

STT 210 - 002: Introduction to Statistics with Applications in the Health Sciences

Instructor:

Main: Rachel Carroll, Ph.D.
Office: Osprey 2012-D
Office Hours: Wednesday 9-11 am or by appointment

Student Learning Outcomes:

1. Describe the variability inherent in univariate and bivariate data in numerical, graphical and written form.
2. Explain the role randomization plays in designed experiments and in standard sampling methods.
3. Compute and interpret probabilities of events in everyday random phenomena and of common sampling distributions.
4. Compute and interpret confidence intervals in one- and two-sample cases.
5. Construct tests of hypotheses in one- and two-sample cases and in two-way tables, interpreting the results utilizing p-values
6. Utilize technology to perform basic analyses and simulations.

Exams

We will have three full-period incremental exams and a comprehensive final exam. All exams are closed-book and the lowest score of an exam will be replaced with the final score, if that is higher. Make-up exams are only given in the case of extraordinary circumstances, and you have to notify me before exam time. Mid-term exams will follow chapters 3, 7, and 10.

Take-Home Quizzes

There will be three take-home quizzes, which are intended as between-exam check points. Students are encouraged to form teams to jointly solve the problems but must create individual returns.

Canvas/Pearson

Canvas and Pearson online MyLab Statistics are joined and the course number is carroll14674. Lectures will be made available on MyLab. The lectures are organized according to textbook chapter and the next chapter will be made available preceding the first lesson where it is used. The lectures are in PDF form and can be printed for taking notes and solving problems on or near the appropriate slides. These are handout version of slides where spaces are left that need to be filled in. If you miss a class, get the missing information from a classmate. The suggested homework assignments are listed in the lecture slides as well as in MyLab.

Grading

Grades will be posted on Canvas.

Comprehensive Final	30%
Exams (3 – 15% each)	45%
Take-home quizzes (3 – 5% each)	15%
Attendance (present or excused)	10%

Scale:

$90 \leq A < 100$	$87 \leq B+ < 90$	$82 \leq B < 87$
$80 \leq B- < 82$	$77 \leq C+ < 80$	$72 \leq C < 77$
$70 \leq C- < 72$	$67 \leq D+ < 70$	$62 \leq D < 67$
$60 \leq D- < 62$	$0 \leq F < 60$	

Attendance

You are expected to attend every lesson and attendance is part of the grade. If you know you will miss a class for whatever reason send me an e-mail before class time, and I will mark your absence as excused. Regardless, be sure to keep up with the material. I will circulate an attendance sheet at the beginning of each class; be sure to sign in. You have 2 excused absences; absences beyond the two will result in a five point (half a letter grade) deduction from the Attendance portion of your grade.

In accordance with NC SL 2010-211, you are entitled to two excused absences (in addition to the two above) for religious observances per academic year. You must inform me in writing the first week of class if you will be missing any classes due to religious observance and using one of the two permissible absences for the academic year. In addition, please inform the Registrar the first week of class who will then confirm your intentions to miss class with the impacted course instructors. Any absence for religious purposes will be considered unexcused unless you submit the request in writing the first week to both me and the Registrar.

Resources and Tools

Book	Statistics: The Art and Science of Learning from Data (3rd Edition) by Alan Agresti, Christine Franklin and Bernhard Klingenberg You do not need a hardcopy but you must register for the website:
Link	www.pearson.com/mylab Course ID: ewald92957
Calculator	TI-83 or TI-84 required for tests and quizzes; bring to class every time
Blackboard	https://learn.uncw.edu/ See the content area for distribution of electronic material
Tools	Students are invited to familiarize themselves with other statistical tools, e.g. CrunchIt, Excel, R or JMP, but their knowledge is not required for tests

Academic Honor Code

In accordance with the academic honor code at the University of North Carolina at Wilmington, no form of dishonesty, such as cheating, stealing, plagiarism, etc., will be tolerated (see UNCW Code of Student Life and the Undergraduate Catalog for further details).

Disability Services

The University of North Carolina at Wilmington has devoted much energy to meeting the requirements of Section 504, Federal Rehabilitation Act and to the Americans with Disability Act. If you feel you need assistance or accommodations to ensure equal opportunities in pursuing your educational goals, please contact Disability Services at extension 3746.

University Learning Center

The Math Lab supports students by providing tutoring for all Math and Statistics courses. Please refer to <https://www.uncw.edu/ulc/math/lab.html> (Google UNCW Math Lab) for details.

Course Outline:

Chapter 1	Statistics: The Art and Science of Learning from Data
Chapter 2	Exploring Data with Graphs and Numerical Summaries
Chapter 3	Association: Contingency, Correlation, and Regression
Chapter 4	Gathering Data
Chapter 5	Probability in Our Daily Lives
Chapter 6	Probability Distributions
Chapter 7	Sampling Distributions
Chapter 8	Statistical Inference: Confidence Intervals
Chapter 9	Statistical Inference: Significance Tests About Hypotheses
Chapter 10	Comparing Two Groups

Schedule:

(Subject to change)

Date	Topic	Comment
08-23	Introduction	
08-28	Ch. 1	
08-30	Ch. 1, 2	
09-04	Ch. 2	
09-06	Ch. 3	Quiz given
09-11	Fall Break	
09-13	Ch. 3	Quiz due
09-18	Ch. 4	
09-20	Ch. 4	
09-25	Ch. 4, 5	
09-27	Exam Review	
10-02	Exam 1	Ch. 1-4
10-04	Ch. 5	
10-09	Ch. 5, 6	
10-11	Ch. 6	
10-16	Ch. 6	Quiz given
10-18	Ch. 7	
10-23	Ch. 7	Quiz due
10-25	Ch. 7	
10-30	Ch. 8	
11-01	Exam Review	
11-06	Exam 2	Ch. 5-7
11-08	Ch. 8	
11-13	Ch. 8	
11-15	Ch. 9	
11-20	Ch. 9	Quiz given
11-22	Thanksgiving Break	
11-27	Ch. 10	Quiz due
11-29	Ch. 10	
12-04	Exam 3	Ch. 8-10
12-06	Exam review	
Final Exam:	1500 Thursday December 13, 2018	