

Stat 141-800: Introduction to Statistical Concepts (3 credits)

Location and Meeting Times: Online

Instructor Information: Don Gayan Wilathgamuwa

LA 841

406-657-2920

don.wilathgamuwa@msubillings.edu

http://www.msubillings.edu/mathfaculty/wilathgamuwa/

Office Hours: M: 10:30-12:30

W: 9:00 a.m.-12:00 noon. (LA 841)

Or by appointment

Course Goals and Purpose: The purpose of this course is to present the main ideas that statistics has to offer the intelligent outsider. Our aim is to make explicit the questions behind the statistical procedures, free of annoying technicalities. To this end algebra is downplayed and the focus of the course is kept on the purpose of the procedures being studied, that is, on the scientific questions being answered.

Text: Intro stat, 4th edition by De Veaux et al, bundled with CourseCompass (MyStatLab) access code, and study pack.

Prerequisite: Math 095 or equivalent

Course Outline: Statistics falls naturally into three parts: descriptive statistics, probability, and inferential statistics. Of these, inferential statistics is of the greatest interest to most users of statistics, and thus will receive the greatest attention. The core of the course follows:

1. Descriptive Statistics. Included are the histogram, average, median, standard deviation, interquartile range, percentiles, and the normal curve as an approximation to empirical data.
2. Probability. The frequency definition of probability is used, and the multiplication and addition laws are studied.
3. Chance Variability. Includes the law of large numbers and the Central Limit Theorem.
4. Sampling. Simple random sampling for percentages and averages is covered in detail; an overview is given of large scale sample methods.
5. Confidence intervals and Significance testing. Includes Z-tests, a critique of significance testing.

Grading Scale:

<u>Percentage</u>	<u>Grade</u>
90-100 %	A
80-89 %	B
70-79 %	C
60-69 %	D
Below 60 %	F

Assessment:

<u>Item</u>	<u>Percentage</u>
Exam1	19 %
Exam2	19 %
Exam3	19 %
Exam4	19 %
MathXL Homework (ch2-ch20)	24 %
Total	100 %

IMPORTANT: If you will be out of town for sports or work or whatever and you see that a deadline is coming, you **MUST** consult with the instructor to determine if you can take the exam before you leave. You must plan your schedule. You will be held responsible for taking your exams on or before the deadlines set for the four exams.

Registration: You will access the internet homework and exams by first registering at the following site:
<http://pearsonmylabandmastering.com>

Click on the **Register** button on the right-hand side.

The **Student Access Code** is contained in your bundled package.

The **Course ID** for this course: this number is available in the **Student Registration Handout**

The school choice is: **MONTANA STATE UNIV – BILLINGS.**

Follow the directions. Make sure you install the required software plug-ins during this process.

For more information: Read Student Registration Handout

Note:

1. If you have only the textbook, you can purchase a Student Access Code online in the registration process.
2. You must use your name (as appeared in the MSUB system) in the registration process. If you already have an account with a different name in the Pearson MSL website, you must inform me before the final exam. Otherwise you will receive an “F” grade for the course.
3. **If you have technical problems with CourseCompass call: 1-800-677-6337.**

Homework: All homework will be taken at the above MyStatLab website.

Click on the **Log In** button located on the right-hand-side.

Give your **Login Name** and **Password**.

Click on the **STAT 141-800** link located on the left-hand-side.

Click on the **HOMEWORK** button located on the left-hand-side.

Click on the appropriate **Homework Chapter** link located under the Assignment.

Note: These graded homework problems can be taken an unlimited number of times. Your work is saved automatically when you leave the homework site.

Exams: Exams will be online in MyStatLab.

Click on the **QUIZZES & TESTS** button located on the left-hand-side to access an exam.

Note:

EXAM 1 (and all exams) will be given in the MyStatLab environment. Click on the "Quizzes & Tests" button located on the upper left-hand part of the web page. Here are some items to be aware of as you take this and all exams:

1. Exams can be taken during the window in your calendar. Each exam will consist of around 25-35 multiple choice and T/F questions. Each question will have just ONE part.
2. Make sure your Internet Security Level is set to Medium (or Lower). This will enable you to take exams. To check your level do the following: Click on Tools (upper right-hand side), click on Internet Options, click on Security, set to Medium (or Lower), click on Apply, and click on OK.
3. You will have 2 hours to complete the exam.

4. You can only take it ONCE in ONE sitting, so set aside a good time with all your materials close by.
5. It is open book, manuals, notes, and calculator. Perhaps do a RAM clear on your calculator before beginning the exams.
6. **Click on the Submit button** in the lower right-hand corner when you are finished with the ENTIRE Exam. Do not submit the exam before answering all the questions.
7. **Important:** Do not try to open other/more windows in your computer while taking the EXAM. If you try to open more windows, exam may be closed and submitted automatically
8. You can review your exam results after the deadline for the exam.

Sample Tests and Quizzes in MyStatLab: Sample tests and quizzes can be taken for practice or to build your study plan. Sample tests and quizzes do not affect your grade.

Study plan in MyStatLab: Study plan exercises, Chapter pre-tests, Chapter post-tests and Chapter review Quizzes will not be counted for the final grade. You can use these questions for your practice. It is not mandatory to complete these questions. Only Exams (1 to 4) and chapter homework assignments will be counted for your final grade.

Gradebook: Your homework and exam grades can be viewed by clicking on the **GRADEBOOK** button, located below the **QUIZZES & TESTS** button.

Calendar: The calendar for this course can be viewed by first clicking on the **HOMEWORK** button. Next, click on the **Course Calendar** link located at the right-hand top of the page. All the important dates for the homework are shown here.

ALL work must be completed no later than the DUE DATES.

Incomplete: No Incompletes will be given unless requirements as per student handbook are met. No extra credit is given in this class.

Tutoring: Free math tutoring sessions (onsite and online) are available in the Academic Student Center. For more information go to <http://www.msubillings.edu/asc>
You are advised to make use of this opportunity.

Important URL s: How to Study Mathematics-written by Paul Dawkins
http://tutorial.math.lamar.edu/pdf/How_To_Study_Math.pdf

Important Dates:

Last Day for Registering/Adding Classes	Friday, January 23
Last Day for Withdrawing/Dropping Classes with a Partial Refund	Wednesday, February 4
Last Day to Drop Classes Without Instructor Permission (No Refund)	Thursday, March 12
Last Day to Drop a Class with Approval of Advisor and Course Instructor	Thursday, April 9

Financial Aid and Scholarship: Dropping a course, getting an incomplete, or getting a Failing/lower grade may affect your scholarship or your financial aid. For more information go to:

<http://www.msubillings.edu/finaid/>

STAT 141, spring 2015 Detailed Calendar
 Mark your personal calendars for these deadlines and
DO NOT miss them.

Order	Ch.	Assignment Name	Category	Start	Due	Prerequisites
1	1	Chapter 1	H	1/14/2015	2/9/2015	None
2	2	Chapter 2	H	1/14/2015	2/9/2015	Chapter 1- 10%
3	3	Chapter 3	H	1/14/2015	2/9/2015	Chapter 2- 10%
4	4	Chapter 4	H	1/14/2015	2/9/2015	Chapter 3- 10%
5	5	Chapter 5	H	1/14/2015	2/9/2015	Chapter 4- 10%
6	1-5	Exam1, Ch1-5	T	2/6/2015	2/9/2015	None
7	9	Chapter 9	H	2/6/2015	3/2/2015	None
8	10	Chapter 10	H	2/6/2015	3/2/2015	Chapter 9- 10%
9	11	Chapter 11	H	2/6/2015	3/2/2015	Chapter 10- 10%
10	9-11	Exam 2, Ch9-11	T	2/27/2014	3/2/2015	None
11	12	Chapter 12	H	2/27/2015	3/30/2015	None
12	13	Chapter 13	H	2/27/2015	3/30/2015	Chapter 12- 10%
13	14	Chapter 14	H	2/27/2015	3/30/2015	Chapter 13- 10%
14	12-14	Exam 3, Ch12-14	T	3/27/2015	3/30/2015	None
15	15	Chapter 15	H	3/27/2015	4/30/2015	None
16	16	Chapter 16	H	3/27/2015	4/30/2015	Chapter 15- 10%
17	17	Chapter 17	H	3/27/2015	4/30/2015	Chapter 16- 10%
18	15-17	Exam 4, Ch15-17	T	4/27/2015	4/30/2015	None

This course is based on Intro stat, 4th edition by De Veaux et al,
 Copyright 2012 Pearson Education

Note:

- You have to complete homework and Exams between the corresponding starting date and due date. For example, Chapter 4 homework will be opened on 1/4/2015 at 12:01 a.m. and closed on 2/9/2015 at 11:59p.m. You have to do your homework during this period.
- You have to complete the corresponding **prerequisite** before you can start an assignment. For example, you will not be able to start Chapter 4 homework until you have earned 10% on Chapter 3 homework.
- Generally, homework problems are easier and straight forward than the exam problems. Hence doing only homework problems is not sufficient to get good grades in exams. You are supposed to attempt problems in the textbook even though they are not required. I will assign problems and post the answers of some of the problems (which are more important to your exams) from the text book. Make sure you understand the concepts and techniques used in these problems.

Topics covered in STAT 141-800	
EXAM 1	Chapter 1- Chapter 5
EXAM 2	Chapter 9- Chapter 11
EXAM 3	Chapter 12- Chapter 14 (Except 14.4 to 14.7)
EXAM 4	Chapter 15- Chapter 17

Further Information

1. If you live in or near Billings and if you can't figure out your calculator, the Academic Student Center could possibly help you (it is located in the old Computer Annex just south of the SUB). Also, the ASC has web pages posted (below) with excellent and easy to follow instructions for various models of calculators. The site is located at: http://www.msubillings.edu/asc/graphing_calculators.htm
2. This course is not designed to be easy. Rather, it is designed to be academically rigorous, intellectually challenging, and fair. It will require time and energy to read and reflect on the text and homework and discussions. Generally, when students work hard, good grades follow. However, the relationship between effort and grades is not perfect; in other words, effort alone does not produce a high grade.
3. Realize that you are developing a set of personal habits and attitudes that will shape your professional life. To be an effective student, you must be enthusiastic about what you are doing. I expect your work to reflect a level of creativity and risk taking. Look for ways to use questions and assignments to help deepen your understanding of statistical concepts that you read about.
4. Some of you will face personal situations during this semester that will rightfully demand more attention than this class. Whenever possible, accommodations that are fair to you will be made if I am informed in a timely manner **before deadlines**.
6. For both a student and a teacher there is no substitute for preparation. I expect you to stay current in your readings and other assignments. You should plan on spending time each and every day studying these concepts. Some assignments will require more of your time than others.
7. As college students you should be very familiar with the requirements for academic integrity. Although discussing ideas from the class with others is both productive and encouraged, I expect answers on your exams to be your own independent work. Students who cheat on class assessment work will meet with disciplinary action, including but not limited to a failing grade in the course. For further information, consult the MSU-B student handbook (available online at the MSU-B home page).
8. An Incomplete (grade) is given only when students have been 'in attendance' for at least three-fourths of the semester but have been prevented by circumstances beyond their control from completing all the requirements of the course. The student must provide adequate evidence to the instructor as to the reason why they were unable to complete the requirements of the course. An Incomplete must be made up within one calendar year or the grade will revert to an F. In general, to make up an incomplete for this class, the student

must retake the course and will be required to submit all material required by the new instructor of a regular student. No extra credit is offered.

9. Students with disabilities, whether physical learning, or psychological, who believe that they may need accommodations in this class, are encouraged to contact Disability Support Services (DSS) as soon as possible to ensure that such accommodations are implemented in a timely fashion. Please meet with DSS staff to verify our eligibility for any classroom accommodations and for academic assistance related to your disability. The DSS staff can be reached at 406-657-2283.

Memo from Academic Support Center and Disability Support Services

Students with Disabilities:

MSU Billings is committed to providing equal access. If you anticipate barriers related to the format or requirements of this course, please meet with me so that we can discuss ways to ensure your full participation in the course. If you determine that disability-related accommodations are necessary, please contact Disability Support Services (657-2283; located in Room 135 in the College of Education). We can then plan how best to coordinate your accommodations.

Academic Support Center:

The Academic Support Center of MSU Billings provides tutoring services to support the academic success students. Any MSUB/City College student can utilize the services on either campus. The ASC is staffed with student tutors, professional tutors and instructors who are trained to tutor in a variety of subjects. Tutors are available to assist students with math, writing, reading, anatomy and physiology, and other specialty areas for specific majors. Tutoring services are "free" as they are already paid for as part of your student fees. The ASC hours are as follows:

- **University Campus – Located in the SUB**
Monday through Thursday, 8 a.m.-7 p.m., Friday, 8 a.m.-5 p.m. Friday, and Sunday nights from 6-9 p.m.
- **City College Campus —Located in the Tech Building**
Monday through Thursday, 8 a.m.-6 p.m., and Friday, 8 a.m.-5 p.m.

Frequently asked questions:

1. How do I contact my instructor?

- a. You can contact your instructor via email: don.wilathgamuwa@msubillings.edu
- b. or you can use “ask my instructor” link in MyStatLab
- c. D2L Email.
- d. In every email, use the following format for the heading “Stat 141-800-Your Name”

2. How does the instructor contact students?

- a. I will always send my messages/updates/information through D2L email. So please make sure that you login to D2L system frequently and read all my emails carefully and entirely.

3. Where can I find my course material?

- a. Multimedia library in MyStatLab (<http://pearsonmylabandmastering.com>): online text book, Power point presentations
- b. Chapter content in MyStatLab
- c. D2L(<http://www.msubillings.edu/elearning/d2llogin.htm>): Syllabus and information, Sample problems and answers, Free online resources

- d. Student solution manual
 - e. For more information: please read “Where can I find the information” handout
- 4. How long does it take to get a reply from my instructor?**
- a. Usually, I respond to your emails within 24 hours. In case if you do not get a reply within 24 hours, please verify whether you typed my email address (**don.wilathgamuwa@msubillings.edu**) correctly.