



University of Delaware
MATH 114 – College Mathematics and Statistics
Sample Course Syllabus – Spring 2018

This syllabus is provided as a sample syllabus only. Students should contact their instructor for an updated document.

Materials: *College Mathematics and Statistics: Custom Edition for University of Delaware with WebAssign Access* (ISBN: 978-1337046848)

MATH 114 Regression Packet

Calculator: A TI-84, TI-84 Plus, TI-83+, TI-83, TI-82, or TI-Inspire graphing calculator is required and will be used extensively throughout this course. The homework assignments and exams contain problems that require the use of one of these calculators. It is the student's responsibility to have access to a working calculator for all classes and during all exams. The Department of Mathematical Sciences has a limited number of graphing calculators to lend to students. You should contact Mrs. Betty Walls, room 501 Ewing Hall, to borrow a calculator.

Welcome to MATH 114! For most students, this will be their first experience in a university mathematics course. High school and university education are very different, especially mathematics. Some of the differences particular to MATH 114 are

1. The pace of the course is considerably faster than most high school courses.
2. Classes meet a total of just two and a half hours per week.
3. Exams are departmental (i.e., they are not made up by the individual instructor).
4. The grading scale is fixed – **there is no “curving”**.
5. The course schedule is fixed (e.g., Exam I will cover certain sections, etc.).

It is assumed that MATH 114 students have a **mastered a basic knowledge of arithmetic and elementary algebra**. This includes basic factoring, graphing and operations with signed numbers, fractions, and polynomials. Students without this background should immediately consider changing their enrollment to MATH010 – Intermediate Algebra or MATH113 - Contemporary Mathematics.

If you enrolled in MATH114 without mastering basic arithmetic and elementary algebra then please be advised that you do so at your own risk. The content of the course(s) listed as prerequisites will be assumed to be understood by students on the first day of class. Students who fail to consider this recommendation place additional time and restrictions on themselves as such pre-requisite material will not be reviewed in class.

Students whose goals involve sciences and engineering, or who are inclined toward these areas, should consider contacting their advisor to discuss if enrolling in MATH 115 (Precalculus) or MATH 117 (Precalculus for Engineers) would be a better option for them.

I. Course Content

Mathematics and statistics are important! There are many fields in which mathematics and statistics are used today which were thought of as largely or entirely non-mathematical not long ago. Fields such as literature, linguistics, art, political science, criminology, psychology and anthropology

are just a few examples. Students should be aware that even though they may currently be studying subjects that are not primarily mathematical or statistical, research shows that career shifts are common.

MATH 114, which fulfills the university mathematics requirement, is designed for liberal arts majors who currently do not intend to take additional courses in mathematics.

The emphasis in the first part of the course is on algebra, mathematical modeling, and applications. One aspect of this is the relationship between statistics and algebra. Students will use various functions to model and analyze data. The connections between algebraic and graphical representations of functions will be stressed throughout the course.

For approximately the last four weeks, the course will focus on statistics. Descriptive statistics and inferential statistics, including the use of the normal distribution will be studied. The purpose of this unit is to provide the student with an understanding of some of the tools that are used to analyze data and make informed decisions in the workplace, in research and in everyday situations.

II. Course Organization

Lists of the lecture topics and the assigned homework problems are included in this syllabus. Students are expected to complete assignments following the lecture concerning that section and prior to the next class meeting. Additional problems may be assigned at the instructor's discretion.

III. Assessment

Assessment of your progress in this course will be based on three mid-semester exams, a final exam, WebAssign points, and other points designated by your instructor.

IV. Exams

Each of the three exams will be administered for 75 minutes on the scheduled Thursday evenings. All students must bring their UD ID for identification and be seated in the exam room by 4:45 pm on each exam night. The exams this semester are scheduled as follows:

Exam I	March 1	Algebra Sections Statistics Section	1.1 – 1.4, 1.6, 2.2, 2.3; Linear Regression 4.1
Exam II	April 5	Algebra Sections	2.4, 2.5, 3.1, 4.1 – 4.6 as well as Quadratic Regression and Exponential Regression
Exam III	May 3	Statistics Sections	1.1, 1.2, 2.1 – 2.3, 3.1 – 3.3

Final Exam The final exam will be cumulative. You will be tested on all of the sections and topics listed above as well as Statistics Sections: 5.1, 7.1 – 7.3.

The Final Exam date and location are to be announced.

PLEASE NOTE: For important dates and policies of MATH 114 click on:

<http://www1.udel.edu/registrar/cal/calendars/2017-2018.pdf>

Changes to exam content may be made at the instructors' discretion. Exams will consist of multiple-choice, free-response, and short answer questions. The *cumulative final exam* will assume the same format as the exams and will be administered during the designated "finals week". Please do NOT make travel arrangements until you know when your final exam is scheduled. **It is your responsibility to ensure that you have no scheduling conflicts. There are no provisions for taking the final exam at another time.**

Exam scheduling conflicts are not recognized as a legitimate excuse for missing an exam. As stated by the Faculty Senate, the policy of the University of Delaware is as follows: "The Registrar's Office will insure that there are no conflicts among the common examinations scheduled and will announce the dates and times of the common examinations in the Registration Booklet. In the few instances where it may be necessary for a student to schedule a course in conflict with a common examination, the instructor of the single-section course will treat the student's absence from class on that day as excused."

Makeup Exam Policy: Students who have a verified, approved, and documented university excuse for missing a regularly scheduled course hour exam will take a makeup exam that will be scheduled by the course instructor.

"Absences on religious holidays not listed in University calendars, as well as **absences due to athletic participation or other extracurricular activities in which students are official representatives of the University, shall be recognized as excused absences** when the student informs the instructor in writing during the first two weeks of the semester of these planned absences for the semester. **Absences due to similar events which could not have been anticipated earlier in the semester will be recognized as excused absences upon advance notification of the instructor by an appropriate faculty adviser or athletic coach.**"

Extra Credit Policy: There is no "extra credit" or "curving of grades" in this course. There are no special grading arrangements. No exceptions will be made to this grading scheme.

Exam Replacement Policy: It is the policy of Math 114 to replace the lowest exam score with the final exam percentage score when the final exam percentage score is higher. A score of zero due to a missed exam will not be replaced by the final exam percentage score.

V. Course Grade

Course grades depend solely on the number of points earned during the semester. Points are earned through three mid-semester exams, one final exam, WebAssign homework, quizzes.

3 mid-semester exams @ 100 points	300 points
Final exam	150 points
WebAssign Homework	40 points
<u>Instructor Points</u>	<u>60 points</u>
Total	550 points

WebAssign Points:

MATH114 utilizes an online website called www.webassign.com to deliver "graded" homework assignments. You will be able to earn a maximum of 40 points for accurate completion of all homework assignments on WebAssign. At the end of the semester, the average of all WebAssign scores will be calculated and used as the

total points earned (out of 40) for WebAssign. Other homework assignments, not graded, are listed at the end of the syllabus.

During the “open” period for each assignment, students can work on the assignment multiple times and most (if not all questions) have multiple attempts. Students are strongly encouraged to complete homework in a timely fashion and keep track of the due dates on their own. Extension on any assignment may be made by the instructor at their discretion. Details on how to access and utilize the online homework system is discussed in detail later in the syllabus.

Course Grades:

Final grades will be assigned according to how many POINTS you earn on the following scale.

Grade Distribution

Grades	Total Points	Percentage
A	495 – 550 points	90 – 100
A-	479 – 494 points	87 – 89
B+	462 – 478 points	84 – 86
B	440 – 461 points	80 – 83
B-	424 – 439 points	77 – 79
C+	407 – 423 points	74 – 76
C	385 – 406 points	70 – 73
C-	369 – 384 points	67 – 69
D+	352 – 368 points	64 – 66
D	330 – 351 points	60 – 63
D-	314 – 329 points	57 – 59
F	less than 314 points	less than 57

The last day to change registration or withdraw from a course is Monday, April 9, 2018.

GRADES ARE NOT NEGOTIABLE AND CANNOT BE DISCUSSED VIA E-MAIL.

VI. Communication

- **Email:** Please check your UDEL email regularly as class announcements will be sent via email directly from your instructor or through the UD Sakai portal. Students should check their UD email account at least twice a week to ensure they are aware of current course announcements.

VII. Classroom Etiquette:

- **Attendance:** Students are expected to attend each class on time and remain in the classroom for the entire lecture. Attendance will be taken during each class at the discretion of the instructor).
- **Electronics/Recording:** Unless otherwise directed by the instructor, students are expected to put all electronics (including cellphone, laptops, tablets, ipods, etc.) on silence mode and put away during lectures. Students are NOT permitted to record (video, photo or copy) any portion of the lecture including any course material without **prior** written permission from the instructor. Such violation will be considered a violation of the Student Code of Conduct and addressed as per Student Conduct Services policies. Students registered with UD's Disability Student Services will need to contact the instructor immediately to discuss the use of necessary electronics.
- **Food/Drinks:** All food and beverages are prohibited in UD classrooms. Students are expected to maintain a clean learning environment.

VIII. Web Assign – Class Key:

Web Assign is the internet program associated with the textbook used in this course. You will be completing 16 assignments throughout the semester. *Web Assign materials are to be completed in addition to the textbook assignments and will count as 40 points in your final course point total.*

WEBASSIGN Registration Instructions:

To register on Web Assign, go to www.webassign.net. On the right side of the screen is an option “I have a class key”. (Class key not provided on this document – see your instructor.)

When registering, use your University of Delaware email address and ID. You will also need your access code purchased with the text or you can purchase it with a credit card. If you are not sure if you are going to remain in the course or have not purchased the access code yet, there is an option for a 14-day grace period. After this 14-day period, a student must purchase the access code to complete the remaining assignments.

ASSIGNMENT DUE DATES: (Subject to change so please check due dates OFTEN)

Web Assign	Sections	Due Date
Assignment 1	Algebra 1.1, 1.2	Sunday, 2/11
Assignment 2	Algebra 1.3, 1.4	Friday, 2/16
Assignment 3	Algebra 1.6	Sunday, 2/18
Assignment 4	Algebra 2.2, 2.3	Friday, 2/23
Assignment 5	Statistics 4.1	Monday, 2/26
Assignment 6	Algebra 2.4, 2.5	Wednesday, 3/7
Assignment 7	Algebra 3.1	Monday, 3/11
Assignment 8	Algebra 4.1, 4.2	Friday, 3/16
Assignment 9	Algebra 4.3, 4.4	Wednesday, 3/21
Assignment 10	Algebra 4.5, 4.6	Monday, 4/2

Assignment 11	Statistics 1.1, 1.2	Friday, 4/13
Assignment 12	Statistics 2.1, 2.2, 2.3	Sunday, 4/22
Assignment 13	Statistics 3.1, 3.2, 3.3	Sunday, 4/29
Assignment 14	Statistics 5.1	Sunday, 5/6
Assignment 15	Statistics 7.1, 7.2	Wednesday, 5/9
Assignment 16	Statistics 7.3	Monday, 5/14

Check the Web Assign course homepage for the most up to date due dates and more information.

Web Assign Assignments:

Automatic Extensions: You can request an automatic extension on each assignment by clicking “Extension Request” under the assignment. Once you click “Accept Automatic Extension”, you will have an additional **48 hours** to work on the assignment. There will be a **penalty of 30% off** any questions answered correctly during the extension period. **The extension period will close 4 days after the original due date of the assignment**, regardless of when the extension was requested.

IMPORTANT: Multiple choice questions may have less than 3 submissions, depending on how many answer choices there are. There is a “+” button on the upper left corner of each individual question which tells you how many submissions are available and how many you have used. Use this feature to keep track of how many submissions you have used/have left for each question.

Multiple choice questions with 2 options have **ONE submission**.

Multiple choice questions with 3 or 4 options have up to **TWO submissions**.

Multiple choice questions with 5 options have up to **THREE submissions**.

All NON-multiple choice questions or “Select all that apply” questions have up to **THREE submissions**.

Avoiding Web Assign difficulties: Technical problems must be addressed by contacting the Technical Support on Web Assign. Instructors cannot address these kinds of problems. However, several frustrating concerns can be avoided if you follow these guidelines:

1. READ the computer requirements outlined on the Web Assign student support page: https://www.webassign.net/user_support/student/. Your computer must have the appropriate software and hardware requirements. Use the automatic plug-in version checking option for assistance.
2. Wireless internet connections can cause problems – especially if the wireless is overloaded. BE PREPARED. In other words, **do not wait until the last day (and the last minute) and then try to submit your response with a wireless connection.**
3. Make sure you are not running several programs in the “background”. Many of these will interfere with Web Assign. Go to the Task Manager on your computer to determine what programs are running.
4. IF YOU ARE HAVING DIFFICULTY, USE ANOTHER COMPUTER. If your computer is not working, go to a public computing site and use another computer. Do not miss a deadline because you are having technical problems with your own computer. The Web Assign technical support will probably take about 24 hours to respond.
5. Web Assign responses are graded based on correct math syntax and notation. If you use a lower case letter when an upper case is used in the statement of the problem, it will be marked wrong. If your parentheses

are not placed correctly, it will be marked wrong. There is a Help option you might want to read PRIOR to working through an assignment.

IX. Student Resources:

MATH114 students have access to the following **FREE** on-campus resources. Student participation is voluntary but strongly encouraged to utilize **as many** resources and **as often** as their schedule allowed.

Supplemental Instruction (SI): SI study sessions are offered for MATH114 and are scheduled for twice a week. Each SI session will be hosted by an SI Leader who has mastered the course material and will facilitate group sessions where students can improve their understanding of the material, review key concepts, and prepare for quizzes and exams. The format is relaxed yet informative. Location and hours for each session will be available on the course Sakai/Canvas page.

Math Student Learning Lab (MSLL)

MSLL is UD's math tutoring lab located at Kent Dining Hall. Both faculty and undergraduate tutors are available to assist students with any question on a drop-in basis during open hours. No appointment is necessary during open hours. Hours of operation will be provided on the course Sakai/Canvas page.

Private Tutors:

UD's Office of Academic Enrichment Center (148 – 150 S. College Avenue) maintains a list of private tutors available for hire by a student. Please visit their website for more information:

<http://ae.udel.edu/find-a-tutor>

X. Academic Accommodations:

The University of Delaware is committed to the support and success of every student. Any student who may need an accommodation(s) based on a documented disability should contact the office of Disability Support Service (DSS) as soon as possible. The DSS will work directly with the student to establish the necessary accommodations and will involve the instructor as needed. Please contact DSS at (302) 831-4643 or www.udel.edu/DSS as soon as possible.

Academic Honesty: The following statement is from the Student Guide to University Policies.

“All students must be honest and forthright in their academic studies. To falsify the results of one’s research, to steal the words or ideas of another, to cheat on an assignment, or to allow or assist another to commit these acts corrupts the educational process. Students are expected to do their own work and neither give nor receive unauthorized assistance. Any violation of this standard must be reported to the Office of Student Conduct.”

Also included in the Student Guide is a statement about cheating. The policies in detail are at:

<http://www.udel.edu/stuguide/16-17/code.html> .

Faculty Statement on Disclosures of Instances of Sexual Misconduct:

The University of Delaware staff, faculty and administration are fully dedicated to

providing student with a safe learning environment, free from all forms of sexual misconduct (including sexual harassment, sexual violence, domestic/dating violence or stalking). If, at any time during this course, the instructor is made aware that a student may have been the victim of sexual misconduct, the instructor is obligated under federal law to inform the University's Title IX Coordinator. The Title IX Coordinator will decide if the incident should be examined further. The instructor will ensure any report and/or incident is handled with the upmost confidence and care to the student involved. For more information on UD's policy on sexual misconduct, refer to www.udel/sexualmisconduct.

Note: Your instructor reserves the right to make changes to the syllabus during the semester as necessary.

Textbook Homework Assignments: Material from the listed problems are available for quizzes and exams.

Section	Topic	Assignment
Alg 1.1	Linear Equations	1 – 6, 17– 43 odd, 49,50,54,63,64,68
Alg 1.2	Mathematical Modeling	7-24, 33-37, 39-49 odd, 57, 59, 63-68
Alg 1.3	Quadratic Equations	1-31 odd, 45-51 odd, 65-75 odd
Alg 1.4	The Quadratic Formula	1-45 odd, 51-53 odd, 74, 75
Alg 1.6	Linear Inequalities	1-9 odd, 23-49 odd, 79-81
Alg 2.2	Lines in the Plane	1-4, 23-41 odd, 47-55, 83-88, 90-94
Alg 2.3	Linear Modeling	1 – 4, 21-43 odd.
Stat 4.1	Linear Regression and Correlation	1 – 9 odd
MATERIAL FOR EXAM I ENDS HERE		
Alg 2.4	Functions	1-13, 25, 29,31, 41,43,53,55,59,60,64,65,67, 69
Alg 2.5	Graphs of Functions	1-13 odd, 17-23 odd, 24.
Alg 3.1	Quadratic Functions and Models	15-29 odd, 37-40, 47-61 odd.
Alg 4.1	Inverse Functions	1-4,17,18,21-26, 53-56
Alg 4.2	Exponential Functions	15,17,31,33,41,43,45,51-57 odd,63-71 odd,73,75
Alg 4.3	Logarithmic Functions	7-19 odd, 55-75 odd, 95-101 odd.
Alg 4.4	Properties of Logarithms	1-17 odd, 29-39 odd, 65-73, 77-89
Alg 4.5	Solving Exponential and Logarithmic Equations	1-10, 11-21 odd, 23-45, 71-80, 95-103 odd
Alg 4.6	Exponential and Logarithmic Models	17-45, 48-53, 56, 63
MATERIAL FOR EXAM II ENDS HERE		
Stat 1.1	What is Statistics?	1 – 15
Stat 1.2	Random Samples	1 – 9, 11 – 13
Stat 2.1	Frequency Distributions, Histograms	1 – 7, 10, 15, 17, 19
Stat 2.2	Bar Graphs, Circle Graphs	1 – 9 odd
Stat 2.3	Stem-and Leaf Displays	1 – 3, 5
Stat 3.1	Measures of Central Tendency	1 – 19 odd

Stat 3.2	Measures of Variation	1 – 16, 22-26
Stat 3.3	Percentiles, Box-and-Whisker Plots	1 – 11
	MATERIAL FOR EXAM III ENDS HERE	
Stat 5.1	Probability	1 – 7 odd, 17
Stat 7.1	Graphs of Normal Probability Distributions	1 – 11
Stat 7.2	Standard Units & Areas Under the Standard Normal Distribution	1 – 45 odd
Stat 7.3	Area Under Any Normal Curve	1 – 35 odd