

Math 255 Sections 6 (3-3:50 pm) and 7 (4-4:50pm) Fall 2019

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Final Exam: first day of finals, 5-7pm **Office Hours:** see last page

Course Description: MATH 255. Elementary Statistical Methods. 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. Does not count toward math major/minor, or major for teacher certification. **Prerequisite:** Math 95 or suitable placement test score. GDR: MATH BS BM/BFA

Required Text: Introduction to the Practice of Statistics, Eighth Edition by Moore, McCabe and Craig, published by W. H. Freeman and Company. ISBN: 978-1-4641-5893-3, available thru text rental.

PLEASE NOTE – students are expected to actually READ the textbook! I suggest reading ahead so that you have been exposed to the concepts I will be teaching you in class. We will go through the book in order.

Course Goals

Students are expected to understand statistical concepts. This understanding is to be demonstrated by doing assigned problems from the book, completing online homework, and exam performance, as well as by class discussion. We will cover most of chapters 1 – 9 in the text. Chapter 1 – Looking at Data – Distributions, Chapter 2 – Looking at Data – Relationships, Chapter 3 – Producing Data, Chapter 4 – Probability: The Study of Randomness, Chapter 5 – Sampling Distributions, Chapter 6 – Introduction to Inference, Chapter 7 – Inference for Distributions, Chapter 8 - Inference for Proportions, and Chapter 9 – Analysis of Two-Way Tables. Critical understanding of the concepts will be necessary. Thinking is required.

After completing this course, students will be able to: (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.

Attendance will be taken almost every day. It is obviously to your advantage to be in class unless you are ill. Therefore, attendance is expected at every class meeting. Attendance per se does not count toward your grade, but clearly poor attendance will have a negative impact on your grade, so it is wise to attend class. It is the student's responsibility to know what we covered in class, so ask a fellow student and get notes from someone. Please do not email me and ask if you “missed anything important”! **IF YOU ARE SICK (ESPECIALLY WITH FLU SYMPTOMS) please STAY HOME!!** An email notifying me of your absence is appreciated if you miss more than two classes in a row.

CANVAS: Course documents (worksheets and worksheet keys, the syllabus, the list of suggested problems, grades etc.) will be posted in Canvas. Announcements will also be posted here, so check often.

Calculators and Computers

A calculator will be required for this course. It must be capable of doing *two variable statistics* (including linear correlation and regression) and may be used on all exams. If you are going to purchase a calculator for this course, a good one might be the **TI-30X IIS**. It's easy to use, easy to find, and it doesn't cost much (less than \$10). Any scientific calculator that can handle two variable statistics will do. (A graphing calculator is fine and a TI-83 Plus or TI-84 is very "user-friendly" for stats; I would not recommend *purchasing* a graphing calculator unless you will need it for other math classes.) You **MAY NOT** use your cell phone calculator on exams (specifically, you may not use a device that can communicate with others.)

The computer software MINITAB will be used in this course (mostly for chapters 1, 2, 7, 8 and 9), and so when we are in those chapters, you will need to use the program for at least portion of your work outside of class. The program is very user-friendly, especially if you have any computer background to speak of. Instructional videos for using Minitab (as well as Excel and TI graphing calculators) are available online by searching YouTube. I have also posted a Minitab Guide in Canvas. Minitab will allow us to more easily analyze data and will save a lot of time. When off campus you may remote into one of the campus labs – contact the HELP Desk if you need guidance on doing this. Using Excel (or sometimes a TI graphing calculator) instead of Minitab is another possible option.

Group Tutoring

The Department of Mathematical Sciences and the Tutoring-Learning Center (TLC) offer free drop-in and group tutoring to support you in your math classes. In addition, the TLC offers the option for individual math tutoring sessions. The tutors are UWSP students who have done well in their classes and who are here to share their successful study habits and math content knowledge to help others succeed. Discussing mathematical concepts and practicing problems together clarifies and solidifies knowledge, and the tutors are eager to study with you. If you have questions about the schedules or would like to make an appointment, please visit the TLC in ALB 018 (library basement), email (tlctutor@uwsp.edu), or call (715) 346-3568 for information. Our sections' group tutor's name and the times for the twice-weekly tutoring sessions will be announced soon, and they will start week 3. (Note that low attendance at these sessions may result in their being cancelled.)

Worksheets/Practice Problems

As with all math courses, it is very important to **DO** problems yourself. It is one thing to follow what I am doing in class, and another altogether to be able to do it on your own. You must practice! In light of this, I will be posting all the worksheets with practice problems and giving you a list of additional exercises from the textbook that you should do. We will often do some of these problems in class, so print the worksheets out ahead of time for each chapter as we go. Please take responsibility for your learning and do these

problems. These will NOT be collected or graded, and it will be your responsibility to check your answers and ASK QUESTIONS when you need to! Answer keys will be posted for most of the worksheets.

Assessment:

Unit Exams (⁸⁰74% of your grade)

There will be four unit exams. The first three exams will be worth 65% of your total grade: the best two of the three will count 25% each and the lowest will count 15%; your fourth exam (which will be a take-home) will be worth 15% of your total grade. The final exam is worth 20%. For each exam you will be allowed to have a one-page crib sheet. Save them and you may use them (plus one more if you like) for the final.

***Please bring your textbook (or hard copies of relevant tables),
calculator and crib sheet (except for Exam I) to all exams.***

All exam dates will be verified within one week of the exam.

**In the event that we are ready for Exam II before spring break,
please do NOT plan to take off early for break!**

Topics covered for the exams (dates subject to change):

Exam I: Chapters 1 – 2 Tentative date during week 5

Exam II: Chapters 3 – 4 Tentative date during week 8

Exam III: Chapters 5, 6, 7.1 Tentative date during week 12

Exam IV: Chapters 7, 8, 2.6 (and 9?) Due date Wednesday of week 15

*Exam IV will be a take-home (you may work in small groups and will be using Minitab)
at the end of the semester. You will have 6 days to do this exam.*

Final Exam (20% of your grade)

The final exam will be **comprehensive** and will count as 20% of your final grade. The final is on the first day of final exams, from 5 to 7pm. The location will be posted later in AccessPoint. **You may use your previously prepared crib sheets along with one additional sheet (a “sheet” is a regular 8.5x11 inch piece of paper, and no, I don’t care if you write on only one side or two.** My only proviso is that you cannot bring a magnifying glass to read your crib sheet(s)!).

Grading Scale:

A:	≥ 92%	A - :	≥ 90% but < 92%
B + :	≥ 88% but < 90%	B :	≥ 82% but < 88%
B - :	≥ 80% but < 82%	C + :	≥ 78% but < 80%
C :	≥ 72% but < 78%	C - :	≥ 70% but < 72%
D + :	≥ 68% but < 70%	D :	≥ 64% but < 68%
F :	< 64%		

General Course Policies:

- 1) You may work with other students on worksheets, assigned exercises, etc., but NOT on exams.
- 2) Exams must be YOUR work only unless I have specifically said I am allowing you to work with a partner (on take-homes).

- 3) In general, make-up exams are NOT allowed. If there is an unavoidable conflict, a make-up MAY be allowed, but ONLY IF you contact me IN ADVANCE. In case of an emergency, you MUST contact me (best via email) or call the department office (346-2120) BEFORE the exam begins. You must be prepared to document your absence.**

Classroom Atmosphere:

In order to maintain a comfortable learning atmosphere, I expect that students will:

1. Keep their cell phones turned off during class!
2. Not be embarrassed to raise their hands to ask questions or be corrected.
3. Send emails that are properly addressed in an appropriate tone that contain grammatically correct sentences. ("Hey prof, sry I wuz L8 2day LOL" is unacceptable, and I WILL NOT reply). I prefer to be addressed as Mrs. Milkovich, or as Professor Milkovich.
4. Contact their fellow classmates when absent. In other words, if you miss a class, DO NOT call/email me to find out what you missed.
5. Become familiar with this syllabus. It answers many common questions. Read it.
6. Be in class on time, prepared to work. That means you have prepared by doing your homework and have skimmed the new section and are trying to clarify concepts you have encountered (as opposed to using class time to initially introduce yourself to the concepts).

Academic Integrity: (Cheating policy)

Any act of academic dishonesty will be dealt with by applying the most stringent penalties permitted. Cheating includes but is not limited to receiving help during exams and submitting homework without properly acknowledging persons who assisted you. Please read carefully the policy found at:

<http://www.uwsp.edu/dos/Pages/Academic-Misconduct.aspx>

Accommodations:

Special consideration may be made for students with disabilities. 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 <http://www.uwsp.edu/disability/Pages/Student%20Resources/default.aspx>. To request any accommodations relevant to this class, you should first discuss the matter first with the staff at the Center. Details regarding the documentation necessary to qualify for accommodation can be found on the website.