

Stat Meth Business (33:136:385:10)

Tom Bruning

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Instructor

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Zoom Sessions

All interactions will be held using the Zoom platform.

- Office Hours: Tue. 11:0am-12:00pm, Wed. 12:00pm-1:00pm. These will be held through Zoom link in the first module on the home page.
- Classes: On-line, live, Mon. & Wed; from 5:00 pm to 6:20 pm. through the Zoom link on the course Canvas Page.

Feedback and response expectations:

- Email Response Times: I will do my best to return your emails within 24 hours, please remind me if you do not hear back from me within 24 hours.
- Graded Materials Return Times: I will strive to grade your assignments, quizzes and exams before the next scheduled class period.
- Discussion Board Response Times: I aim to review any posts within 24 hours.

Course Objectives

Students will be introduced to basic statistical methods, particularly understanding the concepts of uncertainty and how the understanding of probability is integral to making business decisions. They will be able to design an experiment, analyze observations and make reasonable predictions and decisions about the business events.

At the conclusion of this course the student will have knowledge of:

- Sampling distribution and estimation
- Confidence Intervals
- Hypothesis Testing
- Experimental Design

- Linear Regression
- Multiple Regression
- ANOVA
- Logistic Regression
- Time Series
- Data Analytics

Resources

Textbook:

Title: *Basic Business Statistics: Concepts and Applications*

Authors: Berenson, Levine, Krebbel

Publisher: Pearson

14th Edition (2017)

Computer Resources

Title: Microsoft Excel, or equivalent

Additional Resources: Data Analysis plugin

Prerequisites

The following prerequisites are **essential** for successful learning and understanding of this course:

- * An introductory course in probability and statistics such as 960:285
- * Basic college algebra
- * Working knowledge of Excel spreadsheets

ACADEMIC INTEGRITY

I do NOT tolerate cheating. Students are responsible for understanding the RU Academic Integrity Policy (https://slwordpress.rutgers.edu/academicintegrity/wp-content/uploads/sites/41/2014/11/AI_Policy_2013.pdf). I will strongly enforce this Policy and pursue all violations. On all examinations and assignments, students must sign the RU Honor Pledge, which states, “On my honor, I have neither received nor given any unauthorized assistance on this examination or assignment. Don’t let cheating destroy your hard-earned opportunity to learn. See business.rutgers.edu/ai for more details.

Course Overview

This course will review the basic statistical methods essential for doing business analysis, in particular when outcomes are uncertain and

future events are subject to chance variation. We will study basics of data analysis using computer software.

Course Web site information and discussion

All class discussions, assignments, and materials will be posted to Canvas

Please review this site 2-3 times per week for further information.

Homeworks, Exams, and Grading Policy

Homework and Quizzes (20% of final grade)

I will post approximately 10 homework assignments or quizzes during the semester. All homework will be completed in Canvas. You are responsible for completing the work, on time. Statistics is not a *spectator sport*, it is a *participatory sport*. I have it on good authority, (10+ years of teaching statistics experience) if you do not do the work you **will** not understand and succeed in this class. If you miss more than two (2) homeworks and/or quizzes you will receive an **F** for this class. Quizzes will be on a class day and will be available the entire day of the class. This is true regardless of your grades on the other homework assignment and your grades on the midterm and final.

Midterm (35% of final grade)

The midterm is a full period test that is scheduled during the 7th week of class.

Final (45% of final grade)

Schedule TBD

This is the most important paragraph in this document

Your final grade is not subject to negotiation. If you feel I have made an error, submit your written argument to me within one week of receiving your final grade. Clarify the precise error I made and provide all due supporting documentation. If I have made an error, I will gladly correct it. But I will adjust grades only if I have made an error. I cannot and will not adjust grades based on consequences, such as hurt pride, lost scholarships, lost tuition reimbursement, lost job opportunities, or dismissals. It is dishonest to attempt to influence faculty in an effort to obtain a grade that you did not earn, and it will not work.

Rutgers Grading Schedule

Lower.Bound	Upper.Bound	Grade
89.5	100.00	A
84.5	89.49	B+
79.5	84.49	B
74.5	79.49	C+
69.5	74.49	C
59.5	69.49	D
0.0	59.49	F

Topic Schedule

Table 2: Tentative Topics and Dates

Week.of Topic	Chapter	Chapter.Title
1/17/21 Intro & Data Analysis	Chapter 7	Review Chapters 4,5,6
1/24/21 Sampling Distributions	Chapter 7	Sampling Distributions
1/31/21 Confidence Interval Estimation	Chapter 8	Confidence Interval Estimation
2/7/21 Hypothesis Testing single sample	Chapter 9	Fundamentals of Hypothesis Testing
2/14/21 Two samples hypothesis test	Chapter 10	Two-sample Tests
2/21/21 ANOVA	Chapter 11	Analysis of Variance
2/28/21 Midterm		
3/7/21 Chi-square	Chapter 12	Chi-Square and Non-parametric tests
3/14/21 Spring Break		
3/21/21 Linear Regression	Chapter 13	Simple Linear Regression
3/28/21 Multiple Regression	Chapter 14	Introduction to Multiple Regression
4/4/21 Time Series	Chapter 16	Time-Series Forecasting
4/11/21 Data Analytics	Chapter 17	Data Analytics
4/18/21 Data Roadmap	Chapter 18	Getting Ready To Analyze Data

Week.of Topic	Chapter	Chapter.Title
4/25/21 Decision Making	Chapter 20	Decision Making
5/2/21 Review		
TBD Final		

Rutgers Business School Student Code of Professional Conduct

Rutgers Business School is recognized for its high-quality education. To that end, maintaining the caliber of classroom excellence, whether in person or online, requires students to adhere to the same behaviors that are expected in professional career environments. These include the following principles:

Discussion and Correspondence

- Each student is encouraged to take an active part in class discussions and activities. Substantive dialogue requires a degree of mutual respect, willingness to listen, and tolerance of opposing points of view. Disagreement and the challenging of ideas must happen in a supportive and sensitive manner. Hostility and disrespectful behavior will not be tolerated.
- In both correspondence and the classroom, students should demonstrate respect in the way they address instructors. Students should use proper titles in addressing instructors unless there is an explicit understanding that the instructor accepts less formal address. Similarly, appropriate formatting in electronic communication, as well as timely responsiveness, are all expectations in every professional interaction, including with instructors. Everything said and written should demonstrate respect and goodwill.

Punctuality and Disruption

- Class starts and ends promptly at the assigned periods. Students are expected to be in their seats or present online and ready to begin class on time.
- In person, packing belongings before the end of class is disruptive to both other students and the instructor. Barring emergencies and within reason, students are expected to remain in their seats for the duration of the class. Online, typing or attending to other tasks aside from the class is distracting. In addition, even if the use of webcams is not required in your course, your attention is fundamentally lacking if you are engaged in multiple tasks at once.

Technology

- The use of technology is sanctioned only as permitted by the course instructor. As research on learning shows, peripheral use of technology in classes negatively impacts the learning environment in three ways:
 1. Individual learning and performance directly suffer, resulting in the systemic lowering of grades earned.
 2. In the classroom, one student's use of technology automatically diverts and captures other people's attention, thus impeding their learning and performance. Moreover, even minor infractions have a spillover effect and result in others doing the same.
 3. Subverting this policy (e.g., using a phone during class, even if hidden below the table or out of sight from your webcam; tapping on a smartwatch; using a laptop for non-course related matters) is evident to the course instructor and offensive to the principles of decorum in a learning environment.
- Networking, computing, and associated resources in the trading rooms, advanced technology rooms, and general classrooms are to be used in the manner intended.
- Sharing links to private online classes, attempting to join an online class that you are not enrolled in, or posting disruptive content during these sessions are strictly prohibited and may lead to disciplinary action.
- For more instructions on information technology resources at Rutgers University, please refer to the Acceptable Use Policy for Information Technology Resources .

Misappropriating Intellectual Property

- Almost all original work is the intellectual property of its authors. These works may include syllabi, lecture slides, recorded lectures, homework problems, exams, and other materials, in either printed or electronic form. The authors may hold copyrights in these works, which are protected by U.S. statutes. Copying this work or posting it online (on sites such as Chegg or Course Hero) without the author's permission may violate the author's rights. More importantly, these works are the product of the author's efforts; respect for these efforts and the author's intellectual property rights are important values that members of the university community take seriously.

- For more instructions on copyright protections at Rutgers University, please refer to the Rutgers Library .

Rutgers Business School is committed to the highest standards of integrity. We value mutual respect and responsibility, as these are fundamental to our educational excellence both inside and outside the classroom.

Questions

Any question of interpretation or application of this policy should be referred to the Director of Special Projects, Mason Ameri.

Support Services

If you need accommodation for a disability, obtain a Letter of Accommodation from the Office of Disability Services. The Office of Disability Services at Rutgers, The State University of New Jersey, provides student-centered and student-inclusive programming in compliance with the Americans with Disabilities Act of 1990, the Americans with Disabilities Act Amendments of 2008, Section 504 of the Rehabilitation Act of 1973, Section 508 of the Rehabilitation Act of 1998, and the New Jersey Law Against Discrimination.
<https://ods.rutgers.edu>

- If you are in need of mental health services, please use our readily available services.

Rutgers Counseling and Psychological Services – New Brunswick:
<http://rhscaps.rutgers.edu/>

- If you are in need of physical health services, please use our readily available services.

Rutgers Health Services – New Brunswick: <http://health.rutgers.edu/>

- If you are in need of legal services, please use our readily available services: <http://rusls.rutgers.edu/>

- If you are in need of additional academic assistance, please use our readily available services.

Rutgers University-New Brunswick Learning Center: <https://rlc.rutgers.edu/>