proper citations when referencing another individual's ideas. Violations of the Honor Code may result in a failing grade for the assignment or exam, a failing grade for the course, or any additional penalties determined by the committee, including dismissal from the university.

ACCOMODATION FOR SPECIAL NEEDS

If you are a student with a disability and you need academic accommodations, please inform the instructor and contact the Office of Disability Resources at 703.993.2474. All academic accommodations must be arranged through that office. See http://ods.gmu.edu for more information.

COURSE REQUIREMENTS AND STUDENT EVALUATION

1. **Exams (50% of final grade):** This course has two exams consisting of multiple-choice questions, true or false questions, and short answer questions based on all material covered in the course (i.e., readings and lecture material). Each exam will account for 25% of your final grade. Unless otherwise announced, the examinations will be held on the dates posted in the syllabus. Students will not be allowed to use texts, notes, or other aids while taking the examinations. You are expected to take the exam at the scheduled time unless there is an exceptional emergency. If for some legitimate reason you cannot take the exam at the scheduled time, you must notify the instructor prior to the exam and provide written verification of your excuse.

2. **R/RStudio Assignments (30% of final grade)**: In this course you will be introduced to the R programming language. R is a powerful open-source programming language for quantitative data analysis. In the course, we will complete some basic data analysis together and you will be expected to replicate some quantitative analysis on assigned datasets. This is not a programming course, nor a course on applied statistics, so the analytical tasks and required programming will be basic. The objective is to introduce you to R and to foster comfort in performing basic data analysis. There will be three assignments related to basic functions in R (loading data, cleaning data, graphing data, basic analysis). Each assignment will be worth 10% of your final grade.

3. **Data Analysis Project (20% of final grade):** There will be one data analysis project in this course. You will use the skills learned through the R/RStudio assignments to complete the data analysis project.

EXAM/ASSIGNMENT WEIGHTING

Exam/Assignment	Percent of Final Grade	Due Date
R-1	10%	2/23/2022
Exam #1	25%	3/9/2022 (Chapters: 1, 2, 3, 4, 5, 6)
R-2	10%	4/6/2022
R-3	10%	4/20/2022
Data Analysis Project	20%	5/4/2022
Exam #2	25%	5/11/2022 (Chapters: 7, 14, 11, 9, 15, 16)

GRADING SCALE

Total Points	Grade
97.0 – 100	A+
93.0 – 96.9	A
90.0 – 92.9	A-
87.0 – 89.9	B+
83.0 – 86.9	B
80.0 – 82.9	B-
77.0 – 79.9	C+
73.0 – 76.9	C
70.0 – 72.9	C-
60.0 – 69.9	D
59.9 and below	F

ADMINISTRATIVE INFORMATION

This syllabus is provided for your information and may change as deemed necessary. You are responsible for learning all material contained in this syllabus as well as any modifications that are made to the syllabus during the course. All changes to the syllabus will be announced during class time and will be sent to everyone via Blackboard. If you have any questions about the syllabus or course requirements, please feel free to contact me.

CLASS SCHEDULE

Week	Dates	Topic / Required Reading	Assignment/Exam Dates
1	1/26/2022	Course Introduction, Syllabus Review, Downloading R, etc.	
2	2/2/2022	Science, Society, and Research Related to Crime, Criminology, and Social Control (Ch. 1) The Process and Problems of Research Related to Crime and Criminology (Ch. 2)	
3	2/9/2022	Ethical Guidelines for Research (Ch. 3) Conceptualization and Measurement (Ch. 4)	
4	2/16/2022	Introduction to R/RStudio	
5	2/23/2022	Sampling (Ch. 5)	**R-1**
6	3/2/2022	Causation and Research Design (Ch. 6)	
7	3/9/2022	**Exam #1**	**Exam #1**
	3/16/2022	**Spring Break – No Class**	
8	3/23/2022	Experimental Designs (Ch. 7)	
9	3/30/2022	Analyzing Quantitative Data (Ch. 14)	
10	4/6/2022	Social Network Analysis, Crime Mapping, and Big Data (Ch. 11)	**R-2**
11	4/13/2022	Qualitative Methods: Observing, Participating, and Listening (Ch. 9)	
12	4/20/2022	Analyzing Qualitative Data (Ch. 15)	**R-3**
13	4/27/2022	Review of data analysis with R (R-1 through R-3)	
14	5/4/2022	Summarizing and Reporting Data (Ch. 16)	**Data Analysis Project**
15	5/11/2022	**Exam #2**	