

Math 233 WA
Statistical Methods and Theory I (Q)

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Course Description:

An introduction to applied statistics and theory. Topics include measures of central tendency, discrete and continuous random variables, Normal distributions, Binomial distributions, sampling distributions and the Central Limit Theorem, probability, correlation and regression, producing data from sampling and experiments, hypothesis testing using the z, t, chi-square, and F distributions, confidence intervals, and analysis of variance. The statistical software package SPSS will be used to illustrate the material presented. *Prerequisite: B or higher in INT 222 and MATH 159, PSYC 250, or MATH 211. Spring semester.

Textbook:

Moore, Notz, Fligner. The Basic Practice of Statistics (9th ed.). MacMillan Learning. (Options below)

- Ebook with Achieve access (6 month access) ISBN: 978-1-319-38395-4

Technology: We will be using the statistical software SPSS in this course. This software is available to you from our IT office. A graphing calculator (such as the TI-83 or TI-84) is required for your homework.

Grading and Assessment:

Your final grade will be based on the following components:

Homework:	25%
Quiz/LearningCurves	25%
Project:	15%
Participation:	5%
Final Exam:	30%

Your final grade will be determined according to the following scale:

A \geq 93	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 = 63-66	D- = 60-62	
F \leq 59			

Late Work:

I will not accept all course materials during the month of August. Late assignments will be accepted for one week after the due date with a late penalty. They will be accepted, but not awarded any credit if they are more than a week late. All due dates are posted on Blackboard.

All course material will be available at the beginning of the semester, so if you think you might be away, you have the option to work ahead.

Homework and Quizzes:

Students may drop their lowest homework and quiz grade.

Midterm and Final Exam:

Both of these items will only be available for one week. They will not be accepted after the due date.

ET Policy: I will consider ET requests for students with extenuating circumstances who have completed some of the course material. You must have the support of your advisor to request an ET. Remember: ETs are not automatic.

Honor System:

All academic work at Mary Baldwin University is governed by the honor system. The honor system is what enables students to complete exams at home and do college work outside a classroom.

Please read through the Honor Code here: <http://www.marybaldwin.edu/student/sga/honorcode/>

All tests and quizzes are to be your own work with no input from anyone else.

You may collaborate on homework and the project, but you each must submit the assignment individually. If you do collaborate, list the name of your collaborator on the assignment.

MBU E-mail Addresses:

Emails from the course Blackboard site go automatically to your MBU email address. Remember that all students are required to activate their MBU-issued e-mail accounts. All questions concerning the course must be sent via your MBU email address. Be sure to include “Math171 in the subject line, and your full name.

Periodically throughout the semester, you will receive information about the course through your MBU email address. If you have questions about activating your email account or using the Blackboard course site, please contact your instructor before the start of the semester.

For technical questions - Computer Help Desk at support@marybaldin.edu or 540-887-7075 or <http://www.marybaldwin.edu/oit/help/>.

Initial Schedule – subject to change (official schedule in Canvas)

Start Date	Module	Contains	Due (Fridays - 11:59pm)
May 17	Week 1	Chapter 0 Getting Started Chapter 1 Picturing Distributions with Graphs	May 21
May 24	Week 2	Chapter 2 Describing Distributions with Numbers Chapter 3 The Normal Distributions	May 28
May 31	Week 3	Chapter 4 Scatterplots and Correlation	June 4
June 7	Week 4	Chapters 5 Regression	June 11
June 14	Week 5	Chapter 8 Producing Data: Sampling Chapter 9: Producing Data: Experiments	June 18
June 21	Week 6	Chapter 12 Introduction Probability	June 25
June 28	Week 7	Chapter 14 Binomial Distributions	July 2
July 5	Week 8	Chapter 15 Sampling Distributions	July 9
July 12	Week 9	Chapter 16 Confidence Intervals: The Basics Chapter 17 Tests of Significance: The Basics	July 16
July 19	Week 10	Chapter 18 Inference in Practice	July 23
July 26	Week 11	Chapter 20 Inference about a Population Mean	July 30
August 2	Week 12	Chapter 25 Two Categorical Variables: The Chi-Square Test	August 6

August 9	Week 13	Chapter 26.1 - 26.2 Chapter 27.1 - 27.2 One Way analysis of Variance: Comparing Several Means Project Due	August 13
August 16	Week 14	Cumulative Final Exam	August 20 (no work will be accepted after this date unless you have an ET)