RUTGERS
School of Business | Camden

52:135:120:90
Dr. P. Mark Ebner
Spring 2025
Online course

Introduction to Quantitative Skills for Business

Contact Information	**office:** N/A - online course **phone:** 856.225.6800 **e-mail:** pe95@camden.rutgers.edu (preferred)
Office hours	Wednesday 6:00 PM to 7:00 PM and by appointment
Course Web Page	on Canvas, https://onlinelearning.rutgers.edu/canvas
Technical Support	856-225-6065 or email help@camden.rutgers.edu

Course Overview:

This course is designed to provide an introduction to foundational mathematics for students interested in majoring in business and economics. Topics include: basic algebra, linear equations, functions and graphs, mathematics of finance (including simple and compound interest, future and present value of annuity), systems of linear equations and matrices.

Prerequisite:

There is no prerequisite Introduction to Quantitative Skills for Business.

Course Objectives:

The objective of this course is to help students to develop an application oriented approach to business mathematics. After completing this course, you should be able to:

- Understand and apply the mathematics of finance.
- Solve problems by applying basic algebra.
- Create and graph linear equations
- Solve systems of linear equations.
- Develop familiarity with different families of functions and their application in finance and business problems
- Apply matrix operations to solve systems of equations

Required Course Materials

Required Text:

Margaret Lial, Thomas W. Hungerford, John. P. Holcomb and Bernadette Mullins, *Finite Mathematics with Applications in the Management, Natural, and Social Sciences*, 12th Edition, **plus MyMathLab.**

You MUST obtain the MyMathLab access code via the "*First Day Course Materials"* tab in Canvas to complete the online assignments for the course. The purchase includes an electronic version of the text. If you also want a physical copy of the textbook you have two options: MyMathLab with Pearson eText -- Instant Access for the above text in loose-leaf format with ISBN-13: 978-0-134-77641-5, or hard bound copy with ISBN-13: 978-0-134-76761-1.

To gain access to MyMathLab you will need a Course ID as well as an Access Code.
MyMathLab Course ID: ebner99190
MyMathLab Access Code: Provided with purchase of MyMathLab

Important: When you register for your account in **MyMathLab**, please ensure you use the same name and **Rutgers email** that you use for Canvas; this helps in keeping track and reconciling the scores from Canvas and MyMathLab correctly.

Other web-based readings (articles, videos, business clippings and web site references) will be assigned during the semester.

You will need a scientific calculator for this course.

Accessing Online Course Content:

All class materials can be obtained via **Canvas** and/or **MyMathLab**. Usually, the lecture notes and class discussions will be available in Canvas. We will use MyMathLab for access to the e-text, hands-on homework assignments, quizzes and test. Note that the lecture materials for a particular week will generally be posted at the start of the week. You are strongly encouraged to access the course via Canvas several times a week. I also recommend that you create a regular weekly plan for attacking each module (see course schedule), which is designed to run seamlessly from day 1 (Monday) through day 7 (Sunday).

Class Communication:

Since this is a virtual class, reliable, ongoing communication is vitally important. Note that all class communication will be via your Rutgers e-mail along with discussion forums and other tools found in Canvas. Also announcements will be periodically made in Canvas and/or email about changes in schedules, assignments, exam, readings, policies and other class activities. Therefore, you are expected to check your Rutgers e-mail and Canvas regularly, at least two or three times throughout the week.

Email Communication:

Email represents the best mode of communication for this course. I will try reply to all e-mails within 24 hours. My hope is that you will check your email regularly as well in order to ensure ongoing, timely dialog as needed for your success in this course.

NOTE: ALL email communication MUST be through your Rutgers email only. I will NOT respond to emails from personal accounts.

Course Assessment

Student performance in this course will be evaluated using the following elements, with final grade weighting is as follows:

Participation in Discussion Boards	20 %
Homework Problems	25 %
Quizzes	25 %
Exam1	10 %
Exam2	10 %
Exam3 (Final)	10 %

Grading Policy

Score range	Grade
90% - 100%	A
85% - 90%	B+
80% - 85%	B
75% - 80%	C+
70% - 75%	C
60 - 70%	D
Below 60%	F

Discussion Board Activities

There will be several specific discussion board activities in this course. Discussions may involve any combination of prepared materials, journal articles, textbook readings, mini-cases, problems, videos, or other resources.

During the week of discussion activity, students are expected to create at least one Discussion Thread by Day 4 (Thursday) of each week that a Discussion topic is assigned and then by Day 7 (Sunday) have responded to at least one other posted

thread by other students in the class. All postings including responses are to be substantive and further the discussion of the topic of interest.

Postings on the discussion board must reflect student's reading and comprehension of the assigned readings and/or related discussion activity. Discussion postings must reflect the ability to synthesize concepts presented through writing at a college level. The minimum length of a post is 100 words not including references listed. A typical rubric for evaluating discussion board activity will be provided.

Exam Policy:

The examinations given in this course are the best way to determine the extent to which students have acquired course skills and knowledge and can apply them to solve problems related to business metrics. The most challenging part of exams is their comprehensive nature; at the same time know that exam problems will be similar to those encountered on homework assignments and quizzes.

Three **exams** will be conducted in **MyMathLab**. The format and policy for each exam is expected to be as follows:

- Each exam will be posted by **12:01 AM on Thursday** of the week of the exam and **must be completed by 11:59 PM on Sunday**. Each exam is designed to be completed in two hour or less. Any student who does not take the exam during this window will receive a zero grade for that exam.

- You can take each exam only once. Once started, the exam must be completed. That is, do not log out until you have completely finished the exam. Any unanswered question will automatically receive a zero grade for that question. While taking the test, you may not refer to any other course materials.

- Ensure that you have a reliable computer, fully charged battery and reliable internet connection before starting the test. Make sure that your computer meets all the requirements and you configure the browser as suggested (i.e. settings related to pop-up blockers). It is also useful to have paper and pencil handy for working on problems, sketching graphs, etc. Finally, never underestimate the importance of a quiet, well-lit location to take quizzes and exams where you will not be subject to interruptions.

- You are usually allowed up to two hours to complete the exam. Hence, at the latest, you should start the taking the exam no later than 9 p.m. on Sunday so that you can use up to 2 hours and complete it by the 11:59 PM deadline.

- Any student who misses an exam without **prior approval** of the instructor or a compelling reason will receive a zero grade for that exam. The professor reserves the right to request documentation to support your absence (i.e. a doctor's note, military orders, etc).

- **Exam Make-Up Policy**: Since you are given a reasonable amount of time to work on the exams, make-ups are **not** given. If, you cannot take an exam by the scheduled deadline for a university- approved reason, you must give the professor written notice at least one week in advance so that other arrangements can be made. If the situation does not allow for advance notification (for example, emergency hospitalization), contact the professor as soon as possible after a missed exam. Be prepared to present appropriate documentation related to your emergency.

Student Code of Conduct:

The University's Student Code of Conduct can be found at
http://studentconduct.rutgers.edu/university-code-of-student-conduct

Violations of the Student Code of Conduct are considered serious infractions of student behavior and students who violate the code are subject to penalties relative to the level of the matter. In general, students may not disturb normal classroom procedures by distracting or disruptive behavior. Examples of disruptive behavior in the online environment include, but are not limited to, the following:

- Harassing or otherwise sending offensive or insulting email or other electronic messages to classmates and/or instructor.
- Failure to observe appropriate on-line etiquette described in the following section.
- Threats or violence

Violations of the Student Code of Conduct should be reported to the Dean of Students office deanofstudents@camden.rutgers.edu or 856-225-6050.

If the violation is immediate and a potential threat is a concern, call the Rutgers-Camden police at 856-225-6111

Etiquette expectations from on-line students:

The following protocols on the codes of behavior reflect professional business norms on manners, courtesy, and respect. (In general, you should treat others as you would like others to treat yourself. Be mindful that what is acceptable in a text or chatroom with friends may not be appropriate in a classroom or in an online conversation with an instructor.) These protocols must be followed by all students taking this course to help ensure the online experiences for everyone involved are pleasant and productive. Just as important it is the best practice for the expectations of the professional community in which you each aspire to become gainfully employed.

- If you send an e-mail to the professor, tutor, or university staff, please address the person appropriately such as "Dr. …." or "Mr./Ms. ….", not 'Hey ….'. Note that I will address you with your first name, unless you prefer that I address you differently.

- When sending an e-mail, you can get better attention by using the following guidelines:
  a) Use descriptive subject lines. Think, "Why are you writing to me?" The answer

to that question is probably a good bet for the subject line.
b) Please be as brief as possible by going straight to the point, and
c) If possible, limit the use of attachments. It is far easier to respond to questions imbedded directly into the email.

- Please feel free to directly contact the instructor to resolve any concerns that you may have. However, refrain from sending offensive and insulting messages to anyone in or associated with the class. If you disagree with someone, communicate your concerns specifically so that they may be addressed. This will help us avoid unnecessarily and negatively affecting everyone's overall experience of the course.

- Copy the minimum number of people. That is, send e-mails to only the people you think should receive and will benefit from it.

- Treat all e-mails and postings as permanent forms of written record and do not expect that any your e-mail communications to be private, unless stated otherwise. Instead, assume that all e-mail communications are public. Do not publicize your own or others' personal information (such as email, phone numbers, last names etc.)

- Avoid using CAPS, if possible, and never type messages in ALL CAPS as this is considered yelling and seen as a form of aggression.

Never send offensive and insulting messages* (this is a violation of the Student Code of Conduct). If you disagree, say so and state your reasons. Social media is a very powerful tool for communication. However, it can be badly misused if it is not used correctly or professionally. For example, you may have personal and legitimate concerns with this course. However, other students, who do not have similar feelings, can be negatively influenced by your concerns. This will unnecessarily and negatively affect their overall experience of the course. Therefore, to minimize such an occurrence, please feel free to directly contact the instructor/tutor first to resolve any concerns that you may have to help ensure that everyone's online experience of this course is beneficial.

- Always guard against inciting others when it comes to content, opinions, etc. That is, avoid blaming or accusing others of wrong doing.

- Do not start a volley of back and forth e-mails, with copies distributed to every student in the class.

- Copy the minimum number of people. That is, send e-mails to only the people you think should receive and will benefit from it.

- Treat all e-mails and postings as permanent forms of written record and do not expect that any your e-mail communications to be private, unless stated otherwise. Instead, assume that all e-mail communications are public.

- Do not publicize your own or others' personal information (such as email, phone numbers, last names, etc.)

Expectation of student participation and keys to success:

To be successful in the course, it is a critically important to complete the following activities in the learning module for each week.

- Carefully read the learning goals and complete all the assignments.
- Review the online lecture notes for each session. Note that any "narrated" lecture will only briefly discuss some aspects of the material. Feel free to print out notes if necessary.
- Carefully read the required and assigned textbook chapter/s and write down additional notes on the printout of the lectures as necessary.
- Sometimes, you may also be asked to read/review the required articles/web sites or watch related videos.
- Use MyMathLab consistently throughout the course. In addition to being a powerful resource, it is where you will complete all of the practice and graded homework assignments for each session. Quizzes and tests will also be administered through MyMathLab. To gain a more thorough understanding of the class material, it is imperative that students work through additional problems at the end of each relevant chapter/module. Unless you complete the homework, you may find the course to be challenging especially when old concepts are built upon as new ones are introduced. You will also find it is not uncommon for exam problems resemble the homework / quiz problems.
- Complete the ALL assigned online exams as all of these count towards your final course grade. Note that every student may have a different exam as the examination questions are taken from a randomized pool of questions. There are no exceptions, unless you have University approved excuse.
- Participate in the assigned class discussions, whenever you can, to get maximum credit for class participation. These discussions are designed to be a collaborative learning experience for all involved.
- For the general class discussion forum, you are also strongly encouraged to share any relevant class related topics pertaining to current business environment. You may also benefit and assist other students via thoughtful interaction.
- **Direct Interaction:** Although Canvas and MyMathLab provide answers to most logistical questions and provide instructional resources, sometimes a direct one-to-one professional interaction may be needed resolve difficult issues. For example, you may have a certain technical/mathematical problem that is difficult to solve that you think is difficult be resolved in an open forums or elsewhere. In this case, please feel free to send me an e-mail and a contact number so that I can call you directly to resolve it. You can also use the "ask your professor" tool in MyMathLab, however an email outreach is the preferred method of seeking assistance.

ACADEMIC SUPPORT

The Rutgers-Camden Learning Center (RCLC) provides academic support to all Rutgers-Camden undergraduate students. The RCLC programs are facilitated by professional staff, graduate students, and trained undergraduate peer leaders who have previously excelled in their courses. Resources available to students in this course may include:

- Peer Tutoring: You can make a one-on-one appointment with a Peer Tutor by going to https://learn.camden.rutgers.edu/peer-tutoring/ Online Tutoring is also available via Smarthinking by going to https://learn.camden.rutgers.edu/smarthinking/.Visit our website for a full schedule of times, locations, and courses.

- Supplemental Instruction (SI): SI Leaders are assigned to specific sections of courses and hold two weekly study sessions. Sessions focus on the most challenging content being covered in class. The SI Session schedule is posted on the RCLC website each week and will also be communicated in a course by the SI Leader.

- Peer Writing: Improve your college-level writing skills by bringing writing assignments from your classes to a Peer Writing Tutor. Like tutoring, you can make an appointment by https://learn.camden.rutgers.edu/peer-tutoring/ to and view the full schedule of available drop-in hours. Students can also use Smarthinking (online tutoring) for writing assistance.

- Learning Specialist: In academic coaching sessions, Learning Specialist assists students in developing study skills, setting goals, and connecting to a variety of campus resources.

RCLC services are offered to all Rutgers-Camden undergraduates at no additional cost. You are invited to call the Learning Center at (856) 225-6442, visit https://learn.camden.rutgers.edu/ or come to the Learning Center located in The Center for Learning and Student Success (CLASS) office located on the 2nd floor of Armitage Hall.

DEVELOPING STUDY SKILLS AND LEARNING STRATEGIES

The Rutgers-Camden Learning Center offers individual consultations and group workshops that support students in developing more efficient and effective study skills and learning strategies. Learning Specialists work with students to address time and project management, academic reading and writing, note-taking, problem-solving, exam preparation, test-taking, self-regulation, and flexibility.

The Learning Center offers free access to a virtual tutor for many Rutgers-Camden courses in both drop-in and weekly format. Tutoring may be individual or in small groups. Tutors will assist with applying course information, understanding key concepts, and developing course-specific strategies. Tutoring support is available throughout the semester.

Go to also https://learn.camden.rutgers.edu/peer-tutoring/ to schedule an appointment today.

Students can also access support 24 hours a day, 7 days a week via Smarthinking https://learn.camden.rutgers.edu/smarthinking/ for additional online tutoring support.

To learn more about the Rutgers-Camden Learning Center visit https://learn.camden.rutgers.edu/, call 856-225-6442, or email **rclc@camden.rutgers.edu.**

Academic Integrity:

Policy found at http://academicintegrity.rutgers.edu/academic-integrity-at-rutgers.

Students are responsible for understanding the principles of academic integrity and abiding by them in all aspects of their work at the University. Students are also encouraged to help educate fellow students about academic integrity and to bring all alleged violations of academic integrity they encounter to the attention of the appropriate authorities.
Academic Integrity means that you must:
•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 your own in a course activity is your own and not from someone else
•obtain all data or results by ethical means and report them accurately
• treat all other students fairly with no encouragement of academic dishonesty
Adherence to these principles is necessary in order to ensure that:
•everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments
•all student work is fairly evaluated and no student has an inappropriate advantage over others
•the academic and ethical development of all students is fostered
•the reputation of the University for integrity is maintained and enhanced.

Rutgers University takes academic dishonesty very seriously. By enrolling in this course, you assume responsibility for familiarizing yourself with the Academic Integrity Policy and the possible penalties (including suspension and expulsion) for violating the policy. As per the policy, all suspected violations will be reported to the Office of Community Standards.
Academic dishonesty includes (but is not limited to):
– cheating
– plagiarism
– aiding others in committing a violation or allowing others to use your work
– failure to cite sources correctly
– fabrication
– using another person's ideas or words without attribution
– re-using a previous assignment
– unauthorized collaboration
– sabotaging another student's work

The use of generative AI tools (such as ChatGPT, DALL-E, etc.) are not permitted in this class; therefore, any use of AI tools for work in this class may be considered a violation of Rutgers University's Academic Honesty policy and Student Conduct Code, since the work is not your own. When in doubt about permitted usage, please ask for clarification. If in doubt, please consult the instructor.

Please review the Academic Integrity Policy at:
https://deanofstudents.camden.rutgers.edu/sites/deanofstudents/files/Academic%20Integrity%20Policy.pdf

Student Resources:

Refer to this site for resources to assist you in preventing academic integrity issues. Such as coaching from the Learning Resource Center, Tips to help prevent AI violations, and other reference material for writing. https://deanofstudents.camden.rutgers.edu/academic-resources

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld. Violations are taken seriously and will be handled according to University policy.

Students are expected to know, understand and adhere to the policies on academic integrity outlined above. Procedures for violation of these policies outlined in the University Code of Academic Conduct will be followed. In all cases, you are responsible for preparing and entering your own work and properly referencing the work of others. Cheating, plagiarism, and other types of misconduct are not acceptable.
Penalties can include expulsion from the University. For the full policy on Academic Integrity please see: http://deanofstudents.camden.rutgers.edu/academic-integrity-process-business

In terms of this course you are free to and encouraged discuss any part of the course materials with your classmates. However, you are not allowed to discuss with, receive assistance from or give assistance to anyone on any part of the course quizzes or exams. Students also may not use online or other resources while completing quizzes and exams.

If a student is found to be engaged in cheating, all sanctions included in the applicable University policies, including the most severe, will be sought.

Support Services:

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation:

https://ods.rutgers.edu/students/documentation-guidelines

If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the Office of Disability Services web site at:

https://ods.rutgers.edu/students/registration-form

Erin G. Leuthold, MS Ed
(856) 225-2717
Rutgers-Camden Disability Services:
311 North Fifth Street, Camden, NJ 08102-1405
Web page: https://learn.camden.rutgers.edu/disability-services
E-mail: erin.leuthold@rutgers.edu

In addition, for any student who is struggling in this course and feels they would benefit from extra help, you may want to consider trying the following resources:

- Pearson Tutoring Services – available via MyMathLab
- Rutgers Learning Resource Center – http://learn.camden.rutgers.edu
- Khan Academy – https://www.khanacademy.org/

Please feel free to share any other useful resources you come across with the entire class so all may benefit.

Important Dates:

Key Spring 2025 Dates:

Spring 2025 classes begin	Tuesday, January 21
Last day to drop classes w/o "W"	Thursday, January 30
Last day to add classes	Thursday, January 30
Spring Break	Saturday, March 15 – Sunday, March 23
Last day to withdraw with "W"	Wednesday, April 21
Regular classes end	Monday, May 5
Reading days (no testing)	Tuesday, May 6 & Wednesday, May 7
Final exam period	Thursday, May 8 – Wednesday. May 14

Course Schedule (Major Topics and Reading Materials)

Listed below are the tentative topics to be covered each week/module. Homework for the sections referenced is due the Sunday following the "Week of Date." Discussions and assessments are due as noted. Note: this schedule may be subject to change if deemed necessary by the instructor. Any changes in topics will be announced via Announcement in Canvas/MyMathLab and/or via email.

Getting Started:1/21/25 **Note: This unit & Week 01 are both due week of 1/21/24**	**Readings (Book)**
Topic: Introduction to Course	
Introduction (view video(s)) Using Canvas Accessing MyMathLab	Canvas Module: Getting Started
Week 01: 1/21/25	**Readings (Book)**
Topic: Algebra and Equations	
Real Numbers Polynomials Factoring	Section 1.1 Section 1.2 Section 1.3
Discussion 1: Self-Introduction **Ungraded Assignment: Complete Orientation to MyMathLab**	**Due Feb. 2** **n/a**
Week 02: 1/27/25	
Topic: Algebra and Equations - Continued	
Rational Expressions Exponents and Radicals First Degree Equations Quadratic Equations	Section 1.4 Section 1.5 Section 1.6 Section 1.7
Syllabus Quiz	**Due Feb. 2**
Week 03: 2/3/25	
Topic: Graphs, Lines and Inequalities	
Graphs Equations of Lines	Section 2.1 Section 2.2
Quiz 1: Chapter 1	**Due on Feb. 9**
Week 04: 2/10/25	
Topic: Graphs, Lines and Inequalities - continued	
Linear Inequalities Polynomial Inequalities	Section 2.4 Section 2.5
Discussion 2: Discussion Assignment #1	**Due Feb. 13/Feb. 16**
Week 05: 2/17/25	
Topic: Exam #1	
Exam 1 – Chapters 1 & 2	**Due on Feb. 23**
Week 06: 2/24/25	
Topic: Functions and Graphs	
Functions Applications of Linear Functions Quadratic Functions	Section 3.1 Section 3.3 Section 3.4

Week 07: 3/3/25	
Topic: Functions and Graphs - Continued	
Polynomial Functions Rational Functions	Section 3.5 Section 3.6
Discussion 3: Discussion Assignment #6	**Due Feb 6/ Mar. 9**
Week 08: 3/10/25	
Topic: Exponential and Logarithmic Functions	
Exponential Functions Applications of Exp. Functions	Section 4.1 Section 4.2
Quiz 2: Chapter 3	**Due on Mar. 16**
Week 09: 3/17/25	
Spring Break	
Week 10: 3/24/25	
Topic: Exponential and Logarithmic Functions - Continued	
Logarithmic Functions Exponential Equations	Section 4.3 Section 4.4
Week 11: 3/31/25	
Topic: Mathematics of Finance	
Simple Interest, Rule of 72 Compound Interest	Section 5.1 Section 5.2
Week 12: 4/7/25	
Topic: Exam #2	
Exam 2: Chapters 3 & 4	**Due on Apr. 13**
Week 13: 4/14/25	
Topic: Mathematics of Finance - Continued	
Annuities, Future Value of Annuity Loan Amortization, Annuities, Present Value	Section 5.3 Section 5.4
Discussion 4: Discussion Assignment # 4	**Due Apr. 17/Apr. 20**
Week 14: 4/21/25	
Topic: Systems of Linear Equations & Matrices	
Systems of Linear Equations (2 variables only) Systems of Linear Equations (> 2 variables)	Section 6.1 Section 6.2
Quiz 3: Chapter 5	**Due on Apr. 27**
Week 15: 4/28/25	
Topic: Course Review	
Practice Final Exam	**Due on May 4**
Week 16: 5/5/25	
Topic: Final Exam (Exam 3); Reading Days (5/6/25 & 5/7/25)	
Exam 3: Chapters 5 & 6	**Due on May 11**