

**Syllabus**  
**Quantitative Business Skills 52:135:220:90**

**Online Spring 2018**

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**Book:** College Mathematics for Business Economics, Life Sciences and Social Sciences 13/E by Barnett, Ziegler and Byleen with MyMathLab  
**ISBN-13:** 9780321945518

**MyMathLab information**

**Course Name:** **Quantitative Business Skills 52:135:220:90**

Students will access MyMathLab through Canvas. An eBook is provided so you can download paper copies as needed.

**The multimedia library in MyMathLab contains power points for each section of the book and videos for each topic in each chapter. Use these!!**

Access and purchase of these materials needs to happen through this course space. See Accessing eText and MyLab under Course Dashboard for instructions.

Please note that students who are in the fully online program will be able to access the eText and MyLabs (including the Multimedia Library) at no additional cost. Students who are not part of the fully online program will be required to purchase the eText and MyLab access. (see below)

***NOTE: There is no need to purchase the hard copy textbook as MyLab access includes your access to the etext. If you feel you need a hard copy to study, that is at your own expense and can be purchased at the university book store.***

### **Accessing eText and MyLab**

You will also need to access the MyLab materials associated with this text. The eBook and MyLab materials for this product are found **in this course**—in the eBook and in Course Home (MSL Quizzes/Tests, Homework, StatCrunch, Tools for Success, and Support). Links to these items are also found in the modules.

Due to different fee structures for online students, access to certain eTexts and course materials is included in their tuition/course fee. How you access these materials in this course depends on your type of enrollment:

- Students who are **fully online students** in the **Bachelor of Arts in Business Administration program** will get access to these materials at **no additional charge**. A fully online student means you are taking all classes toward your degree online.
- Students who are **not** part of that fully online program—students who are on-ground or hybrid—will need to **purchase access from within this course**.

### **Accessing the eBook and MyLab Materials**

To initiate access of the materials:

1. Go to any links to the eBook or to any of the MyLab materials in this course (e.g., MSL Homework or Tools for Success) in Course Home, or links to these items in any of the numbered course modules.
2. You will be prompted to accept the user agreement and privacy policy, and then you will be prompted to select your access option:
  - *Students who are in the fully online Bachelor of Arts in Business Administration program:* Select "Access Code," then enter the access code that was given to you by your executive coach. If you did not

receive your access code, please contact your executive coach at [studentsupport@online.rutgers.edu](mailto:studentsupport@online.rutgers.edu) or you can call 866-890-2578.

- *Students who are **not** in this fully online program:* Select "Buy Now," then select the link to purchase *MyLabPlus for College Mathematics for Business Economics, Life Sciences and Social Sciences 13/E* by Barnett, Ziegler and Byleen.

3. Note that you will only have to do this the first time you access the materials. If you are unsure about which type of enrollment you fall under, please contact Christine Ebner at [Christine.ebner@camden.rutgers.edu](mailto:Christine.ebner@camden.rutgers.edu)

## **I COURSE GOALS AND OBJECTIVES**

This course will provide students of business with additional mathematical and statistical tools used in all fields for analyzing data in support of decision making. Instead of focusing on theoretical formulae, students will learn to apply these tools for analyzing and interpreting data routinely collected by all entities in order to formulate business strategies, business/financial plans and investment decisions. This course will provide the knowledge base, experience in the use of mathematical and statistical tools, and practical examples of how to select and apply appropriate techniques to interpret and communicate results.

By the end of this course, you should be able to:

1. Interpret Linear Equations and Graphs
2. Understand Functions and their Graphs
3. Make Finance Computations using Mathematics
4. Interpret Systems of Linear Equations as Matrices
5. Understand Logic Sets and Counting
6. Understand and Use Probability
7. Explain and use Markov Chains
8. Understand Rates of Change – average - instantaneous
9. Understand the use of Derivatives and how to calculate them
10. Apply Derivatives to Business

## **II COURSE DESIGN**

This online course is designed to provide a variety of learning experiences and opportunities. Class activities will include some or all of the following: videos, class discussion, lecture, exams, quizzes, and class and group exercises. In order for you to maximize your learning experience, you will need to prepare by reading the assigned material and completing assignments and discussions.

For each topic covered, an outline in the form of a PowerPoint presentation will be posted on Canvas. Please note that the outlines are not sufficient for performing well on

exams; you will need to read and understand the material in your text. The exams will require in-depth knowledge of the assigned material in your textbook and other readings.

### **III Course Requirements and Assessments:**

**Homework** worth 10 points each, once a week on MyMathLab site. You will have three chances to do each homework assignment; the best score counts.

**Discussion Board** – you are required to participate in class discussions via the discussion board **at least once a week**. Sometimes the instructor will pose questions to start the discussion, but you may pose your own questions for the class to respond to. You earn 4 points for each weekly discussion.

**Quizzes:** There will be 2-3 questions each week; each quiz will be worth 2 points, 1 point per problem. If you take the quiz **on time** you receive **1 bonus point**.

**Exams:** There will be three tests each worth 100 points. Each will be online and you will have 3 chances for each question.

**Project** – a 3-4 page paper is optional for extra credit. A list of possible projects will be available on Canvas in unit 12. All projects will be submitted to the dropbox for unit 12. (30 bonus points) The project and taking the quizzes on time are the **only** ways to get extra credit.

**Total point count possible is 476 points + 41 bonus points.**

#### **Course Plan:**

**There are NO late homework papers accepted – MyMathLab cuts off access after the due date. All homework is due by a Sunday night at 11 PM on the date indicated on MyMathLab. You get three chances on each homework set, and the highest score counts.**

**All quizzes in each unit must be taken by the date that the homework for that unit is due. You get three chances, and the highest score counts.**

**Module 1** is a review of the fundamentals of algebra needed for this course. Facility with basic algebraic operations is necessary for almost every section of the course.

**Learning Goal:** Students will be able to perform basic algebraic operations, including those with exponents and logarithms. They will be able to interpret practical word problems algebraically, and use equations to find solutions to the problems.

**Due January 21 :** Homework Problems Chapter 1.1 and 1.2 posted on MyMathLab, and quiz 1 posted on MyMathLab. Week 1 discussion contribution must be made by this date.

**Module 2** continues the chapter 1 material emphasizing graphs of linear functions and the interpretation of these graphs, as well as translations into functions.

**Learning Goal:** Interpret Linear Equations and Graphs

**Due January 28:** Homework for sections 1.3 and chapter 2.1 and 2.2 and quiz 2.

**Module 3** Mathematics of Finance and review of exponents and logarithms.

Students will understand the difference between simple and compound interest and be able to calculate each.

**Due February 4:** Homework for sections 2.5, 2.6, 3.1,3.2, 3.3 and quiz 3

**Module 4** Matrices applied to Business

**Learning Goal:** Students will be able to use matrices to solve business problems.

**Due February 11:** Homework for sections 4.1, 4.2, 4.3, 4.4 and discussion of 4.7, and quiz 4

**Exam 1 must be taken by February 18**

Exam 1 covers Modules 1-4

**Module 5:** Counting

**Learning Goal:** Students will understand how to count sets of objects with the goal of counting instances of something for probability

**Due February 25:** Homework for 7.1-7.4 and quiz 5

**Module 6:** Probability

**Learning Goal:** Students will be able to calculate probability.

**Due March 4:** Homework sections 8.1-8.3 and quiz 6

**Module 7**

**Learning Goal:** Students will understand Markov Chains and how to use them.

**Due March 11:** Homework sections 9.1 and 9.2 and quiz 7

**Module 8**

**Learning Goal:** Students will understand average rate of change and instantaneous rates of change.

**Due March 25** Homework sections 10.1 and 10.4 and quiz 8

**Exam 2 must be taken by April 1**

Exam 2 covers modules 5-8 (only sections covered by homework)

**Module 9**

**Learning Goal:** Students will understand derivatives, how to calculate derivatives, and how they are used in various business contexts,

**Due April 8** Homework sections 10.5 – 10.6 and quiz 9

**Module 10.**

**Learning Goal:** Students will understand how to use derivatives to graph functions with maxima and minima.

**Due April 15** Homework Sections 12.1-12. 4 and quiz 10

## Module 11

**Learning Goal:** Students will learn to solve various problems using the derivative.

**Due April 22** Homework Sections 12.5 and 12.6 and quiz 11.

Optional projects are due should you choose to do one.

**Optional projects must be submitted by April 22**

**Test 3 must be completed by May 6 and it is on the material since the last exam thus modules 9-11, but with background from the whole course.**

**Grading Scale in total points:**

<b>A</b>	<b>428 or better</b>
<b>B +</b>	<b>404 - 427</b>
<b>B</b>	<b>380 – 403</b>
<b>C+</b>	<b>357 – 379</b>
<b>C</b>	<b>333 – 356</b>
<b>D</b>	<b>285 – 332</b>
<b>F</b>	<b>below 285</b>

**The grades are kept on the Canvas gradebook. Only scores on individual pieces are on MyMathLab. Be sure to check your grades periodically to be sure they were transcribed correctly. All discussion is via Canvas.**

### Academic Integrity at Rutgers

Principles of academic integrity require that every Rutgers University student:

- properly acknowledge and cite all use of the ideas, results, or words of others
- properly acknowledge all contributors to a given piece of work
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of unsanctioned materials or unsanctioned collaboration
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

### **DISABILITY STATEMENT**

Students requiring accommodation should visit the website <https://learn.camden.rutgers.edu/disability-services> or contact the Camden campus Disability

Coordinator (email: [disabilityservices@camden.rutgers.edu](mailto:disabilityservices@camden.rutgers.edu)). Please let me know whether you require any individual needs to support your efforts in the class.

### **INCLEMENT WEATHER CLOSING HOTLINE**

Since this course is an online course, inclement weather will not impact your ability to attend class. However, here is the Inclement weather website:

<http://www.camden.rutgers.edu/about/operating-status>

The Operating Status at Rutgers University–Camden provides operating information regarding emergency and weather alerts, class cancellations, campus closures, and more.

Students can also sign up for Emergency Text Alerts. Rutgers–Camden sends emergency text alerts to subscribed users via the Emergency Notification System. You can register your cell phone number to receive alerts in the event of a campus emergency.