

## MATH 255 ELEMENTARY STATISTICAL METHODS, Sections 3, 5

Class Times: Fully Online, Jan. 25, 2021 - May 14, 2021

Instructor: Daniel Harnett, Department of Mathematical Sciences

Office: Sci D353 Email: [dharnett@uwsp.edu](mailto:dharnett@uwsp.edu)

Office Hours: MT R 9:00 – 11:00, or by appt.

---

### Course Description:

4 cr. Fundamental concepts and techniques that underlie applications to various disciplines, including descriptive statistics; averages; dispersion; random sampling; binomial, normal, Student T, Chi-square, and F distributions; estimation and tests of hypothesis; linear regression and correlation; laboratory emphasis on sampling and applications. **This course was formerly known as MATH 355.**

### Required Materials:

1. **Text:** [Introduction to the Practice of Statistics](#), 8th Ed. by Moore, McCabe and Craig.
2. **Calculator:** TI-83, TI-83+, TI-84, or TI-84+ recommended. A hand-held calculator with statistical functions including mean and standard deviation will be very helpful, though it is possible to work around this by using online apps. You can also use computer programs such as Microsoft Excel, but a hand-held calculator will be much easier in many cases.
3. **Computer access:** This course will use Microsoft Excel (other spreadsheets are fine) and MINITAB. This software is available at all UWSP computer labs. If you are not on campus, University computers can be accessed by logging in to [remotelab.uwsp.edu](http://remotelab.uwsp.edu). You are expected to have access to your UWSP email and Canvas account at UWSP.

**Course Learning Outcomes:** The two branches of introductory Statistics are *descriptive* and *inferential*.

- Descriptive Statistics – numerical and graphical means to study, summarize and communicate about data.
- Inferential Statistics – mathematical methods to make conclusions or decisions based on partial information.

By the end of the course, students will understand and use some of the most popular statistical methods, including those in the catalog description above. In addition, students will be alert to issues of data quality and scientific approaches to gathering information.

**General Education Learning Outcomes:** This course satisfies the Quantitative Literacy (QL) component of the General Education Program. These general ‘deliverables’ will be emphasized throughout the course. Successful students will be able to:

- Select, analyze, and interpret appropriate numerical data used in everyday life in numerical and graphical format.
- Identify and apply appropriate strategies of quantitative problem solving in theoretical and practical applications.
- Construct a conclusion using quantitative justification.

In general, I want you to approach data like a scientist. The main tasks involved are: Exploring data, quantifying uncertainty, drawing valid conclusions, and communicating results using written and graphical methods.

**Attendance:** This is an ‘asynchronous’ course, meaning you can choose your own schedule; however, you must meet **weekly deadlines**. There will be an online quiz/test most every Wednesday. There will be written Homeworks that are due on Fridays. Generally, you must do about the same amount of work as everyone else on a weekly basis. **Do Not Fall Behind.** Also, new material will be released each week, so it will not be possible to work very far ahead.

**Online Course Materials:** You will need to study from the Textbook (above) and materials placed on the Canvas website. You will receive instructions on which material you should cover each week. This is a 15-week course. You will need to do the same work as everyone else each week – it will not be possible to work ahead or do everything in the final week.

**Homework:** There will 7 to 9 written homework assignments during the semester. Homework assignments may be submitted online through Canvas. Assignments and due dates will be listed on the Canvas page. For written assignments, you must write a complete solution to each problem, bare answers without support will receive no credit. Graphs should be labeled. Late homework will not be accepted without the instructor’s permission. You may work on the homework with others, but each student must write and turn in their own complete assignment. Homework may be typed or hand-written, but Graphs should be produced by a computer.

**Quizzes:** There will be an online quiz most Wednesdays on Canvas, and also on Friday if there is not a written Homework. Most quizzes will be short and easy, expect multi-choice and matching-type questions.

**Exams:** Occasionally instead of an online quiz, there will be an Online Exam. This will be similar to the Quizzes, but longer and a little more difficult.

**Final Project:** There will be a Final Project, due on the last day of class. It will be a 2-3-page paper, longer than a regular homework. You will receive details during Week 14 of class.

**Final Exam:** There will be a comprehensive final exam, also online, on Mon Dec 14. Time will be limited.

**Grade Calculation:**

Homework	33%
Quizzes	24%
3 Exams	19%
Final Project	12%
Final Exam	12%
Total	100%

Grades for each assignment and exam will be recorded on your Canvas page. Questions about individual grades must be addressed within one week from the day the paper is returned to you.

The Canvas web site will record your scores, and the Canvas web site will also calculate your current grade. **Do Not Believe the Canvas Grades.** It calculates things in strange ways. You can believe the individual scores, but the current grade will not be correct until the end of the semester, after ALL items are in.

Your letter grade will be assigned based on the following scale:

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: 59 % or less	

The above table is a minimum guide, the instructor may make positive adjustments at the end of the semester.

**Help Available:**

INDIVIDUAL TUTORING: TLC – See Canvas Site for links

STUDY GROUPS: Meet with your peers on a regular basis; Free

INSTRUCTOR OFFICE HOURS: MT R, 1:00 or W at noon, see below.

**Instructor Office Hours:**

If you need to talk to your instructor, you can either (2) email with questions; (3) place a Zoom call during the scheduled office hours; or (3) come to my physical office in the Science building during scheduled office hours. If you are unable to make the listed office hours, email your instructor and we can set up a Zoom call.

**COVID-19 Provisions:**

Face Coverings:

At all UW-Stevens Point campus locations, the wearing of face coverings is mandatory in all buildings, including classrooms, laboratories, studios, and other instructional spaces. Any student with a condition that impacts their use of a face covering should contact the Disability and Assistive Technology Center to discuss accommodations in classes. Please note that unless everyone is wearing a face covering, in-person classes cannot take place. This is university policy and not up to the discretion of individual instructors. Failure to adhere to this requirement could result in formal withdrawal from the course.

## Other Guidance

- Please monitor your own health each day. If you are not feeling well or believe you have been exposed to COVID-19, do not come to class; email your instructor and contact Student Health Service (715-346-4646).
- Maintain a minimum of 6 feet of physical distance from others whenever possible.
- Do not congregate in groups before or after class; stagger your arrival and departure from the classroom, lab, or meeting room.
- Wash your hands or use appropriate hand sanitizer regularly and avoid touching your face.
- Please maintain these same healthy practices outside the classroom.

**Academic Integrity:** You should be fully aware of your rights and responsibilities as a UWSP student. These are detailed in the UWSP Community Bill of Rights and Responsibilities found at

[https://www.uwsp.edu/dos/Documents/UWS\\_14.docx](https://www.uwsp.edu/dos/Documents/UWS_14.docx)

Information regarding Section 504 of the Rehabilitation Act or the Americans with Disabilities Act can be found at the UWSP Disability and Assistive Technology Center site

<https://www.uwsp.edu/datc>

**Religious Beliefs:** Students' sincerely held religious beliefs will be reasonably accommodated with respect to all examinations and other academic requirements. According to UWS 22.03, you must notify the instructor within the first three weeks of classes about specific dates which require accommodation. See the link below:

[https://www.uwsp.edu/dos/Documents/UWS\\_CHAPTER\\_22.docx](https://www.uwsp.edu/dos/Documents/UWS_CHAPTER_22.docx)