Richard Single
Richard.Single [at] uvm [dot] edu
306 Mansfield House
656-8631

Office hours: TBA – please check the class webpage (www.uvm.edu/~rsingle/stat211/index.html).

Required Materials:

- Text: "OpenIntro Statistics" (3rd Edition) by Diez, Barr, and Cetinkaya-Rundel
- A scientific calculator

Software: We will use the R statistical software. R is a language and provides a flexible and extendable environment for statistical computing and graphics. It is available as Free Software under the terms of the Free Software Foundation's GNU General Public License (GPL).

Prerequisites: Minimum Junior standing or (STAT 141/143 AND instructor permission)

Course description:
This course has two major objectives. (1) You will gain an understanding of several techniques used in the statistical analysis of data, including the underlying statistical models, and how they relate to specific research questions. (2) You will also learn how to implement and interpret analyses for different types of studies using statistical software. Putting this information together will allow you to formulate a research hypothesis, determine an appropriate statistical analysis method, carry out the analyses, and interpret the results. We will discuss ways of determining appropriate numbers of subjects/units to include in experiments and methods for verifying assumptions that underlie the statistical models.

The class will consist of a mixture of lecture, discussion, and projects to highlight particular topics. It would be impossible, however, for these to encompass all of the material for the course. There will be material in the text for which you will be responsible that we will not cover explicitly in class. *I expect that you will read the material in the text before we discuss it in class.*

The course will cover material from chapters 1-7 in the text and additional topics as time allows.

Topic	Chapters	Skip
Introduction to data	1	1.8
Probability	2	2.3, 2.5
Distributions of random variables	3	3.3, 3.5
In this order: 3.3.1, 3.4, 3.1, 3.2		
Foundations for inference *	4*	
Additional Topic: statistical power		
Inference for numerical data (skip 5.5)	5	5.5
Additional Topic: non-parametric inference		
Inference for categorical data	6	
ANOVA	5.5	
Introduction to linear regression	7	
*Note: there is a lot of errata in Chapter 4		

Assignments & Policies:
Reading the text prior to class will be an ongoing homework assignment throughout the course. Homework assignments will be listed on the class webpage (www.uvm.edu/~rsingle/stat211/index.html). They will be due on Fridays at the beginning of class. **Late assignments will not be accepted**. Your lowest homework score will be dropped.

Be sure to preface the subject of any email related to the course with "stat211:", otherwise I may not see your email (e.g., stat211: *your subject here*).

You are encouraged to work together in groups. You will find this especially helpful in learning to use the software. Solutions to homework assignments, however, must be written on your own. This will help to clarify your understanding of the material by ensuring that you have thought through the ideas for yourself. You must note the name(s) of any group partners on the top of any assignment that is a group effort.

Each assignment that you turn in should be neat with multiple pages stapled together. The following header information must be included on the first page (Name, Course #, Date or Assignment #):

FirstName LastName
Stat 211
Homework #

You must show your work for each problem, since little to no credit will be given for simply writing the final answer. Your grade will be reduced by 10% for each of the following: no staple, messy, or no header.

Some assignments will have a page limit. Any material exceeding the page limit will be ignored and points will be deducted.

Your final grade will be determined by your exams, quizzes, homework, and participation in class discussions according to the following scheme:

2 Exams	50%	(3/2 and 4/13)
Quizzes & Labs	15%	
HW / Participation	10%	
Final	25%	

Final Exam: 10-MAY-2018 10:30 – 13:15 ROWELL 118

Special Needs:

If you need specific accommodations please bring a letter from ACCESS as early as possible so that we can make appropriate arrangements (at least 2 weeks before any exam or project).

Academic Honesty:

As in all of your classes, you will be held to the standards for Academic Integrity at UVM outlined by the Center for Student Ethics & Standards (http://www.uvm.edu/cses/?Page=ah.html&SM=ahmenu.html).

Classroom Environment:

University of Vermont Classroom Code of Conduct: (http://www.uvm.edu/policies/?Page=alphalist.php)

Faculty and students will at all times conduct themselves in a manner that serves to maintain, promote, and enhance the high quality academic environment befitting the University of Vermont. To this end, it is expected that all members of the learning community will adhere to the following guidelines:

1. Faculty and students will attend all regularly scheduled classes, except for those occasions warranting an excused absence under the University Attendance Policy (e.g., religious, athletic, and medical).
2. Students and faculty will arrive prepared for class and on time, and will remain until the class is dismissed.
3. Faculty and students will treat all members of the learning community with respect.
4. Students and faculty will maintain an appropriate academic climate by refraining from all actions that disrupt the learning environment.
5. Students and faculty should turn off cell phones and not use TEXT MESSAGING during class. Surfing the web is not an acceptable behavior in class unless it is an explicit part of a class assignment.