Syllabus

Schedule: MTWR (1:10PM-2:05PM)   *Classroom*: Centennial 2211

Instructor: Dr. Sherwin G. Toribio   *email*: storibio@uwlax.edu

Office: Cowley Hall 1023   *Office Phone*: (608)785-6606

Office hours: MTWR (9:00 AM - 10:30 AM & 3:30 PM - 4:00 PM), or by appointment.

Course Webpage: http://websites.uwlax.edu/storibio/

Course Management System: Desire to Learn (D2L)

Course Description : An initial course in probability and statistics for students strong in mathematics. Probability topics include sample spaces, random variables, independence, and the binomial, Poisson, normal, and exponential distributions and their applications. Calculus-based methods will be used for analyzing continuous distributions. Statistics topics include descriptive statistics, sampling distributions, confidence intervals, hypothesis testing, regression, and ANOVA. Prerequisite: MTH 208 or concurrent enrollment.

Course Objectives : The **main objective** of this course is for students to master different commonly used statistical methodologies. That is, at the end of the semester, students should be able to do the following:

1. Select, produce, and interpret appropriate graphical and numerical summaries of data.

2. Apply rules of probability to solve problems (both theoretical and applied) using discrete and continuous distributions.

3. Implement and interpret the appropriate statistical inference procedure for a given scenario.

That is, at the end of the semester, students should be able to determine the most appropriate statistical method to use for a given statistical problem; do the statistical analysis manually, with calculator, and using SPSS and/or R; and write appropriate conclusions based on the statistical results. **Secondary objectives** for the course include:

1. To develop good study habit.

2. To foster hard-working attitude.

3. To help students develop the ability to learn new concepts on their own.

Textbook : *"Probability & Statistics for Engineering and the Sciences,"* 9th ed., by Jay L. Devore.

Grading :

4 Long Exams	400 pts
1 Comprehensive Final Exam	200 pts
28 Quizzes @ 5 points each (drop lowest 3)	125 pts
3 SPSS Assignments	100 pts
Attendance and Class Participation	25 pts
Total points	850 pts

To get a grade of

A   - one has to get at least 782 (92%) points out of 850 <u>and</u> at least 75% in the final exam.

A/B   - one has to get at least 739 (87%) points out of 850 <u>and</u> at least 70% in the final exam.

B   - one has to get at least 697 (82%) points out of 850 <u>and</u> at least 65% in the final exam.

B/C   - one has to get at least 646 (76%) points out of 850 <u>and</u> at least 60% in the final exam.

C   - one has to get at least 595 (70%) points out of 850 <u>and</u> at least 55% in the final exam.

D   - one has to get at least 510 (60%) points out of 850 <u>and</u> at least 50% in the final exam.

Note: Grades will be posted in D2L.

Long Exams : In order to finish these long exams in the allotted time, you should be <u>well prepared</u> for them. That is, you should be familiar with all the material we covered in class and have practiced enough to know how to answer most of the problems in the exam at first glance. Complicated formulas will be provided in all exams.

Make-up Exam Policy : In order to be excused from a long exam, you must have a valid reason and you must discuss the matter with me before the exam. In the event that you miss a long exam due to circumstances beyond your control, I may count your final exam for a larger part of your grade.

Homework : Homework will be assigned daily. This is to help you practice and master the concepts we discuss in class. It is expected that you will complete all exercises and will verify that your answers are correct using the back of the book. It is **your** responsibility to ask me when you do not understand a question. In this course it is really crucial that you fully understand the material we covered the previous class before the start of our next class. One way to achieve this is by doing the assigned homework problems.

Quizzes : Quizzes are meant to motivate you to do the assigned homework problems and to review the material we covered the previous meeting. There will be a total 28 5-point quizzes, but only your best 25 scores will be counted in your grade. Because you can drop your lowest 3 quizzes, **there will be no make up quizzes until after you used up all 3 drop quizzes**.

SPSS Assignment : These assignments are meant to introduce students to the statistical software package SPSS. Through these assignments, students will learn how to use SPSS to implement the statistical procedures that you will learn in class. Students can work in pairs for these SPSS assignments. All your work should be **type written** on a computer paper.

Attendance : Attendance will be taken every day. An excused absence (approved by me) does not count as an absence. At the end of the semester, points will be awarded as follows:

Absences	0-2	3-4	5-6	7-8	9 or more
Points	15	12	9	6	0

Calculator : It is recommended that students bring with them a calculator to class. TI-83 is preferred but any other calculator that has statistical mode is fine. **Two students may <u>not</u> share a calculator during an exam**.

Classroom Courtesy : Please turn off your cellphones, tablets, or any other electronic device when you get into the classroom. If you have to leave early, please let me know at the beginning of class and make a quiet exit.

Academic Honesty Policy : Academic dishonesty will NOT be tolerated in this classroom. If you are caught cheating in an exam, it will result in an automatic F in that exam and a written reprimand to be included in the student's disciplinary file. Do not even let yourself come under suspicion of dishonesty.

Students with disabilities : Any student with a documented disability (e.g. ADHD, Autism Spectrum Disorder, Acquired Brain Injury, PTSD, Physical, Sensory, Psychological, or Learning Disability) who needs to arrange academic accommodations must contact The ACCESS Center (165 Murphy Library, 608.785.6900, ACCESSCenter@uwlax.edu) and meet with an advisor to register and develop an accommodation plan. In addition to registering with The ACCESS Center, it is the student's responsibility to discuss their academic needs with their instructors.

UWL's legal obligations to students : For other statements that reflect UWL's legal obligations to students regarding sexual misconduct, religious accommodations, and veterans and active military personnel, go to https://www.uwlax.edu/info/syllabus/

Final note : Mathematics/Statistics is not a spectator sport. It requires daily participation, both in the classroom and in the homework. This might be a difficult course for some of you, so find a study partner(s). Two heads are usually better than one and it makes the work a lot more fun.....

Good luck and I hope you will do well in this course!