

**Rosenberg**

Fall 2010

Central Connecticut State University  
New Britain, CT

## **STAT 200 – Section 8 Business Statistics I**

Business Statistics I Skill Area II Prereq.: MATH 101 (C- or higher) or placement exam. Application of statistical methods used for a description of analysis of business problems. The development of analytic skills is enhanced by use of one of the widely available statistical packages and a graphing calculator. Topics include frequency distributions, graphical presentations, measures of relative position, measures of central tendency and variability, probability distributions including binomial and normal, confidence intervals, and hypothesis testing. No credit given to students with credit for STAT 104, 108, 215, 314, or 315.

3.000 Credit hours  
3.000 Lecture hours

**Levels:** Doctorate, Graduate, Undergraduate  
**Schedule Types:** Independent Study, Lecture, Online Instruction

Mathematics Department

**Course Attributes:**  
Mathematics Requirement - SK2

**Scheduled Time of Class Meetings:** Monday, Wednesday, and Friday  
12 noon – 12:50 pm

**Location of Classes:** Maria Sanford Hall -- Room # 212

Each class we will focus on a detailed discussion of the core concepts, as well as considerable time on active problem-solving. There will be considerable emphasis on the steps to solving problems, utilizing all available information, by developing and following a logical plan. This course will allow you to develop a full understanding of very fundamental statistical concepts, not merely the ability to plug numbers into a calculator or a software program. Having said this, we will obtain answers to problems utilizing a long list of tools, including critical thinking, spreadsheet analysis, software programs, calculator assistance, and of course -- pencil and paper, and common sense. I will be bringing to this course the same fundamentals and rigor with which I have previously taught Statistics at the *Wharton School of Business*, in Philadelphia. My emphasis is having you truly understand the material. As President of a specialized venture capital firm for over twenty years, I will be heavily stressing the importance of

statistical analysis in decision-making processes. By **the end** of the semester you will definitely know the difference between the null and alternative hypotheses, as well as to what the concept of a “test statistic” refers. I will start slowly and we will build up some momentum as the semester advances. The earlier chapters of the book provide building tools and we will cover all of the material referenced on the syllabus and further identified in class, yet we will ultimately spend the majority of our time on Chapters 6 – 9. You should either drop the class or be prepared to study hard from the very beginning of the course, at which point I will cover a key review of the most basic core concepts. I am very enthusiastic about teaching this course, and providing you the opportunity to learn as much as possible. An understanding of statistics provides an incredibly powerful and useful tool in a multitude of business and economic situations which you will encounter. My goal is to provide you a good understanding of statistics if this is your last statistics class, as well as provide you the key foundation to move on to Statistics 201, if that is your intention. Last Fall I taught Statistics 201 and with that as background I am interested in making sure that you will have the correct educational bridge to advance, as needed.

**Instructor:** Stewart Rosenberg

**E-mail addresses:** [rosenbergstb@ccsu.edu](mailto:rosenbergstb@ccsu.edu) or [bioinv1@aol.com](mailto:bioinv1@aol.com)

**On-site Office Telephone Number for**

**Mathematical Sciences Department:** 860 832-2835

**Off-site Telephone Number (Instructor):** 203 421-0028

**Office Hours:** By appointment

**Required Textbook:** *Statistics for Business and Economics 11e*, 2011,  
Anderson, Sweeney, and Williams. Thomson South-Western

**Resources Available:**

1. Please do not wait until the last minute to get help. Assistance is available from your Instructor, a tutor, or the Learning Center.
2. The Learning Center is located in Room 241, Copernicus. Free tutoring is available in Room 241, Copernicus, and at other locations on campus. A schedule for hours the Center is open will be posted soon after the beginning of the semester.
3. Give serious consideration to forming a study group with other students in your section. Explaining solutions to homework problems to each other is a good way to learn. You will not be able to maximize your learning of the material unless you address homework on a timely fashion, in a consistent manner.
4. A list of private tutors for hire is available in the Mathematical Sciences Department - Room 107 Marcus White, 832-2835.

**Weekly Discussions on the Intersection of Statistics with Business and Economics:**

In addition to materials covered from our textbook, we will be covering key topics each

week that address the intersection of statistics with business and economics. As your instructor, I will be bringing in key articles for our discussion, based on my weekly review of key journals and newspapers. We will be discussing start-up and established companies with which I have utilized statistical analysis in making key decisions within sales and marketing, operations, clinical trials, etc. In addition, I will be broadly drawing upon my past experiences and activities at universities and their technology transfer departments related to economic analysis, and the role of statistics in evaluating historical activities as well as forecasting new activities, within for-profit “spun-out” companies. All discussions will be interactive and allow for significant insight on the impact of statistics to reaching key business and economic decisions.

**Disabilities Policy:** Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. I will need a copy of the accommodation letter from Student Disability Services in order to arrange your class accommodations. Contact Student Disability Services, Room 241, Copernicus Hall, if you are not already registered with them. Student Disability Services maintains the confidential documentation of your disability and assists you in coordinating reasonable accommodations with your faculty.

**Class cancellation:** In the event of inclement weather, power failure, or any other extreme or unusual circumstances, cancellation and delay information is available on the CCSU “Snow Phone” at 832-3333. The official radio station for canceling classes is WTIC, 1080 AM. Announcements also are posted on television stations (WVIT (Channel 30) and WFSB (Channel 3)) and the University web site <http://www.ccsu.edu/cancellation/>

**Policy on cell phone use during class:** I would ask that you please respect the rights of other class members by turning off cell phones, pagers, or other similar devices during class. Please make arrangements with others not to call or page you during class-time. If you expect an extremely important call during class, please talk with me before class. In case of emergencies when you must use such devices, please leave the classroom, and do so in such a way as to minimize disruption during class.

**University’s plagiarism policy:** See Student Handbook. University policy on academic integrity appears in [http://www.ccsu.edu/registrar/Policies/Academic\\_Honesty.htm](http://www.ccsu.edu/registrar/Policies/Academic_Honesty.htm) . Violation of this policy will result in an automatic "F" for the class and referral to the university Judicial Officer for additional consequences.

**Class behavior policy:** Students are expected to contribute to a positive learning environment in the class and during all interactions related to the class. All students should follow the university code of conduct, which is described in <http://www.ccsu.edu/studentaffairs> . There is zero tolerance for any behavior that does not show civility and respect for class members and the instructor. Acts of incivility toward a class member or the instructor will result in a consequence ranging from being removed from the class activity and receiving a grade of zero for the specific activity up to

and including being withdrawn from the class with a failing course grade and being referred to the university judicial system for additional consequences. This class has a **zero tolerance policy** for any forms of violence or threats of violence. Students who display any forms of violence or threaten violence against any class member or the instructor will be required to withdraw from the class and face the maximum penalties allowed for these actions (ranging from class termination with a failing grade up to and including the maximum penalties allowed by the criminal justice system and University regulations). All threats of violence are taken seriously even if the student may have intended these threats to be a joke.

**Grading Breakdown and Policy (Subject to further clarification and modification):**

Mid-term Examination	– 25%	-- You may earn up to 250 points
Final Examination	– 25%	-- You may earn up to 250 points
Class Project/Case Problems	– 25%	-- You may earn up to 250 points
In-Class Participation on lecture material, assigned problems, announced or unannounced quizzes (we will discuss this point further)	– 25%	--You may earn up to 250 points

1000 Points Total

Hence, as you saw from the bottom of the previous page, you may earn up to a total of 1000 points in this class. I will add up each of the components to reach your final grade for the class.

**The final grade is based on the total number of points earned:**

930 = A	900 = A-	870 = B+
830 = B	800 = B-	770 = C+
730 = C	700 = C-	670 = D+
630 = D	600 = D-	

Examinations and quizzes are to be taken at the scheduled time. Projects and/or papers are to be presented in class and/or turned in to me at the scheduled times. **You must keep back-up for all projects and papers submitted on your computer for at least 30 days beyond the end of the semester, in case of any lost material. You are responsible for providing the back-up material, if needed.** Any materials submitted must be submitted in Office 2003 Version, so that they may be opened on computers with Office 2003 or 2007. If you miss more than three classes without extenuating

circumstances pre-explained to me, you will automatically fail the course. There are no exceptions.

**Grading Breakdown and Policy (Continued):**

If you do not attend class, you will be penalized by virtue of the above grading breakdown. If you miss classes continually and as a result do not participate in any in-class participative activities, you can readily see that you have risked losing 250 points, right from the start, and/or automatically increase the probability that you will fail the course. Attend classes and participate, you are off to a running start toward receiving 250 points.

**For Further Clarity, Policy on Makeup Exams:** There are no makeup exams or makeup quizzes.

If you miss an examination or quiz you will receive a grade of zero for the exam or quiz.

**For Further Clarity, Policy on Late Assignments:** I will not accept late assignments.

If an assignment is not submitted on the assigned date, or if a student is not prepared to participate in his/her individual or group project or submit his/her class project/case problems at the assigned time, you will receive a grade of zero for the assignment.

**Instructor Philosophy and Course Objective:** My goal is to make the course as interesting and stimulating as possible, and to help each of you become more familiar with the field of Statistics. I have carefully reviewed our textbook, and it is an excellent book. This semester we have a new edition of the book, just released, the 11<sup>th</sup> Edition, copyright 2011. It covers a significant amount of material, with excellent collateral material. I believe that all of the chapters have important representative material. In a Business Statistics I course we have considerable core material in the first five chapters, followed by an introduction of key concepts which ultimately allows you to test various hypotheses. While we may not cover every page in a given assigned chapter, you are responsible for reading/reviewing/understanding the assigned sections of selected chapters. Please read over for basic understanding the assigned material before each class, as we will be covering a considerable amount of material from the chapters, in class. I will utilize the problems in each chapter for major class discussions and evaluation of class participation. The problems and cases provided in your text are extremely interesting and well-written.....read each problem with an open mind.....after you read the problem for an overview and assimilate in your mind the questions posed, go back and read the problem again so as to better understand the questions asked, prior to attempting to solve any problem. We will learn more about



**COURSE CALENDAR (CONTINUED):**

Week of October 18, 2010	Review MID-TERM EXAMINATION Chapter 6: Continuous Probability Distributions <b>(6.2 is VERY IMPORTANT)</b> 6.1 – 6.2
Week of October 25, 2010	Chapter 6: Continuous Probability Distributions 6.3 – 6.4
Week of November 1, 2010	Chapter 7: Sampling and Sampling Distributions 7.1 – 7.4
Week of November 8, 2010	Chapter 7: Sampling and Sampling Distributions 7.5 – 7.8
Week of November 15, 2010	Chapter 8: Interval Estimation 8.1 – 8.4
Week of November 22, 2010	Chapter 9: Hypothesis Tests 9.1 – 9.2 <b>(9.1 is VERY IMPORTANT)</b> (No Classes on 24 - 28 November -- Thanksgiving Break)
Week of November 29, 2010	Chapter 9: Hypothesis Tests 9.3 – 9.5  Submissions/Presentations of Class Projects and/or Final Case Problems
Week of December 6, 2010	Chapter 9: Hypothesis Tests 9.6 – 9.8 <b>(The final four chapters of the course are covered in the final eight weeks.)</b> Submissions/Presentations of Class Projects and/or Final Case Problems
Week of December 13, 2010	Scheduled Final Examination Period <b>FINAL EXAMINATION</b> <b>December 15, 2010 – Wednesday</b> <b>11 am – 1 pm</b>

## **COURSE CALENDAR (CONTINUED):**

*We may modify the schedule, and spend more time on a given chapter, as needed. My goal is to provide you the greatest exposure to statistics for business and economics in a limited time, while always paying attention to clear communication. If possible, we will spend less time on Chapters 1-5 and more time on Chapters 6-9, which are heavily focused on transitioning into hypothesis testing. Much depends on how prepared the class is upon start. I will be flexible and understanding to students that have different backgrounds and preparations, to an extent.*

**\*\* The last day to withdraw from full-semester courses without permission is October 25, 2010.**

**Project Work Session:** One class will be designated as a class project/case problems work session. Prior to the work session we will together assemble a list of well-defined objectives, for focused attention and completion during the work session, and for which you will be accountable. At our class following the work session we will review your progress during the work session, and accomplishments to date.

**Policy on Religious Holidays:** Classes, examinations, or other class activities unintentionally may be scheduled on religious holidays. If any of these activities are scheduled so that they interfere with a student's observation of a specific holiday, an alternate time will be scheduled for students who observe such a holiday. The student should contact the instructor at least ONE WEEK BEFORE such a holiday so that alternate arrangements may be made.

If individual students cannot go to the work session because of religious observation, they can work this out with the group and/or me. I am available to help you if you need assistance in identifying a way to make a contribution if you are unavailable to personally participate in a group session, at the scheduled time.

### **Final Comment from Instructor:**

One of my paramount departmental goals is to be fair to all students. It is unfair for some students to work hard and follow the rules, while others disregard assignments.

I hope that you will support me in helping to maximize our learning experience together.

***Now let's study Statistics for Business and Economics!!!***