



Course Title: Business Mathematics I
Term: Summer 2016
Class Times and locations: Section 205: M–F 10:00-11:35 Blocker room 161
Class Times and locations: Section 203: M–F 12:00-1:35 Blocker room 135

Instructor Information

Instructor: Joe Kahlig
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Office Hours: Monday–Friday: between classes.
other times by appointment

Course Description and Prerequisites

Description: Business Mathematics I (Credit 3) Linear equations and applications; functions and graphs, systems of linear equations, matrix algebra and applications, linear programming, probability and applications, statistics.

Prerequisites: High school algebra I and II and geometry. Credit will not be given for more than one of MATH 141 and 166.

Calculator Policy: This course **REQUIRES** a TI-84(plus) graphing calculator. You may use another calculator, provided that it does not give you an unfair advantage over your classmates. **The only calculator programs allowed are those I give out during class.** All other programs must be erased from the calculator. Using a calculator that is not approved or having programs(or notes) on the calculator will be considered a case of Scholastic Dishonesty and will be dealt with in that manner.

Learning Outcomes

This course is focused on quantitative literacy in mathematics found in both business and everyday life. Upon successful completion of this course, students will be able to:

- Logically find relationships among variables to formulate mathematical models for everyday applications, including business applications, such as cost, revenue, profit, supply and demand.
- Understand matrices and their applications, including solving systems of linear equations.
- Construct linear programming problems for various applications and solve using graphical techniques, including finding the optimal point(s) where a company minimizes its cost or maximizes its profit.
- Solve linear programming problems using simplex methods. Including finding surplus and the discussion of shadow prices.(Honors class)
- Understand set terminology and its relationship to symbolic notation.
- Use Venn diagrams to model the relationship between sets and set operations, with applications to real-world problems.
- Understand the principles of probability and counting and apply these concepts to a variety of problems, such as finding the number of ways or probability of obtaining particular card hands.
- Identify types of random variables and calculate probabilities and statistics for random variables.
- Apply the concepts of finance to real-world situations, such as financing a car or house.

Textbook and Resources

Textbook: *Finite Mathematics*, 11th Edition, by Tan will be provided in electronic book format through the WebAssign system. Buying a paper copy is optional.

Week in Review: I have an on-line week in review for my regular math 141 course and my regular math 166 course. These reviews will cover most of the material that we cover in this class.

Help Sessions: The department's help session schedule may be found at <http://www.math.tamu.edu/courses/helpsessions.html>

Web Page: My class web page contains a variety of resources for this class. Here is a list of some of them.

- Blank version of the lecture notes.
- Completed lecture notes (posted after each section is completed).
- My additional homework problem sets(with solutions) for this course.
- Solutions to the exams.
- Instructions for the TI-84.

Grading Policies

Homework: Homework for this course will primarily consists of electronic assignments and will be worked and submitted in the WebAssign system. Directions on how to use the webassign system can be found on my web page. Three homework assignment will be dropped when computing the average.

Due to the pace of the summer session, your online homework will be graded using a sliding scale (i.e., you do not have to get all of the problems correct to receive a 100%).

In WebAssign, when you work a problem correctly, you will earn one point (partial points are possible for questions with multiple parts). Since each homework has a different number of problems and we are using a sliding scale, each homework will be worth a total of 10 points (regardless of the number of questions in the assignment).

The following categories are based on the number of questions in each homework. In each category, the number of WebAssign points necessary to receive the corresponding homework points is shown. Remember, for each homework, you can receive up to 10 homework points (this would mean getting a 100%).

Homework has 6 or 7 questions:

Web assign points	Homework Grade
0	0
more than 0 but less than 1	2
1 or more but less than 2	4
2 or more but less than 3	6
3 or more but less than 4	7.5
4 or more but less than 5	9
5 or more	10

Homework has 9 or 10 questions:

Web assign points	Homework Grade
0	0
more than 0 but less than 2	2
2 or more but less than 4	5
4 or more but less than 5	6
5 or more but less than 6	7.5
6 or more but less than 8	9
8 or more	10

Homework has 11, 12, or 13 questions:

Web assign points	Homework Grade
0	0
more than 0 but less than 2	2
2 or more but less than 4	5
4 or more but less than 5	6
5 or more but less than 7	7.5
7 or more but less than 9	9
9 or more	10

Quiz: Expect a quiz every class day, except for exam days. I will drop three of the quiz grades when calculating the quiz average. **Take-home quizzes will not be accepted late without a university excused absence.**

Exams: There will be three in-class exams and a comprehensive final. **I will not curve your test grades.** Once an exam is returned, I will not give a makeup for that exam. If you believe that you have a valid reasons for receiving a makeup after the exams have been returned, then talk to me. Any question regarding grading/scoring must be done within one week of the return of the exam or no change to the grade will be made.

Tentative Exam Schedule

Exam 1: July 13	Final Exam: August 9
Exam 2: July 22	Section 205: 10:30am-12:30pm
Exam 3: August 3	Section 203: 1pm - 3 pm

Grading Scale:

3 Exams @ 19% each	57%	$88.5 \leq A \leq 100$
Homework	9%	$78.5 \leq B < 88.5$
Quiz	9%	$68.5 \leq C < 78.5$
Final Exam	25%	$58.5 \leq D < 68.5$
Total Points	100%	$F < 58.5$

Attendance and Make-up policies

- The University views class attendance as an individual student responsibility. It is essential that students attend class and complete all assignments to succeed in the course. University student rules concerning excused and unexcused absences as well as makeups can be found at <http://student-rules.tamu.edu/rule07>.
- Since I am dropping 3 quiz grades, I will not be giving makeup quizzes.
- Excuses for absences during an exam must be substantiated by appropriate documentation. Notification before the absence is required when possible. Otherwise, you must notify me within 2 working days of the missed class to arrange a makeup. I will NOT accept the "Explanatory Statement for Absence from Class" form as sufficient written documentation of an excused absence.
- Providing a fake or falsified doctor's note or other falsified documentation is considered academic dishonesty, will be reported to the Aggie Honor Council, and will result in an F* in the course.
- The last day Q-Drop this class is **July 26th**.

Week In Review: There is a link to a weekly review(for the Fall/Spring schedule) on my webpage.

Class Announcements, E-Mail Policy and Communications

Class announcements will be posted to my class web page and sent to your university e-mail account. If you send me an e-mail, please include your name and course information(i.e. class and section) as well as any additional information that I might need to help respond to your e-mail.

Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit <http://disability.tamu.edu>

Academic Integrity

An Aggie Does Not Lie, Cheat, or Steal or Tolerate Those Who Do. The Aggie Code of Honor will be enforced in this course. For the purpose of this course, cheating will be defined as (but not limited to) access or use of unauthorized material during exams, collaboration between students during exams or assignments for which group work is not allowed, perusal of another student's work during exams, copying other student's work or allowing other students to copy your work, and having unauthorized programs or other information stored on calculators when these calculators are accessible during an exam. Falsified documentation is considered academic dishonesty.

For additional information please visit: <http://aggiehonor.tamu.edu>

Course Topics (Tentative weekly schedule)

Week	Topics	Sections
1	Linear functions and Mathematical models, systems of linear equations, matrix arithmetic	1.3, 1.4, 2.1, 2.4, 2.5, 2.2, 2.3
2	systems of linear equations, Exam 1, Graphing systems of linear inequalities, Linear Programming problems, Sets,	2.2, 2.3, 2.7, 3.1, 3.2, 3.3, 6.1
3	Sets, Counting, Multiplication principle, Permutations, Combinations, Experiments, Sample spaces, Events, , Exam 2	6.1, 6.2, 6.3, 6.4, 7.1,
4	Definition and rules of Probability , Counting techniques in probability, Conditional probability, Independence, Bayes' Theorem, Independence, Distributions of random variables, Expected Value, Variance, Standard Deviation, Chebychev's,	7.2, 7.3, 7.4, 7.5, 7.6, 8.1,8.2, 8.3
5	Binomial Distribution, Exam 3, Normal distribution, Finance	8.4, 8.5, 8.6, 5.1, 5.2/5.3
6	Finance, Final Exam	5.2/5.3