1 A Short History of this Course

I retired from the University of Wisconsin–Madison in 2006 after 32 years of service. After 2006, I continued teaching for a few years as a part-time lecturer.

By October, 2011, I had grown tired of lecturing to huge classes of mostly nonresponsive students. (Not the students’ fault; it is not really possible to have class-interaction with 150 students and a large amount of material to cover.)

In theory, Summer teaching was more fun because of smaller class sizes. Well, until 2011. Summer of 2011 was a nightmare. I was placed in a classroom with no AC and noisy construction down the hall. During the 16 class days of double lectures, we actually twice voted to go home early before either the instructor (me) or some students would pass out due to the extreme heat and humidity.

But, even with an ideal physical on-campus setting, I was kidding myself about the Summer classes. Yes, they were convenient for me, the instructor, but not so much for the students. Many potential students want to take a Summer class while: living at home or off-campus to save money; working full time because, well, life and school are very expensive; and/or working at a local internship for additional training and credentials. Not to mention the students who, for whatever reason, could not be anywhere near Madison to take a Summer class. Oh and let’s not forget the joy of parking on the Madison campus.

By October 2011, I was ready to quit teaching, when I saw a notice that the UW–Madison wanted to encourage the development and teaching of online courses. Perhaps online would be a better solution than simply quitting.

From June 2012–May 2013 I developed materials for my online course, with a great deal of help from the people at the Division of Continuing Studies. I offered the course, Stat 371, in Summer 2013 and it was a big success, 64 students enrolled and 58 finished it successfully. A big success, but not perfect.

I worked on improving the course and the Summer 2014 version was much better than the previous year’s offering. In 2014, we offered the option of taking the course as either 371 or 301
and had 109 students complete it successfully—38 in 301 and 71 in 371. (I don’t recall the number of drops in Summer 2014, but it was equal or smaller than the six of the previous year.)

This summer’s course will be, essentially, identical to the course from Summer 2014. The only possible difference—this is currently under consideration—is that we might make some substantive distinctions between 301 and 371. Whatever distinctions are made, the remainder of this document will be accurate for students enrolled in either 301 or 371. (I anticipate that the two classes will have different exams and different project assignments.)

An online course is not for everyone. In my opinion, you should give serious thought to the following question before enrolling:

Will you have the time and discipline required to successfully complete this course?

The great majority of my summer students have answered this question with a yes and have really loved the course. OK. This is introductory Stats; does anyone actually love it? So, let me rephrase. The great majority of my summer students have really loved the flexibility offered by my online course. Also, they feel that my materials make learning quite easy.

2 Two Obvious Questions

In no particular order, the first question is:

- Is this Statistics 301 or Statistics 371?

**Answer:** I taught both sections last summer and did not enjoy having that much work and responsibility. I believe that I have a co-teacher lined up for this Summer, but I don’t want to identify the person yet.

It would be a bad strategy to give me one lecture and Fred (as good a name as any) the other. Why? Fred has no experience with my materials and while he is an excellent teacher and highly committed to his students’ success, he will have a learning curve. As a result, Fred and I will team teach the two sections. In particular, which section you choose, you may work with me or work with Fred or work with both of us. (There will be TAs too.)

We are working on making the sections different, although I am not sure why. Let me explain. Stat 301 is general intro Stats; Stat 371 is general intro Stats with an emphasis on biology. Any teacher of 301 is allowed to choose to focus on biology, but a teacher of 371 is not allowed to ignore biology. My materials are designed for 371; hence, in my opinion, they are perfectly adequate for 301. In addition, if you disagree the Department offers several Summer options for taking traditional 301.

The second question is:

- Is this class Online (some classroom) or Online only?

**Answer:** This class appears under both of these headings under mode of instruction in the university’s class search because it really is both.

Let me explain by describing the experience we had in Summer 2014. At the first discussion session approximately 45 of the 109 students attended and learned that they were not required to
attend, but they were welcome to attend if they needed/wanted help. Because our course materials are so good (no false modesty for me!) only six students (out of 109!) felt the need to regularly attend discussion. As a result, our discussions are actually tutorials.

One of the most important jobs that Fred and I will have (and, to a lesser extent, the TAs) is to promptly answer your email questions. This worked great last summer.

In 2013, 10 of the 58 students were scattered around the world: one each in Northern Iraq, Columbus, Ohio, Mackinac Island, Michigan, and Washington D.C; and six outside Dane County in Wisconsin, including one at the Apostle Islands and two in Sheboygan.

In 2014, 19 of the 109 students were scattered around the world, including: three in South Korea; one working on a ranch in Montana; one working on an organic farm in northern California; one working in the (film) industry in LA; two at the Apostle Islands (apparently a favorite spot).

For these 29 students, the course was definitely online only.

We will offer discussion sections twice each week, but I anticipate that very few students will attend. In summary, for many students the course was online (some classroom) and for others—either by choice or necessity—it was online only.

3 Course Content and Schedule

As mentioned above, I spent the academic year 2012–13 developing the course materials. When I told people what I was doing, by far the most common response I received was:

Oh, are you going to videotape your lectures?

My answer was no. Instead I created the Course Notes (CN). The CN replace both the lectures and the textbook of a traditional class. If you want to see them, after you read the remainder of this current document, go to

http://www.stat.wisc.edu/~wardrop/courses/CNfall13.html

Well, if you can’t wait—go there now.

Twenty-two chapters comprise the CN. Your midterm exam will cover Chapters 1–11 and the final exam will cover Chapters 12–22. Note that the final is not cumulative; i.e., it does not cover the entire course.

You can find a tentative schedule for Summer at:

http://www.stat.wisc.edu/~wardrop/courses/sum15sched.pdf

The course consists of 15 modules. During the Fall or Spring, module is synonymous with week. Modules consist of either one or two chapters in the CN; for example, module 1 is Chapters 1 and 2, while module 3 is Chapter 5. Module 15, the last module, consists only of the final exam.

For Summer we will cover two modules per week, with the exception that the week of the midterm will consist of only one module, thus giving you more time to study. As a result, the eight weeks of Summer will accommodate 15 modules; two per week with the exception just noted.
4 Determination of Course Grade

Your course grade will be based on your total number of points. Points can be earned as described in the following table.

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<thead>
<tr>
<th>Source</th>
<th>Points</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Final Exam</td>
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<td>Project 1</td>
<td>5.0</td>
</tr>
<tr>
<td>Midterm Exam</td>
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<td>Project 2</td>
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</tr>
<tr>
<td>Homework</td>
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<td>200.0</td>
</tr>
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Please note the following:

1. I am not going to specify how many points are required for an A or a C or any other grade. I follow the Departmental guideline for grading intro Stat courses: roughly 35% A's, 15% AB’s and 25% B’s. Below a B I look at quality of work and evidence of effort. It is easy to get an F in the class—simply do no work. It is difficult to obtain exactly a D—you must do the work, but not very well, which is rare.

2. Note that 175 of the 200 possible points come from the two in-class exams. (We will make accommodations for the taking of these exams for the distance students.)

3. The Summer 2013 offering of this course included online quizzes for each module. There will not be online quizzes in this course.

4. Do not discount the importance of homework and projects. Nearly all students can score at or near the maximum on these and failure to complete them likely will result in the course grade decreasing by a half grade or more. I say likely because anyone who scores perfect on both exams should have enough points for an A in the course; I call this my eccentric genius clause.

Before the midterm exam I will post a practice midterm with solutions. The midterm exam will include four pages of notes that will be prepared by me. You will see these notes in advance of taking the exam; hence, there is no need to memorize any formulas or ideas that are specified in the notes. The final will be handled in a similar way. If you want an idea of what these notes and practice exams look like, you may go to the course site for my current offering—Spring 2015—of online Stat 371:


and click on the obvious links. Note the following possible source of confusion. For Spring 2015, we have two midterms and one final. The midterms cover Chapters 1–7 and then Chapters 8–14. The final covers Chapters 15–22. I believe that two midterms are useful for the academic year, but would be really annoying in an eight week summer course.
5 Epilogue

If you have any questions, comments or suggestions, please email me at

wardrop@stat.wisc.edu

If you want to get a head start on the class, you may begin reading the CN. Stating the obvious: Given that the midterm will be in July and the final will be in August, learning the material in April might not be the best plan. But studying Chapters 1–4 of the CN in June before the class begins can’t hurt. In fact, your main tool for learning in this course will be the CN; thus, you might want to take a look at them before deciding whether to enroll.