Math 141 – Introductory Statistics – Course Policies

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TENTATIVE OFFICE HOURS: Monday 2:00–3:00
Wednesday 2:00–3:00
Thursday 12:15-1:15 pm
Friday 11:30–12:15
And by appointment (Really!)

TEXT: *The Basic Practice of Statistics, 2nd Edition* by David Moore

Overview

The emphasis in this course is to give you experience with, and understanding of, data analysis and statistical inference, as well as an understanding of some of the issues with data production. One of the major goals is to help you become a knowledgeable and skeptical consumer of statistics. To quote Rich Single, a friend of mine who is a statistician,

> We are bombarded every day with numerous statistics. Some are from well designed studies and some are from poorly defined studies; some are clear and understandable, some are unintentionally misleading, and some are purposefully misleading. It is becoming more and more important to be able to discern among these.

Course Goals and Expectations

Two of the goals of this course are that you learn to evaluate technical material and that you learn to communicate this material clearly and precisely. Therefore, a major emphasis of all of the assignments in the course is that your explanations be complete and thorough. The class will be structured with some lectures to emphasize particular topics, but much of the time will be spent on in-class work. The class meetings are not intended to be a complete encapsulation of the course material – *There will be material in the text for which you are responsible that we will not cover in class.*

You will have a reading assignment for nearly every Monday, and it is **extremely** important that you complete the reading before class. Although you may not completely understand the entire section, the class meetings will be much more beneficial to you if you are familiar with the basic topics for the day.

We will be using the statistical software package Minitab heavily during the semester. Minitab is a wonderful tool for performing the routine calculations and generation of graphs that will allow you to do meaningful statistical analysis that would be almost impossible otherwise. As you will see, it is important that you develop a level of competence with Minitab during the semester.

You should expect to put in at least 2 hours outside of class for each hour in class. In other words, expect to spend at least 6 hours per week on Statistics outside of class. There will be some weeks where you spend more time (e.g. preparing for exams), and there may be some weeks where you do not spend the full 6 hours.

Evaluation

Your final grade will be determined by

Reading Assignments	5%
Homework	25%
Three In-Class Exams	45%
Final Exam	25%

Reading Assignments

I will put a copy of each reading assignment on the Math 141 homepage (linked from my homepage). Each assignment will indicate which parts of the section are especially important and which can be skipped. Each assignment will also include two or three questions that you should be able to answer after you have read the section.

See the *Guidelines for Submitting Reading Assignments* and *Suggestions for reading a math book* on the course web page for more information on submitting the assignments.

Exams

The dates for the exams are given on the syllabus. Each exam will have a short open-book, open-note, open-Minitab takehome part that will count for 25% of the total. The remaining 75% of the exam will be closed-book and closed-note, although you will be allowed to bring an 8.5×11 piece of paper, handwritten on one side, which you will turn in with the exam. We will have a question and answer session before each exam to discuss any questions that you may have.

Homework

You will have a homework assignment due nearly every Thursday, which will be posted on the course webpage. Each assignment will be worth a total of 10 points. I will somewhat randomly pick one problem from each assignment to grade carefully. This will count for five of the points, and I will quickly scan the rest of your assignment for the remaining five points.

The homework assignments will alternate between Individual assignments and Group assignments. For the Group assignments, *each* student should attempt *all* of the homework problems, and the group should meet to complete the assignment. Each group will turn in one paper with one student designated as the primary author who writes-up the solutions for that assignment. **The role of primary author must rotate among the members of the group.**

You may discuss Individual assignments with other students, but under no circumstances should you turn in work that is identical to another student's. The paper you turn in *must* represent your own efforts.

Here are a few guidelines for the presentation of your homework. If you do not follow these, I reserve the right to return your homework ungraded!

- Any handwriting must be clear and legible.
- Your homework should be well-written, using complete sentences to justify your results where necessary. *A list of answers without explanation is not acceptable.*
- Here is a good rule of thumb to follow when writing up your homework:

  > Write your solutions so that you could hand them to a student in a different section of Statistics and she could understand your explanation.

- If you write in pen, there should be no scratch-outs.
- Do not turn in paper torn from a spiral notebook with ragged edges.
- Clearly label each problem.

In order to give you some time to look over your assignment after you have asked questions, I will leave 10 minutes of class on Wednesday to answer homework questions. However,

Expect to spend 4-6 hours for each homework assignment, so be sure to start early!

The homework is due in my office by 2:00 on Thursday. You will be allowed to drop one homework assignment at the end of the semester. Therefore,

Late homework is not accepted!! No exceptions!!

I do not intend to give quizzes during the semester, but if I feel that the class is not keeping up with the course work, I reserve the right to give quizzes that will be counted into the homework grade. The quizzes would be announced at least one class meeting in advance.

Grading of Group Assignments

Each group assignment will receive a single grade, and the group will determine how the points are allocated to each member. For example, if a group of two receives an 8 out of 10 on a homework assignment, then the group will have $2 \times 8 = 16$ points to distribute among them. I will be available to mediate this process, if necessary.

Class Attendance

Although class attendance is not a specified percentage of your grade, I will keep a class roll to help me determine borderline grades at the end of the semester. If you do miss class, you are responsible for the material that was covered.

Getting Help

Please come see me during my office hours! This is why I have them scheduled!

If you have a conflict and cannot make my office hours, please call or email me and we can set up an appointment for another time.

Tentative Syllabus

All numbers indicate sections from *The Basic Practice of Statistics, 2nd Edition* by David Moore

	Monday		Wednesday
1/27	1.1 Displaying Distributions with Graphs	1/29	1.2 Displaying Distributions with Numbers
2/3	1.3 The Normal Distribution	2/5	1.3 The Normal Distribution (cont) *Individual HW Due*
2/10	4.3 Sampling Distributions	2/12	6.1 Estimating with Confidence *Group HW Due*
2/17	6.1 Estimating with Confidence (cont)	2/19	8.1 Inference for a Population Proportion *Individual HW Due*
2/24	**Exam 1** (Covers thru 6.1)	2/26	8.1 Inference for a Population Proportion
3/3	6.2 Tests of Significance	3/5	6.2 Tests of Significance *Group HW Due*
3/10	7.1 Inference for the Mean of a Population	3/12	7.2 Comparing Two Means *Individual HW Due*
3/17	Spring Break	3/19	Spring Break
3/24	7.2 Comparing Two Means (cont)	3/26	8.2 Comparing Two Proportions *Group HW Due*
3/31	9.1 Two-Way Tables 9.2 The Chi-Square Test	4/2	**Exam 2** (Covers thru 8.2)
4/7	10.1 The Analysis of Variance F Test	4/9	10.1 The Analysis of Variance F Test (cont) *Individual HW Due*
4/14	11.1 Inference about the Model (regression)	4/16	11.2 Inference about Prediction *Group HW Due*
4/21	11.2 Inference about Prediction (cont)	4/23	**Exam 3** (Covers thru 11.2)
4/28	Course Overview	4/30	The REALLY BIG Picture

Final Exam, Wednesday, May 7, 9:00-12:00 am