

Statistics Online and in Only 8 Weeks!  
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This presentation will focus on an 8-week introductory online Statistics course taught at Fontbonne University in St. Louis, MO. The instructor has taught the course 6 times, beginning in fall, 2000.

The course was developed at the request of the Deaconess School of Nursing in St. Louis. In fall, 2000, the nursing school began to offer a fully online RN to BSN degree. Fontbonne has historically taught the general education courses for Deaconess students in the traditional face to face format. So it was logical that Deaconess ask Fontbonne to develop the online version of the traditional classes for their new program. Since their online nursing courses were offered in the 8-week format, they asked us to develop the general education courses in the 8-week format, also. That is the reason behind the 8-week format for the statistics course.

The students taking the online statistics course have been a mixture of nursing students and Fontbonne students. Often our students athletes have chosen to take the course since they are often away from campus due to games and/or trips. Student teachers, who cannot make it to class during the day, have opted for the online version also.

There are two prerequisites a student must fulfill before taking the online Statistics course - one is a Fontbonne requirement, the other a requirement set by the instructor. Prior to taking their first online course at Fontbonne, students must complete a short tutorial on Blackboard, our web tool. This was developed at Fontbonne to insure a minimal drop out rate. We estimate that it takes students approximately 3 -4 hours to complete. Following that, a student is enrolled into another short tutorial, developed by this instructor, which has two purposes: (1) Purpose 1 is to ensure that the students can use their calculators and (2) Purpose 2 is to teach the students how to use Word to form the mathematical symbols they will need to submit their homework. For instance, they need to know how to form  $\alpha$ ,  $\mu$  and  $\sigma$  and well as how to form subscripts and superscripts. The method of teaching in each case is a short PowerPoint slide show followed by an online quiz.

Having make it through both of the above tutorials, students are enrolled in MTH 115, section 20, Introductory Statistics, online. The text book we are currently using is Elementary Statistics, 8<sup>th</sup> edition, by Mario Triola.

The topics covered in the course include the standard topics:

- Descriptive Statistics
- Probability and Probability Distributions, including the Binomial and Poisson Distributions
- Normal Probability Distribution
- Estimates (Confidence Intervals) and Sample Sizes
- Hypothesis Testing
- Correlation and Regression
- Multinomial Experiments and Contingency Tables
- ANOVA

A typical unit (week) of this course entails the following activities: (1) Students are instructed to read the text and work through the animated PowerPoint slide shows the instructor has developed for each section of each chapter. (2) Students submit homework assignments, using Word or Excel, for each section of each chapter. This work is submitted to the instructor using a feature of Blackboard, called the Digital Drop Box. After grading the assignment the instructor sends the assignment back to the student, again

using the Digital Drop Box. During a typical week of this 8-week course, students submit 5-6 assignments. Many assignments require the use of Excel to complete. (3) Students take 2- 3 online quizzes per week.

In addition, students participate in online discussions about various topics and concepts posed by the instructor.

Finally, students take three proctored tests during this 8-week period. For those students truly at a distance, they are required to locate a professional supervisor to proctor the test. The instructor emails the test to this proctor and he or she faxes it back to the instructor after the student has completed the test. Those students who take other classes on Fontbonne's campus take the proctored test at our Learning Center.

The final grades of students taking the online version of this statistics class have been above average. Most of the grades have been either in the A or B range. Student evaluations have been very positive.

Anyone wishing more information should contact the instructor, Dr. Mary K. Abkemeier, [mabkemei@fontbonne.edu](mailto:mabkemei@fontbonne.edu)