

MATH 211: Elements of Statistical Method

Summer 2010

Shoreline Community College

Welcome to the online version of MATH 211, Elements of Statistical Method. You may print this syllabus if you want. All this information is also available online under the Course Information button.

Your Instructor and Shoreline Community College

Instructor: Shana Calaway

Office: 5308, in the FOSS Building on the campus of Shoreline Community College

Telephone: 206-546-4628

Office hours: Tuesdays and Wednesdays from 9:30 until 11:30 am.

E-mail: scalaway@shoreline.edu.

Website: <http://www.shoreline.edu/scalaway/>

Holidays: The college will be closed on Monday July 5th for Independence Day.

Math Learning Center: You may use the Math Learning Center on the campus at Shoreline Community College as a place to work on this class. There are computers there, and there will be answers to some or all of the textbook exercises there. Not all of the learning assistants can help with Statistics, but there is usually at least one person who can help on duty.

What is MATH 211?

This is a first statistics course. Statistics is the art and science of using data to make predictions. In this course, we will learn principles of data analysis, data collection (sampling methods and experimental design), linear regression, probability, and statistical inference (confidence intervals and tests of significance). **We'll be using the graphing calculator extensively in this class – see below.** Surprisingly, there isn't a lot of the kind of mathematics you're used to in this course. There is, however, a lot of mathematical thinking. There is also a lot of reading and writing in this class.

The prerequisites for MATH 211 are MATH& 148 or MATH& 151 (differential calculus) with a 2.0 or better, and placement into ENGL 100 or ESL 100.

Be sure to dedicate enough time to this course. Fifteen hours a week is a good starting point.

What do you need to buy?

Text: Intro Stats, by DeVeaux, Velleman, and Bock, Third Edition. This book has a VW Beetle driving on a map on its cover. We will cover most of Chapters 1 through 25. This textbook is required. You may also find the [Textbook Site](#) useful.

The Student's Solutions Manual contains more detailed solutions for the odd-numbered exercises in the textbook. You may find this helpful, but it is not required. I will never refer to this book in class.

Calculator: You must have a TI-83 or TI-84 (any version such as Plus or Silver edition is fine) graphing calculator for this class. These have all the statistical capabilities built in, and we'll be learning how to use them during class. Other graphing calculators, including the TI-85 and the TI-89, cannot do what we need. If you do not want to buy one, you can rent a TI-83+ in the Shoreline Community College Bookstore for about \$25 for the quarter. You do have to hurry if you want to rent one; there is a limited supply.

You will be expected to use your calculator for all the statistical calculations in this course.

Incidentals: You will need a few sheets of graph paper, a ruler, set of dice, a couple of bags of candy, and other inexpensive items whose cost should not exceed about \$20 for the quarter.

Components of the course

The course is divided into parts. Parts 1 through 6 of the course correspond to Parts 1 through 6 of our textbook. There is also a Final Review section.

Parts 1 through 6:

For each Part, you can read an Overview and a list of Outcomes; these will help you as you proceed through the material. In each of Parts 1 through 6, you are expected to complete reading assignments, exercises from the textbook (which are not collected), one or more mini-projects, one or more required discussions, an online homework set, and a timed online quiz. Due dates are listed in the Course Calendar and within each part.

Reading assignments: In this online class, you will get almost all your information by reading. Reading will primarily be in three places. For each part of the course, I have assigned reading from the textbook – these are called Text Readings. In addition, you are expected to read the Lecture Notes; these would be similar to classroom lectures. You will also need to read (and write) in the Discussion Boards; this is the virtual counterpart to classroom discussions.

Textbook Exercises: In addition to the reading from the textbook, I have assigned exercises from the textbook to do. *These exercises will not be collected.* These are practice problems that are meant to prepare you for the homework and quizzes that you will submit (see below). You may ask questions about the textbook exercises in the Q&A discussion board, or you can ask me directly at scalaway@shoreline.edu.

Mini-projects: The mini-projects typically involve lengthier or more difficult problems than I can ask on a quiz or test. They might also require you to do a small amount of research on your own. In my face-to-face classes, problems like these usually appear in projects. You may ask questions about the mini-projects in the Q&A discussion board, or you can ask me directly at scalaway@shoreline.edu.

Discussions: There are several required discussions over the quarter, and I may add more as the quarter progresses. These are related to the topics we are working on. For most of the discussions, you will need to perform some task or activity and post something brief about what you did or learned. In every required discussion, you are responsible for making a meaningful contribution to the discussion as well as reading the other contributions. In each discussion, you will get full credit if you do what I ask you to. This is similar to classroom participation – you don't lose points for getting something wrong at first.

All contributions to discussions need to be respectful and free of sexual, verbal, and racial discrimination and harassment. Always reread everything you post to make sure that your readers will get the impression you want them to. In particular, be aware

that sarcasm and humor don't always come across properly if your reader can't see your smile or wink.

Online Homework: For each part, you will turn in one online homework set. This is a set of about ten questions, usually multiple choice. The homework set is not timed; you can (and should!) print it out and use it to guide your studies. The homework must be submitted by midnight of the day it is due. Blackboard will automatically give you your score after you submit it.

Online Quizzes: For each part, there is one timed, online quiz. The quizzes are based on the exercises, the homework problems, reading, discussions and miniprojects that have been assigned for that part. The problems on the Quizzes tend to be fairly open ended.

Each quiz must be submitted before midnight of the day it is due. The quizzes are timed – you must submit the quiz within one hour of when you open it. I will drop your lowest quiz score before I compute your grade. **Quizzes must be done individually!** See **Directions for Quizzes** under **Course and Instructor Information** in the Blackboard classroom for more specific information.

Exams:

Midterm Exam: Because summer quarter is so short, we don't have time to take a midterm. There will be no midterm.

Final Exam: The final exam for the class will need to be taken in person with a proctor. I will arrange at least one time for us to take each test as a class on campus at Shoreline Community College. If the pre-arranged time and place does not work for you, you will need to make other arrangements. (See below.) You can arrange to take the final exam early if necessary, but you cannot take it late. You may have one 8½" x 11" page of notes (yes, both sides) and your calculator for the exam.

Your completed final exam must be in my hands no later than 4 pm Seattle time on Thursday August 12th.

Proctoring information: If you need to make other arrangements to take the final exam, I can help. Please contact me as soon as possible. Be sure to allow enough time for this process, particularly if you can't come to the Shoreline Community College campus. See **Proctoring Information** under **Course and Instructor Information** in the Blackboard classroom for more details.

How will I figure your course grade?

10% of your grade will come from the homework, 20% will come from the mini-projects, 10% will come from the discussions, 20% will come from the quizzes, and 40% of your grade will come from the final exam.

In general, grading is a subjective process and depends on many things. As a baseline, I use a linear scale, with 90% (and above) being a 4.0, and 60% being a 2.0.

Policies

Late Work (Fairy Godmother): You get **one** chance this quarter to turn in something late for any reason. Examples of why you might need to turn in something late: your internet connection goes down right before the deadline for a quiz, or you get sick right before you were planning to take the quiz, or you took the quiz on time, honest, but Blackboard doesn't have any record of it. Use your Fairy Godmother wisely – it's more important to get that mini-project in than to get the discussion post in. To use your Fairy Godmother, simply email me, explain the situation, and I will tell you what to do. **You may not use your Fairy Godmother for either exam!**

Other than this **one** chance, I do not accept any late work, and I do not give makeup quizzes or tests of any kind. It is your responsibility to get all the materials to me on or before their due dates. If you have an emergency that prevents you from submitting something on time, contact me immediately upon your return to class. **In particular, if you take the final exam with an off-campus proctor, you need to allow some extra time to get your completed exam to me by the expiration date.**

Cheating Policy: Do not cheat. Some of the work in this class is collaborative, and I expect and encourage you to use each other as resources. But for much of the required work, collaboration is not allowed. In particular, on the quizzes and on the final exam, the work you submit must be your own. Plagiarism is also not allowed. I reserve the right to give you a zero on any submission where I believe you have been cheating.

Dates: The last day to turn in a P/NC form is July 19th, 2010. The last day to drop this class with a W grade is July 22nd, 2010. You are responsible for paying attention to the calendar.

Emergency School Closure: If Shoreline Community College is closed (inclement weather, earthquake, broken water main, etc.), we will take up where we left off at the next class meeting. In particular, if the College is closed on a due date, the due date will be extended one day. Please be patient with me on this, as I may not be able to react immediately if the College is closed.

Students with disabilities: Students with disabilities have the right to request and receive reasonable accommodations to ensure access to programs and facilities at Shoreline Community College. To receive reasonable accommodations, students are responsible for requesting accommodations and documenting the nature and extent of their disability in a timely manner. Students should direct their requests for reasonable accommodation to the Services for Students with Disabilities office. (State of Washington Laws of 1994, Ch. 105, Washington Core Services.)