

QUANTITATIVE REASONING

Math 1001 Section 044, CRN 19551
Instructor, Dr. Joshua Miller, Spring 2022
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Office Hours: MW 9:15-10:15 (F2F/Webex), TTh: 10:00-12:00 (Webex)
<https://gsumeetings.webex.com/meet/jmiller208>
Class meeting time: TTh days 2:15 p.m. – 3:30 p.m.

Course Description – What is Quantitative Reasoning?

This course emphasizes quantitative reasoning skills needed for informed citizens to understand the world around them. Topics include logic, basic probability, data analysis, and modeling from data.

Note: This course is an alternative in Area A of the Core Curriculum and is not intended to supply sufficient algebraic background for students who intend to take Precalculus or the Calculus sequences for mathematics or science majors. You are responsible for understanding the implications of taking MATH 1001. Please discuss your situation with your instructor if necessary.

Course Goals

After finishing this course, you should be able to:

1. Interpret and use precise mathematical language appropriately, including the areas of set theory and logic. (Chapters 1, 2, 3)
2. Read, interpret, and present data in multiple representations, especially graphs, functions, and linear systems. (Chapter 7)
3. Identify key components of financial security through an understanding of basic ideas about savings, loans and investments. (Chapter 8)
4. Solve real world applied problems using units of measurement and perform conversions using dimensional analysis. (Chapters 9, 10)
5. Understand and solve problems using the basic principles of probability and elementary statistics, including counting methods and collecting, presenting, and interpreting data. (Chapters 11, 12)

Course Materials

Technical Requirements

- This class uses **iCollege** as its central hub for all communication, content sharing, activities, and tests. [Make sure you have the technology capable of working with iCollege.](#)
 - If you need assistance with iCollege you may contact the GSU Helpdesk: help@gsu.edu | 404-413-HELP

- For assistance outside of the GSU Helpdesk hours of operation, contact [D2L Help Center](#).
- This course also uses the **MyLab Math** platform. [You can check to see if your browser and operating system is supported](#).

Be sure to have a backup plan in case you run into technical difficulties. Deadlines are not extended because of technical issues.

Activity Platform

This course requires access to Pearson MyLab Math (you will access MyLab Math via iCollege). This MyLab platform will provide you access to the digital textbook (eText) and all homework, tests, and most quizzes. MyLab Math has a variety of features available to help you master the course material. These features include a media-rich textbook and interactive homework problems that provide immediate feedback and guided help.

- To get started you can register for MyLab Math using the free 14-day temporary access. You will need to purchase access to MyLab Math later.
- It is the responsibility of the student to use available online resources to resolve all technical issues. Georgia State University and its faculty are not responsible for outcomes due to individual technical issues, nor scheduled MyLab downtime. It is expected that the student will be responsible for completing their work in a timely fashion as to alleviate any pressures these scheduled downtimes occur. Whenever you have an issue with MyLab, [please contact Pearson directly for support](#).

Textbook

Blitzer, Thinking Mathematically 7th Edition (ISBN: 9780135903575)

Online access to the digital textbook (eText) is included in the purchase of MyLab Math access. If you would like a hard copy, [you can purchase it from the publisher for an additional \\$49.99](#); they will ship the textbook to you free of charge.

Notebook, paper, and pencils

Completing a math course requires that you write out math problems. It is important that you keep your notes and coursework organized in a notebook so that you can refer to them as you prepare for exams.

Assessments

Each unit in this course has a similar structure with homework and quizzes and unit exam. Consistent and progressive work spread out over the whole semester will help you to both retain what you are learning and reduce the stakes of any single assignment. This table provides a quick overview; see below for detailed description of each assessment category.

Summary of Math 1001 Assessments

Category	Information	Part of Grade
Unit Tests	4 tests total, 10% each	40%
Homework	Unlimited attempts prior to due date; highest score recorded. Exam reviews are counted as required homework.	25%
Quizzes	3 or 4 quizzes per unit (13 total); two attempts allowed; best score recorded.	15%
Final Exam	Cumulative	15%
Project	Individual project teaching you how to use Excel for calculations.	5%

Weekly Activities

You will complete homework activities and a quiz every week.

Homework (25%): Homework in MyLab Math (including all exam reviews which are counted as part of your homework grade) is required and should also be used as preparation for quizzes and exams. Do the homework exercises repeatedly until you can do the work correctly without any assistance from tutors, notes, or software tutorials. The online homework assignments and exam reviews can be attempted unlimited number of times prior to the due date. The highest score will be recorded. Exam reviews are counted as required homework.

Quizzes (15%): You must have a minimum score of 80% on your corresponding homework assignment to be able to take a quiz in MyLab Math. The quizzes can be attempted up to two times. Your best score will be recorded.

Note: There will be NO makeups, NO amnesty day. If you miss the deadline of a quiz or homework for any reason, you are allowed to complete it with 15% penalty.

Unit Activities

You will start each unit with a knowledge check activity (Non-Credit) and close each unit with a unit exam and another knowledge check activity (bonus quiz).

Unit Tests (40%): There are four (4) unit exams in MyLab Math.

- Test 1 covers chapters 1, 2, 3.
- Test 2 covers chapters 7, 9.
- Test 3 covers chapters 8, 10.
- Test 4 covers chapters 11, 12.

Each Unit Test will focus on the mentioned chapters and is cumulative, which means that it will include questions from previous units as well. You can take the tests from any computer with Internet access. You have one attempt for each question and 90 minutes to complete each test. See the calendar for the dates of the tests.

Extra Credit: In iCollege there is a bonus quiz at the end of each module that will count toward your Unit Exam grade (The maximum of each bonus quiz is 5 exam points).

Final Exam

Final Exam (15%): The final exam must be completed during the scheduled final exam period. You will have one attempt for each question and 150 minutes to complete the exam. The final exam is cumulative and covers material from chapters 1-3, 7-12. You should have a minimum score of 70% on the two-part final exam review to be able to take the final exam in MyLab Math. The final exam may NOT be taken outside of the exam period. The final exam is mandatory to complete the course.

Note: If your Final Exam score is higher than your lowest test score, it will replace the lowest test score in the determination of your final course grade.

Project (5%): A small project using Excel will be assigned in Week 10 and is due Week 12.

Grading

Grading Scale and Calculation:

You are responsible for keeping track of your own grade. Please email your instructors if you have any concerns about your grade.

Grade Calculation: The overall average in your online grade book may be incorrect due to unattempted assignments not being set to zero. Your homework and quiz overall average are correct ONLY after work not attempted has been assigned a 'zero'.

The Course Grade is computed by using the following formula: $25\% * \text{Homework} + 15\% * \text{Quiz} + 40\% * (\text{Test 1} + \text{Test 2} + \text{Test 3} + \text{Test 4} + \text{Bonus}) / 4 + 5\% * \text{Project} + 15\% * \text{Final Exam}$

Rounding: When determining the final course average, grades will be rounded in the usual way. For example, a grade of 86.5 will be rounded to an 87, 86.4 will be rounded to an 86.

Grade	Range
A+	97-100
A	93-96
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	70-76
D	60-69
F	0-59

Example of Final Course Grade Computation:

Homework Average : 90

Quiz Average: 78

Test Grades: T1 = 88, T2 = 72, T3= 68, T4=80

Bonus: 12

Project: 85

Final Exam: 77

*Final Grade: $0.25*90 + 0.15*78 + 0.40*(88 + 72 + 77 + 80 + 12)/4 + 0.05*85 + 0.15*77 = 82.9$*

Note: In this case the final exam grade replaced the lowest test grade.

Course Schedule

Schedule

The following schedule is a general overview of how the course will be conducted. This course is divided into four units, each covering two to three chapters. For more detailed information about what is required for each unit, check out the weekly introductions and the printable calendar in iCollege.

Week	Module	Details - See Calendar for Due Dates (Due dates and times are Eastern Time)
First days of class	Start Here	Review all information in the Start Here module and register for MyLab Math
Weeks 1-4	Unit 1	Chapters 1, 2, 3; Homework & Quizzes 1-4; Unit Exam 1
Weeks 5-7	Unit 2	Chapters 7, 9; Homework & Quizzes 5-7; Unit Exam 2
Weeks 8-10	Unit 3	Chapters 8, 10; Homework & Quizzes 8-10; Unit Exam 3
Weeks 11-14	Unit 4	Chapters 11, 12; Homework & Quizzes 11-13; Unit Exam 4
Week 15	Wrap Up	Review for Final and take Final Exam

Homework and Quizzes all due on Sunday nights at 11:59pm

Note: must pass Homework with 80% in order to take the Quiz.

Note: must pass “Review for Exam” with 70% in order to take the exam.

This syllabus is subject to change at the instructor's discretion. All changes to the course will be announced in iCollege and all students are responsible for keeping track of such changes.

COURSE POLICIES

Participation Expectations

Successful students start assessments and assignments well ahead of the due date to allow time for questions and to seek help.

Calculator Policy

Calculator Policy: You are free to use any stand alone calculator, i.e. not a part of your cell-phone or similar device, or any graphing calculator. Remember that you will be asked to provide work for the questions on your tests and the final. Calculators are not allowed to be shared during any exam unless permitted by your instructor.

Make Up

If you miss the deadline of a quiz or homework for any reason, you are allowed to complete it with 15% penalty. No make-ups are given for unit exams unless in some extreme situations, like university-

approved excuses which must be verified in writing. If feasible, written notification in advance is required. Otherwise, it allows two working days for notification. Excuses must have some form of written verification, such as a doctor's note. If your Final Exam score is higher than your lowest unit test score, it will replace the lowest test score in the determination of your final course grade. No make-ups are given for the final exam. Absence from the final exam will result in a grade of F for the course unless arrangements are made PRIOR to (one week before) the administration of the test.

Verified Absence

Students who want to do well in this course will attend class following the class attendance policy. You will need an excused absence due to illness. GSU has a new process for students seeking excused absences through the Dean of Students Office. Please submit documentation to <https://deanofstudents.gsu.edu/student-assistance/professor-absence-notification/>. I will then be notified by the Dean of Students of any excused absences.

Withdrawals and Incompletes

See the [registrar's semester calendar](#) for the last day for regular withdrawal. Please talk to your instructor and your advisor before withdrawing from this course.

Assignment of incompletes by an instructor follows the university policy on incompletes. In particular, incompletes can be assigned at the discretion of the instructor and not the student. The student must have completed most of the major assignments of the course (generally all but one). The student must be earning a passing grade in the course in the judgment of the instructor. A schedule for completion of assignments must be approved prior to the assignment of the incomplete.

Cheating/plagiarism

Cheating/plagiarism will not be tolerated on any work. A first occurrence will result in a grade of 0 on the assignment for all concerned parties as well as an Academic Dishonesty form being filed with the Dean of Students. A second occurrence will result in a grade of F for the course for the concerned parties and a second Academic Dishonesty form being filed." Also refer to the university Policy on Academic Honesty. For example: This course is conducted in a manner consistent with the university policy on academic honesty at <http://codeofconduct.gsu.edu/>.

Accommodations

Students who wish to request accommodation for a disability may do so by registering with the Access and Accommodation Center. Students may only be accommodated upon issuance by the [Access and Accommodation Center](#) of a signed **Accommodation Plan** and are responsible for providing a copy of that plan to instructors of all classes in which accommodations are sought.

Student Records & Privacy

In keeping with USG and university policy, I will make every effort to maintain the privacy and accuracy of your personal information. Specifically, unless otherwise noted, I will not actively share personal information gathered from the course with anyone except university employees whose responsibilities require access to said records. This course may use websites and technologies such as iCollege. As such, some information collected from iCollege, websites, or other technologies may be subject to the Georgia Open Records Act. This means that while I do not actively share information, in some cases we may be compelled by law to release information gathered from the site. Also, the course will be managed in

compliance with the [Family Educational Rights and Privacy Act \(FERPA\)](#), which prohibits the release of education records without student permission.

Diversity, Inclusion, and Respect

It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of all diversity including gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your comments (in the discussion posts and in other activities) related to the class and content will be encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups.

Course Evaluation and Evolution

Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State. Upon completing the course, please take the time to fill out the online course evaluation.

Getting Help and Accessing Resources

How Do I Contact You?

I prefer to be contacted in the following way(s).

- GSU email is my preferred way to be contacted (be sure to use your student GSU email).
- I am also available during online office hours (see top of syllabus).

How Do I Access My Course?

You can log in to your course via [iCollege](#). For help logging into iCollege, please see [GSU's FAQs about iCollege](#) (including username info, why courses are in PAWS, but not iCollege, etc.).

If your courses have disappeared from iCollege, it is likely that [financial aid](#) needs to be contacted.

What Other Resources are Available if I need Help with the Material?

The MAC (Math Assistance Complex) online tutoring at the tutor ocean gsu-as.tutorocean.com
If first time with tutor ocean, create an account, if already have an account just sign in to get an available tutor.

The Learning and Tutoring Center also offers online tutoring. Go to the [Learning and Tutoring Center](#) and click on Online Tutoring for more information.

How Do I Get Help with iCollege and MyLab Math?

Go to the [GSU Technology Support](#) for help with iCollege.

Go to [Pearson's support page](#) for help with MyLab Math.

How Do I Succeed in this Course?

If this is your first time taking an online course, you should refer to

- [GSU's Keep Learning: Resources For Learning Away From Campus](#)
- [Online Time Management Essentials Guide](#)

How much time do I need to spend working on this course?

Since this is a 3-credit hour course, GSU recommends that you spend around 3 hours or more per week interacting with readings, videos, and other sorts of content and then 6 hours (2 hours per credit hour) per week completing activities and assessments. This comes to a total of 9 hours per week for this course.

How Should I Study?

- Review assigned chapters, practice homework assignments until you have mastered them, and review old quizzes before exams.
- When doing your homework activities, use the built in **Learning Aids** which include:
View an Example and Help me Solve This