Math 255: Elementary Statistical Methods

Fall 2021

Instructor: Mr. Fehrenbach Room and Time: Sci A202 MoTuThFr 10:00 – 10:50 Text: Introduction to the Practice of Statistics by Moore, McCabe, Craig (8th Edition, © 2014)

Contact Information for Mr. Fehrenbach

Email (best way to contact):bill.fehrenbach@uwsp.eduor through CanvasTelephone: Department Office is 715.346.2120 or x2120. There are no individual office phones.Office Hours: 11:00 – 11:50 MTR and by requestTeaching Hours: 9 am (Oct-Dec), 10 am MTRF

Statistics is the science of collecting, organizing, and interpreting numerical facts, which we call *data*. Math 255, Elementary Statistical Methods, is an introductory 4-credit course dedicated to the study of Statistics.

Course Goals

Many majors at UWSP and elsewhere require students to take and pass an introductory Statistics course. To that end a goal for students in this class is to not only demonstrate enough learning of statistics to pass, but also to learn the material well enough to be of value as you pursue other fields of study. The learning standards we will follow are the ones set forth internationally by the **College Board (CB)** in conjunction with the **American Statistical Association (ASA).**

Furthermore, Math 255 fulfills **UWSP's Quantitative Literacy** component of the General Education requirement. Accordingly, additional goals for the student include the following: (1) Select, analyze and interpret appropriate numerical data used in everyday life in numerical and graphical format, (2) identify and apply appropriate strategies of quantitative problem solving in theoretical and practical applications, and (3) construct a conclusion using quantitative justification.

Our textbook authors state, "We are bombarded by data in our everyday lives." This has never been more true! Making sense of it can have shape how you make decisions and how you live. To that end, perhaps the most important goal for students in this course is *understand statistics as it relates to our everyday lives, today and beyond.*

The purpose of an introductory course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes:

- * Exploring Data: Observing patterns and departures from patterns
- * Planning a Study: Deciding what and how to measure
- * Anticipating Patterns: Producing models using probability theory and simulation
- * Statistical Inference: Confirming models

Student Expectations and Grading

Students are expected to attend every class and to participate in class activities each day. Attendance is recorded. You should have graph paper for your daily assignments and a three-ring binder for distributed notes. A *calculator* **that has lists, can calculate standard deviations, and can calculate combinations** in class on a daily basis is helpful. I demonstrate with a TI-84, **so a TI-83 or 84 are the best choices**. Otherwise you will need to use Excel or Mini-Tab.

- 1. **Projects (30%)**: Projects assess some essential concepts in the curriculum and are a significant part of the course. You are required to complete three projects in Stats. You will choose or generate the data for each project.
- 2. Mid-Term Exams (40%): There will be three mid-term exams. Each will have a Multiple Choice section and a Free-Response section. College Board questions will be used. Exams are taken in class without notes but with a Formula Sheet and are currently scheduled for Oct 5, Nov 2, and Nov 30.
- 3. Final Exam (15%): The Final will be cumulative and will also have multiple choice and free response sections. Mark your calendar—Dec 13, 5:00 7:00 pm—for the time reserved for all Math 255 exams. This exam takes priority over other exams in this time slot. Did you mark your calendar yet?
- 4. Formative Assessments--Daily Notes, Homework, Quizzes (15%): Daily class attendance and engagement and completion of daily class notes is important. You are to submit completed daily class notes every class day for credit. Homework is given daily but due and submitted weekly, usually on

Monday morning. Quizzes will be given once between Midterm exams, will model the exam format, and are also considered formative assessments—they guide the instructor and the student as to student progress while not intending to lower the student's grade. The quiz score in not immediately recorded. Students are expected to complete quiz corrections, after which the quiz scores are recorded.

 The Grading Scale:
 (Decimals at .9 or higher will be rounded up in final grading.)

 A 93-100, A- 90-92, B+ 87-89, B 83-86, B- 80-82, C+ 77-79, C 73-76, C- 70-72, D+ 67-69, D 60-66, F below 60.

Keys to Student Success

Daily attendance is crucial to your success in Stats. You will learn a lot by being here and staying engaged. If you are absent, you should always download and complete the class notes. Your attendance is required on test or quiz days if you want credit for the test or quiz.

Here are five recommended practices to help you to learn the course material and succeed in Stats.

1. Attend every class, stay engaged, complete the interactive notes and participate in class activities. Ask clarifying questions. Request a re-statement.

- 2. Complete any unfinished examples from daily notes, submit after class, and study your class notes!
- 3. Complete the projects. Do them well.
- 4. Read the textbook as assigned. Do the examples as needed.
- 5. Do the assigned homework problems, from the text and the College Board FRQs.

Extra Help

I highly recommend working with study partners or groups and taking advantage of tutoring services offered by UWSP. The Tutoring-Learning Center (TLC) offers **FREE** tutoring to support you in your math classes. The tutors are UWSP students who have done well in this class. If you have questions or would like to make an appointment, please visit the TLC in ALB 018 (library basement), email (<u>tlctutor@uwsp.edu</u>), or call (715) 346-3568.

STEM Drop-In Tutoring: CBB 190 No appointment needed – stop by when tutors are available: <u>https://www.uwsp.edu/tlc/Pages/dropInTutoring.aspx</u>. Free.

STEM One-on-One Tutoring: ALB 018 By appointment. Visit ALB 018 (library basement) to make a request or complete online request form here: <u>https://www.uwsp.edu/tlc/Pages/request-math-science-tutoring.aspx</u>. Free.

You can also see me during my office hours or arrange another time to see me.

Accommodations

UWSP is committed to providing reasonable and appropriate accommodations to students with disabilities and temporary impairments. If you have a disability or acquire a condition during the semester where you need assistance, please contact the Disability and Assistive Technology Center on the 6th floor of Albertson Hall (library) as soon as possible. DATC can be reached at 715-346-3365 or DATC@uwsp.edu. If you are allergic to or fearful of dogs, please contact Dr. Susie Rood in the DATC Office (LRC Rm 609 ALB, srood@uwsp.edu), as dogs are sometimes in classrooms on campus.

General Classroom and Course Rules/Policies: Respectful, Responsible, Committed

- 1. Please observe general university rules in the classroom and outside. UWSP Community Rights and Responsibilities can be found at the For Students section of the Dean of Students website.
- 2. Please be on time and prepared for class.
- 3. Participate in class activity. No cell phone use without permission. Ask if needed.
- 4. Make-up tests or quizzes are not generally granted without pre-arrangement. An exception may be made in unusual circumstances.
- 5. Appeal of grading should be submitted in writing within 5 days of receiving the evaluation of assessment.
- 6. Copyright and File Sharing: Posting instructor-created notes and course material onto course-sharing websites directly violates the instructor's copyright on his/her academic materials. These materials are provided for your convenience as an aid to learning. Permission to post instructor-created material on any such site is unequivocally denied. You may have another student pick up hard copy of class notes for you or pick up the following class day.
- 7. Abide by COVID rules as applied by UWSP. As of right now, masks are required in class. Stay healthy!