MAT 126: Quantitative Reasoning
Course Syllabus

General Information
MAT 126 Quantitative Reasoning *4 hours, 3 credits*. Survey of modern quantitative techniques in a variety of disciplines. Critical thinking and mathematical/quantitative literacy are emphasized.
Notes: This course satisfies the CUNY Pathways Quantitative Reasoning graduation requirement.

Grading Policy
Expectations: Students are expected to learn the mathematics covered in class and the mathematics in the textbook and other assigned reading. Completing homework is part of the learning experience. Students should review topics from prior courses as needed and, if needed, seek help from their instructor or the Math Lab.
Homework: Online homework using Pearson's MyLab will be assigned at the end of each lesson. Students will be required to complete these assignments as part of their final grade.
Final Grade Computation: Provided that you attend class *regularly* and *on time*, your final course grade will be calculated as follows:

Homework	20%
Quizzes	20%
Midterm Exam	30%
Final Exam	30%

Materials, Resources, and Accommodations
Textbook: Bennett & Briggs, *Using and Understanding Mathematics: A Quantitative Approach 7e*. Students MUST also have access to the accompanying homework software, MyLab. *Consult with your instructor before you purchase anything.*
Technology: Students can use a Scientific Calculator in class, on homework, on quizzes, and on exams.
Tutoring: Departmental tutoring is available in the Math Lab on the 2nd floor of Gillet Hall.
Accommodating Disabilities: Lehman College is committed to providing access to all programs and curricula to all students. Students with disabilities who may need classroom accommodations are encouraged to register with the Office of Disability Services. For more info, contact the Office of Student Disability Services, Shuster Hall, Room 238, 718-960-8441.

Course Objectives
At the end of the course, students will be able to
- Interpret and draw appropriate inferences from quantitative representations, such as formulas, graphs, or tables.
- Use algebraic, numerical, graphical, or statistical methods to draw accurate conclusions and solve mathematical problems.
- Represent quantitative problems expressed in natural language in suitable mathematical format.
- Effectively communicate quantitative analysis or solutions to mathematical problems in written or oral form.
- Evaluate solutions to problems for reasonableness using a variety of means, including informed estimation.
- Apply mathematical methods to problems in other fields of study.

These objectives will be assessed on the midterm and final exams along with other important techniques

Course Topics

There is flexibility in the order and time allotted to each of the topics below, but all topics must be covered by the instructor and understood by the student. *Section numbers refer to the mo*st *RECENT edition of the text; consult with your instructor if you are using an older edition*.

Lesson 1: Introductions, MyLab, & What is QR?
Lesson 2: 3A – Percentages, Fractions, and Decimals
Lesson 3: 3A – Using Percentages
Lesson 4: 3B – Scientific Notation and Conversions
Lesson 5: 3C – Rounding and Error
Lesson 6: 3D – Using the Consumer Price Index
Lesson 7: 3E – Reading Tables and Simpson's Paradox
Lesson 8: 4A – Managing Money Basics
Lesson 9: 4B – Simple and Compound Interest
Lesson 10: 4B – More on Compound Interest
Lesson 12: 4C – Savings Plan Formula
Lesson 13: 4D – Loan Payment Formula
Lesson 14: Review for Midterm Exam
Lesson 15: Midterm Exam

Students who fail this exam should consult with their instructor and consider dropping the course.
Bring a copy of all of your quizzes and your midterm exam to this consultation.
Students can also consult the department adviser

Lesson 16: 5A – Fundamentals of Statistics
Lesson 17: 5C – Qualitative vs. Quantitative Data
Lesson 18: 5E – Correlation and Causality
Lesson 19: 6A – Characterizing Data
Lesson 20: 6B – Variation in Data
Lesson 21: 8A – Linear vs. Exponential
Lesson 22: 8B – Doubling Time and Half-Life
Lesson 23: 8C – Real Population Growth
Lesson 24: 9A – Functions
Lesson 25: 9B – Linear Functions
Lesson 26: 9C – Exponential Functions
Lesson 27: Catch-Up Day and Review
Lesson 28: Review for Final Exam

Exams: Uniform Midterm and Final Exams are given in this course. Samples will be made available to you in advance. Scientific Calculators are allowed on both exams.

Last Updated: Summer 2019