**SCMA632-901** (32405), Course Outline, Fall 2016

*Course:* **http://www.people.vcu.edu/~randrews/632/632\_fall\_2016.html**

**INSTRUCTOR:** **Robert L. Andrews**

Electronic Mail: **randrews@vcu.edu**

Home phone: 355‑4645 This number is given in good faith that it will be used with reason (8 a.m. to 10 p.m. except for urgent situations).

**OFFICE HOURS:** Since I am not a full-time faculty member I do not have an office or regular office hours. Normally I can be available after class on Wednesdays. If you need to see me, I suggest that you make an appointment. I generally work at home most mornings.

**PREREQUISITE:**  SCMA524 or equivalent preparation. This means that you have an understanding of algebra and statistics through estimation, hypothesis testing and simple regression.

**TEXTBOOK**  options

Required: **Statistics for Business: Decision Making and Analysis** by Stine, Robert A. & Foster Dean, Second edition (2014), Pearson Publishing. There are 3 options for this text:

* Hardback with MyStatlab that includes etext: ISBN-13: 9780321890269
* Student Value Edition with MyStatlab with etext: ISBN-13: 9780321921772
* MyStatlab with etext: ISBN-13: 9780321838087

**Three things are needed to register and enroll for MyStatLab:**

1. **Course ID (andrews22555)**
2. **Email address** (You may use any e-mail you wish.)
3. **Student access code, a valid credit card, or a PayPal account**

Register for MyStatLab at

**https://www.pearsonmylabandmastering.com/northamerica/students/get-registered/index.html**

Suggested: **Discovering Statistics Using SPSS** by Andy Field, Sage publications, Bookstore has 4th Edition ISBN-13: 9781446249185. 3rd Edition ISBN-13: 9781847879073 can provide valuable essentials.

Suggested: **Building Better Models with JMP Pro** by Jim Grayson, Sam Gardner & Mia Stephens, (2015) SAS Institute, ISBN-13: 9781629590561.

Suggested: **Regression & Linear Modeling: Best Practices and Modern Methods** by Jason W. Osborne, (2017) Sage publications, ISBN-13: 9781506302768.

**CLASS MEETINGS:** Wednesday 7:00 - 9:40 p.m. **(No Class on Wednesday, November 26)**

(In class quiz: Wednesday, October 5)

**WITHDRAW:**  The last day to withdraw is **Friday, November 4**

**MyStatLab due: 9 AM, December 13**

**FINAL EXAM:** **Wednesday, December 14, 7-9:40 p.m.**

**MISSION AND OBJECTIVE OF THIS COURSE**

To provide students with a conceptual understanding of basic statistical procedures for building linear models using regression, analysis of variance and elementary design of experiments. Students will be expected to perform basic calculations and to be able to use a software package to create data based visualizations, linear models and analysis to gain insights about applied problems. The focus will be on improving critical thinking and reasoning rather than on rote memorization of formulas and procedures.

**ACADEMIC INTEGRITY**

Go to **http://www.policy.vcu.edu/sites/default/files/Honor%20System.pdf,** obtain a copy of the V.C.U. Honor System and familiarize yourself with it. Each of us has a part to play in upholding academic integrity at V.C.U. If the university is producing cheaters, this reflects poorly on the entire university community, including you even though you individually are not cheating. A true friend will confront the person cheating. If individuals are not held accountable for their behavior they have no reason to change. If you observe something that is not correct and refuse to take any action, you are developing a habit that may be as detrimental to society as the habit you are allowing others to develop. All work submitted for grading is considered to be pledged work unless the instructor specifies otherwise. Please come to me with academic integrity concerns involving this class. Remember that **your honesty and integrity are more important than a grade in a course or even a university diploma**.

**GRADING:** Final letter grades will be assigned using this scale.

 A B C D F

 90‑100 80‑89.9 70‑79.9 60‑69.9 Below 60

The final numerical average will be based on a series of quizzes and assignments, a project and a comprehensive final exam. The quizzes will be averaged together to provide a quiz average with the lowest quiz or assignment grade being dropped (MyStatLab homework will count as one of these grades). If you do not take an in-class quiz within 24 hours of when it is given, no makeup will be given and a grade of zero will be assigned. For the final average, quiz average will each count 40% with the project and the final exam each counting 30%.

**CLASS ATTENDANCE and HOMEWORK**

**Each student is held responsible for the material covered and assignments given during each class.** If you are forced to miss a class then it is your responsibility to find out what was covered in class. Quiz dates as well as homework problems will be assigned during class meetings. Should you be forced to miss a class, then arrange to obtain the notes from a classmate. It is the policy of VCU to accord students, on an individual basis, the opportunity to observe their traditional religious holidays. Students desiring to observe a religious holiday of special importance must provide advance written notification to each instructor by the end of the second week of classes. Also, notify me in advance of necessary absences. **I do not give makeup quizzes**, but I will try to be reasonable in dealing with individual cases if the situation merits.

A minimal set of problems illustrating principles that should be learned will be assigned in class. **The problems will not be collected**, but each student is expected to be prepared to discuss their work if called on during class. Your attendance and homework performance can be used to improve your letter grade if your average falls slightly below a cutoff.

***YOUR ATTENDANCE AND HOMEWORK PERFORMANCE WILL NEVER BE USED TO LOWER YOUR LETTER GRADE!***

**Rules for quizzes, assignments, and exams**

**All calculations for pledged work (quizzes, assignments, project and exam) are expected to have at least three significant digits.** Calculations rounded off to fewer digits will be considered to be in error due to excessive rounding. **We have computers in the classroom and students may use the Excel, SPSS or JMP packages to perform computations**.

**The final exam and all in-class quizzes will be OPEN BOOK and OPEN NOTES.**

**COMPUTING**

I will use Excel, JMP PRO, and IBM SPSS in class. You will be expected to use Excel, JMP, SPSS or a comparable software package to perform analyses on provided data sets. These tools may also be used for in-class quizzes and the final exam. VCU has license agreements allowing VCU students to use Excel, JMP and SPSS products at no additional cost.

Microsoft Office **free download** details at

**http://www.ts.vcu.edu/software-center/general-purpose/microsoft-office/**

**JMP** details at **http://www.ts.vcu.edu/software-center/data-analysis/jmp/** and

**SPSS** details at **http://www.ts.vcu.edu/software-center/data-analysis/spss/**

Projects may be done using other statistical analysis packages such as SAS or STATA if you get prior approval. Users should be familiar with VCU’s Computer Ethics Policy at **http://www.controller.vcu.edu/finpolicies/compethics.htm.**

**Unforeseen cancellation of class**

If a class is canceled because of an unforeseen event then all assignments for that class meeting, including quizzes, carry over to the next class meeting. In the case of inclement weather, I will make every effort to be in class if VCU is not closed. You must assess the risks involved in your situation and decide what you should do. Also you must accept the consequences of your decision and be responsible for the material covered if you choose to miss class. The university maintains an inclement weather telephone number, **(804) 278-1727**, as well as an inclement weather and office closing web page found at **http://www.vcu.edu/alert/** & you can sign up foremergency text messaging or e-mail notices for non-VCU addresses at **http://www.vcu.edu/alert/notify**.

**CLASS RELATIONS**

Here is some of my personal philosophy that will have an important bearing on our relationship during this course. I ask that classroom behavior be orderly and reasonable. I intend to respect you as a person and I expect each of you to do the same for your classmates and me. Constructive criticism is necessary in the education process but in excess it is destructive and indicates a lack of respect for others. I am concerned about you. As a teacher, I am concerned about your progress as a student. As a Christian and a fellow human being, I am concerned about you as a person and your personal problems. I invite you to come to me with difficulties you are having in class or out. As a practical matter, I have many students and limited time available. Hence, I do not have time to waste with people who are not willing to make an effort to help themselves. Should you need help, please come for help before you get in over your head. If you have any constructive criticism for me that you believe will benefit our entire class or future classes, please come to me privately with this. I do appreciate this feedback that is essential for improving the quality of my classes. It is important to have an environment that is conducive to learning and VCU has policies to govern discrimination, sexual harassment **http://equity.vcu.edu/discrimination/** and other unacceptable conduct that does not respect fellow members of the university community.

**GENERAL COMMENTS**

This course is clearly quantitative in nature. Emphasis will be on improving problem solving skills and understanding the concepts to enhance your ability to recognize the benefits, potential uses and limitations of the methods being studied. Emphasis will be on practical application rather than theoretical foundations for the methods and it will not suffice to memorize rote manipulations of formulas and procedures.

This course will depend on the utilization of previously acquired skills. Most likely some of you are well prepared while others may have a weaker foundation. If your foundation is weaker, then you will need to give additional time and effort to this course in order to succeed.

**VCU Syllabi statements that apply to this class**

These statements are found at

**http://www.provost.vcu.edu/academic-affairs/operations/syllabus-statements/**

VCU complies with the requirements of the Rehabilitation Act of 1973 and the American Disabilities Act of 1990. **If you have a disability** that requires an academic accommodation, **see me privately**.

**cell phones**

I ask that cell phones are on vibrate during class. If you have to respond to a call, please get up quietly and step outside the classroom.

**For Emergencies contact the VCU Police (828-1234).**

**prerequisite knowledge**

The chapters/sections of ***Statistics for Business: Decision Making and Analysis* (2nd edition)** listed below cover what is considered to be prerequisite knowledge for SCMA 632.

Part One

Chapter 2, Data

Chapter 4, Describing Numerical Data

Chapter 5, Association between Categorical Variables

Chapter 6, Association between Quantitative Variables

Part Two

Chapter 7, Probability

Section 8.2, Dependent Events

Sections 9.1 & 9.2, Random Variables

Sections 10.2 & 10.4, Distribution and Dependence of Random Variables

Chapter 12, The Normal Probability Model

Part Three

Chapter 13, Samples and Surveys

Section 14.1, Sampling distribution of the Mean

Chapter 15, Confidence Intervals

Chapter 16, Statistical Tests

Chapter 17, Comparison (omit 17.2 & 17.3)