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**Instructor**: Dr. Chris Lee[clee@roanoke.edu](mailto:clee@roanoke.edu) Trexler 270D

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# Office Hours: Have a question? Please stop by my office to chat. Regular office hours are listed below, and I welcome you to contact me to make an appointment outside of these hours:

# Mon: 3:30-4:15 pm, Tue: 1:00-2:00 pm, Wed: 3:30-4:15 pm.

**Course Description**: Does gun control save lives? Such a politically charged question can be approached from many directions. In this course, students will learn the methodologies of modern statistics and use them to address the issue of measuring the effectiveness of gun control. Special attention will be given to the importance of setting aside politics, emotions, and preconceived notions to analyze a difficult question from a statistical point of view.

**Learning Outcomes:** Some of the specific skills I hope you will obtain in this course are listed below. Being a critical consumer of information is essential – all these activities will help you become one.

1. Use the methodologies of statistics to investigate a topic of interest and make important decisions.
2. Critique news stories that include statistical information, identifying potential sources of bias and both proper and improper cause-and-effect inference.
3. Articulate the importance and limitations of using data and statistical methods in decision-making.
4. Write about course topics clearly and effectively.

**Required Text:** *The Basic Practice of Statistics, 9th Edition.* Moore, Notz, and Fligner.

**Attendance**: Come to class and be prepared to participate actively - this is the best way for you to engage in the learning material, and it makes our class meeting so much more fun! You should attend every class, but extenuating circumstances can arise that may make it challenging. If you cannot attend a class, please let me know. If circumstances cause you to miss more than 3 classes during the semester, you may be overextended and should consider dropping the class.

**Late & Missed Work:** Unfortunately, illnesses, death in the family, or other traumatic events are part of life. Such events are unwelcome, and because I understand how difficult these times are, if you contact me **prior** to the absence, I will be happy to extend deadlines and/or provide make-up work. Please note that you must let me know in advance of an absence for any late work to be accepted.

**Reading and Participation:** Participation is key to learning. We will strive to have an active, rather than passive, classroom environment. On Inquire is a day-by-day outline of the chapters that will be discussed in class. I fully hope that you will have read the upcoming chapter before the class meeting. You most certainly will not understand everything while you are reading ahead, but having read the section will allow you to ask questions and follow along better in class.

**Expected Hours of Work:** To be successful in this course, it is anticipated that you will put in at least 12 hours of work inside and outside of class each week.

**Academic Integrity**: Students are expected to follow the integrity policy detailed in the handbook, *Academic Integrity at Roanoke College*.  Additionally, if you are ever uncertain as to how the College’s policy pertains to any assignment or exam in this course, please ask me for clarification.  The bottom line is that all work that a student submits for a grade must be ***solely*** the work of that student unless the instructor has given explicit permission for students to work together.

**Retrieval Practice:** A clear and most important goal of this course is to give you exposure to and understanding of basic statistical methods - the ability to use this information to make good choices, engage in thoughtful discussions, and determine the validity of information and arguments. There is a significant difference between the intake of course information and the retrieval of such information. And, as shown by study after study, if you wish to be able to retrieve information, you must PRACTICE retrieving information. To aid in this retrieval practice, there are a variety of assessment activities throughout the term, the goal being higher frequency with less weight on any particular event. You will have multiple quizzes and tests throughout the semester.

**Everything is Cumulative**: You will find that virtually every day in class, we will be combining information from previous chapters with material we are currently studying, and this pattern will carry over to all your graded work. I am committed to helping you put together a large course basket of knowledge this semester and to giving you frequent opportunities to practice the retrieval of this knowledge. To that end, all quizzes, tests, and the final exam are cumulative. On any one of these, approximately 30% of the assessment will be on fundamentals of previous material and 70% on new material.

**Writing:** While knowing statistics is essential, it is useless if you cannot communicate the ideas and concepts you have learned, and more importantly, apply them to a topic such as whether we have free will on the internet. There are four writing assignments throughout the semester. These are a significant component of the course. These assignments will push you to address issues from a statistical standpoint and improve your writing and communication skills.

**Writing Assignment 1**: This is personal, reflective opinion writing. You will be asked to describe some of your daily activities on the internet and think through how you may be being manipulated, or if you are above manipulation and are truly doing whatever you’d like on the internet.

**Article Analysis**: For this assignment, you will critique an article from an established news source. The topic of the article will be the use of statistics by online entities. You will use the knowledge you have gained thus far in the course to critique the methods used by the author.

**Project**: There is a major project in the second half of the semester. In this project, you will be asked to employ the statistical knowledge you have gained as you research a mass-casualty shooting event and argue whether specific gun control measures could have or would not have made a difference in the outcome.

**Course Grade:** Components of a student’s grade will be weighted as follows:

Tests: 50% Quizzes: 10% Homework: 10% Final Exam: 15% Short Writing: 5% Project: 10%

A scale for final grades will not be lower than the scale given below.

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| *0* |  | *60* |  | *63* |  | *67* |  | *70* |  | *73* |  | *77* |  | *80* |  | *83* |  | *87* |  | *90* |  | *93* |  |
|  | *F* |  | *D-* |  | *D* |  | *D+* |  | *C-* |  | *C* |  | *C+* |  | *B-* |  | *B* |  | *B+* |  | *A-* |  | *A* |