

Class Policies

MTH 1210 Introduction to Statistics, Fall 2019

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Office Hours: Mon 2:00 – 3:00
 Tue 3:00 – 5:00
 Thu 2:00 – 4:00
 All other times by appointment.

Course Description: This course is an introduction to the principles and techniques of descriptive statistics, probability, regression analysis, and statistical inference (estimation and tests of hypotheses). Students will work with data on problems related to their own interest or field of study. Credit will not be given for both MTH 1210 and MTH 1230.

Prerequisites: Two years of high school algebra or equivalent and an appropriate score on the mathematics preassessment test, or one of MTH 1080 or MTH 1109 or MTH 1110 or MTH 1112 or MTH 1610 with a "C" or better.

Required Textbook: *Introductory Statistics*, 10th edition, by Neil A. Weiss, Pearson Education, Inc., 2016. You may purchase the custom loose leaf binding version from the campus bookstore or the electronic (E-Text) version online.

Required additional material: Calculator with functions for computing \bar{x} , s , and r .

Grading: Your grade for the course will be based on your total accumulated points at the end of the semester.

	Points	Percentage
Ten homework assignments worth 10 points each	100	20%
Three midterm exams worth 70 points each	210	43%
Final exam	100	20%
Final project	50	10%
Seven labs worth 4 points each	28	6%
Total possible	488	100%

Grading Scheme:

Total Accumulated Points	Percentage	Grade
471	96.7%	A+
455	93.3%	A
439	90.0%	A-
422	86.7%	B+
406	83.3%	B
390	80.0%	B-
374	76.7%	C+
357	73.3%	C
341	70.0%	C-
325	66.7%	D+
309	63.3%	D
292	60.0%	D-

Policies: All in-class **exams** must be taken at the **regularly scheduled time** and place except by special permission from the instructor. Generally, if you cannot take an exam at the regularly scheduled time, then you must take it early. Whenever possible, requests to take an exam at an alternate time must be made at least three days prior to the scheduled in-class exam time.

Late homework and lab assignments will **not be accepted after one week** from the due date. Points will be deducted from late assignments turned in within one-week window. Scores for late assignments may be **reduced by up to 50%**. Late projects will not be accepted except by special permission of the instructor. **E-mailed** homework assignments, lab assignments, and projects will **not be accepted except** by special permission.

Any student caught **cheating** on an exam will receive a score of **zero** on that exam. Cheating includes the unauthorized use of crib sheets or electronic devices and also includes copying someone else's exam answers.

Deadlines:

- Mon, Aug 26, 2019 - Last Day to Drop with 100% Refund
- Wed, Sept 4, 2019 - Last Day to Drop with 50% Refund and Have Class Deleted from Academic Record.
- Fri, Nov 1, 2019 - Last Day to Withdraw and Receive a 'W'.

Holiday Information:

Labor Day: Mon, Sept 2 (Campus Closed)

Policies for All Courses: Students are responsible for full knowledge of the provisions and regulations pertaining to all aspects of their attendance at MSU Denver, and should familiarize themselves with the policies listed on the following website:

<https://msudenver.edu/math/policies/> .

MTH 1210 Introduction to Statistics

MSU Denver General Studies Quantitative Literacy Student Learning Objectives (SLO's)

- SLO 1. Demonstrate the effective use of technology appropriate to the task and discipline
- SLO 8. Apply mathematical techniques to the analysis of quantitative problems
- SLO 9. Communicate the mathematical process and results in text, graphics, and symbols

GT Pathways

The Colorado Commission on Higher Education has approved MTH 1210 for inclusion in the Guaranteed Transfer (GT) Pathways program in the GT-MA1 category. For transferring students, successful completion with a minimum C- grade guarantees transfer and application of credit in this GT Pathways category. For more information on the GT Pathways program, go to

<http://higher.ed.colorado.gov/Academics/Transfers/gtPathways/curriculum.html>.

GT Pathways Quantitative Literacy Competencies (SLO's)

Competency in quantitative literacy represents a student's ability to use quantifiable information and mathematical analysis to make connections and draw conclusions. Students with strong quantitative literacy skills understand and can create sophisticated arguments supported by quantitative evidence and can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc.). *Students should be able to:*

SLO 1. Interpret Information:

- a. Explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words).

SLO 2. Represent Information:

- a. Convert information into and between various mathematical forms (e.g., equations, graphs, diagrams, tables, words).

SLO 3. Perform Calculations:

- a. Solve problems or equations at the appropriate course level.
- b. Use appropriate mathematical notation
- c. Solve a variety of different problem types that involve a multi-step solution and address the validity of the results.

SLO 4. Apply and Analyze Information:

- a. Make use of graphical objects (such as graphs of equations in two or three variables, histograms, scatterplots of bivariate data, geometrical figures, etc.) to supplement a solution to a typical problem at the appropriate level.
- b. Formulate, organize, and articulate solutions to theoretical and application problems at the appropriate course level.
- c. Make judgments based on mathematical analysis appropriate to the course level.

SLO 5. Communicate Using Mathematical Forms:

- a. Express mathematical analysis symbolically, graphically, and in written language that clarifies/justifies/summarizes reasoning (may also include oral communication).

SLO 6. Address Assumptions:

- a. Describe and support assumptions in estimation, modeling, and data analysis, used as appropriate for the course.

GT Pathways Content Criteria (CC's)

This course should provide students with the opportunity to / Students should be able to:

GT-MA1 CCa: Demonstrate good problem-solving habits, including:

- Estimating solutions and recognizing unreasonable results.
- Considering a variety of approaches to a given problem, and selecting one that is appropriate.
- Interpreting solutions correctly.

GT-MA1 CCb. Generate and interpret symbolic, graphical, numerical, and verbal (written or oral) representations of mathematical ideas.

GT-MA1 CCc. Communicate mathematical ideas in written and/or oral form using appropriate mathematical language, notation, and style.

GT-MA1 CCd. Apply mathematical concepts, procedures, and techniques appropriate to the course.

GT-MA1 CCe. Recognize and apply patterns or mathematical structure.

GT-MA1 CCf. Utilize and integrate appropriate technology.

Specific Measurable Student Behavioral Learning Objectives	MSU Denver	GtPathways	
	General Studies SLO's	QL Competencies	Content Criteria
1. Describe sets of data graphically, by numerical measures, by linear regression and correlation.	1, 8, 9	1a, 2a, 3c, 4a, 4b, 4c, 6a	a, b, d, f
2. Use the rules of probability to compute probability of events, conditional probability and Bayes' Theorem.	8, 9	1a, 3a, 3b, 3c, 4b, 4c	a, d, e
3. Evaluate random variables, compute expected values and variances, and find probabilities related to the binomial, normal and T distributions.	8, 9	1a, 2a, 3a, 3b, 3c, 4b, 4c, 6a	a, d, e
4. Explain and use the Central Limit Theorem to implement inferential statistics.	8, 9	4a, 4c, 6a	c, d, e
5. Compute point and interval estimations.	1, 8, 9	3a	a, b, d, e, f
6. Test hypotheses for population means and proportions of one or two populations.	1, 8, 9	4b, 4c, 6a	a, e, f
7. Set and describe a problem of the student's choosing: collect data and apply all major statistical concepts from the course, both descriptive and inferential, using Minitab and hand calculations. Interpret the results and state conclusions in written form. (Term project) .	1, 8, 9	1a, 2a, 3a, 3b, 3c, 4a, 4b, 4c, 5a, 6a	a, b, f
8. Demonstrate basic knowledge of statistical software (Minitab).	1	3a, 3c, 4a, 4b	d, f
9. Have working knowledge of calculator functions (but not necessarily through use of graphing calculators) to do problems in the course.	1	4a	d, f