Office hours: TBA – please check the class webpage (www.uvm.edu/~rsingle/stat231/index.html)

Required Materials:
- **Text:** "Design of Experiments: Statistical Principles of Research Design and Analysis" by Robert O. Kuehl, 2nd Edition
- A scientific calculator (a smart phone will not be allowed)

Software:
We will use an online version of the SAS statistical package. It is also available on the computers in Waterman some of the Votey labs and through 'Virtual Votey'.

Prerequisites: STAT 221 is recommended. STAT 211 or equivalent is required.

Course description:
This course has two major objectives. (1) You will gain an understanding of several experimental designs, the underlying statistical models, and how they relate to specific research questions. (2) You will also learn how to analyze results from these experimental designs. Putting this information together will allow you to formulate a research hypothesis, determine an appropriate design, 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 1-9 in the text and, as time allows, portions of chapters 11-15.

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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/stat231). *Late assignments will not be accepted.*

Be sure to preface the subject of any email related to the course with “stat231:”, otherwise I may not see your email (e.g., stat231: your subject here).
I intend to have at least one of the assignments involve collecting and/or analyzing your own data using techniques from this course. A written report will accompany these analyses and, if time permits, an oral presentation of the results will be made. A detailed description of this assignment will be given later in the course.

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.

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 #, Assignment #):

- FirstName LastName
- Stat 231
- Homework #

You must show your work for each problem. No credit will be given for simply writing the final answer. Most problems will require a brief (one or two sentence) interpretation. One-word and/or incomplete sentences are not acceptable. Your grade will be reduced by 10% for each of the following: no staple, messy, or no header.

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

- 2 Exams 50% (3/9 & 4/20)
- HW / Quizzes / Projects / Participation 25%
- Final 25%

**Final Exam:** 07-MAY-2018 13:30-16:15 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/student/studentcode.pdf)

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.