



**Foundations of Math Reasoning (MATH-0308-033IN-FA2021)**

Quantitative Reasoning  
Fall 2021  
Online Course

Instructor Information: Prof. Lakshmi Suresh  
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Student hours and location: Asynchronous, online on Blackboard.

**Required Textbook:** A Survey of Mathematics With Applications, 10th edition, by Angel, Abbot, and Runde, Pearson Education, 2017.

The access code for MyMathLab may be purchased with the textbook or may be purchased separately at mymathlab.com. A calculator is needed for this course. A Texas Instruments TI30XIIS is recommended. You will need computer access to the internet to use MyMathLab. If you do not have a computer and/or dependable internet access, contact your professor immediately so that you may discuss any options that may be available to you through the college.

**Course Description:** Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications. Number sense, proportional reasoning, estimation, technology, and communication will be embedded throughout the course.

**Course requirements:** Access to internet and Mymathlab.

**Discussion Forums:** Discussion forums will be assigned four times throughout the course to give students the opportunity to exchange and clarify ideas. Students are asked to answer one or more questions as thoroughly as possible, and then to comment on at least two of their classmates' responses to the questions.

**Homework Assignments on MyMathLab:** There is a homework assignment for each unit covered. These are listed on the course outline of this syllabus. Each day's homework assignments must be completed by 11:59 pm on the due date shown on both the course outline and on the list of assignments on MyMathLab.

**Quizzes on MyMathLab:** Six quizzes which relate to the student learning outcomes, will be done on MyMathLab. Like the homework assignments, the due dates are shown on both the course outline on this syllabus and on the assignment list on MyMathLab. Unlike the homework assignments, the quizzes must be taken in one sitting, they are timed, and the student gets only one attempt to answer each question. The quizzes may be retaken one time. The higher of the two grades will be used to determine the student's quiz average.

**Chapter Exams:** There are four exams which cover the chapters in the text book. The exams are taken on MyMathLab and are to be finished by the due dates shown on the course outline on this syllabus and on the course outline on MyMathLab.

The student has two hours to take each exam. Like the quizzes, the exams must be taken in one sitting, and the student gets only one attempt to answer each question. Exams may not be retaken.

**Comprehensive Final Exam:** The comprehensive final exam is taken on MyMathLab and must be finished by the due date shown on the course outline on this syllabus and on the assignment list on MyMathLab. The student has two hours to complete the final exam. The final exam must be taken in one sitting, and the student gets only one attempt to answer each question. The final exam may not be retaken.

#### **Determination of Course Grade/Detailed Grading Formula:**

Discussion Forums	5%
Comprehensive Final Exam	15%
Average of Chapter Exams	
60% Homework Average	
10% <u>Quiz Average</u>	
<u>10%</u>	
Final Average	100%

**Grade I:** Given unforeseen circumstances that result in the student's inability to successfully complete the course objectives, an I-Contract may be requested from the instructor assuming the following criteria have been met:

1. Have a passing overall average (70 or higher)
2. All work completed except for The Final Exam.

#### **Grading Scale:**

Grade A: Final Average is [89.5, 100]

Grade B: Final Average is [79.5, 89.5)

Grade C: Final Average is [69.5, 79.5)

Grade D: Final Average is [59.5, 69.5)

Grade F: Final Average is [0, 59.5)

Late Work, Make-Up, and Extra-Credit Policy: There is a twenty point penalty for all homework and quizzes submitted after the due date. There are no make-up exams unless: 1) the student notifies the instructor before the exam due date, and 2) the reason for the requested make-up exam is extraordinary. Extra-credit may be given on assignments from time to time throughout the course at the discretion of the instructor. Their worth and the requirements for earning the extra-credit will be discussed at the time of the assignments.

Attendance Policy: Students at COM are expected to participate every week for which they are registered. Per COM policy, students are required to log on to their course at least twice per week, but would suggest logging in each day to complete the necessary assignments on time that are required of this course.

Communicating with your instructor: ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means. I can answer mundane questions about the course or about homework, quiz or exam questions using the phone numbers or email addresses given at the top of the syllabus, but if you have a question about your grade, you must log into your email account at COM and email me at my COM email to state your question and to receive my reply.

Table Mapping SLO's and Core Objectives:

Student Learner Outcome Maps to Core Objective Assessed via this Assignment:

- |   |                            |
|---|----------------------------|
| 1. Apply the language and notation of sets.<br>Quiz 1   | Communication Skills       |
| 2. Determine the validity of an argument or statement and provide mathematical evidence.<br>Quiz 2  | Critical Thinking Skills   |
| 3. Solve problems in math of finance.<br>Quiz 6   | Critical Thinking Skills   |
| 4. Demonstrate fundamental Skills Quiz 3 probability and counting techniques and apply those techniques to solve problems.  | Emperical and Quantitative |
| 5. Interpret and analyze various representations of data.<br>Quiz 4   | Critical Thinking Skills   |
| 6. Demonstrate the ability to choose and analyze mathematical models to solve problems from real-world settings, including personal finance, health literacy, and civic engagement.<br>Quiz 5 | Critical Thinking Skills   |

Academic Dishonesty: College of the Mainland is committed to a high standard of academic integrity. All students are responsible for honesty and independent effort. Incidents of academic and scholastic dishonest (including cheating, plagiarism, and collusion) will be dealt with in a manner that is consistent with College Policy and the Student Handbook. Any student found to have be academically dishonest on an assignment, quiz or exam will receive a zero for that assignment, quiz or exam and he or she will be referred to the Office of Student Conduct for further disciplinary action. Please read the sections of Standards of Student Conduct and Discipline and Penalties in the on-line Student Handbook.

Student Concerns: If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact Mr. Leslie Richardson, Math Department Chair, at 409-933-8329 or lrichardson@com.edu.

### Course outline and Calendar

Week #	Dates	Tentative Due Dates
1	8/23-8/29	Discussion Forum: Introduce yourself Orientation Exercises 2.1 Set Concepts 2.2 Subsets
2	8/30-9/5	Discussion Forum: Sets and Subsets , 2.3 Venn Diagrams and Set Operations, 2.4 Venn Diagrams w/Three Sets & Equality of Sets 2.5 Application of Sets
3	9/6-9/12	Quiz (Section 2.5, SLO 1) 1. Statements and Logical Connectives 3.1 Truth Tables: Negation, Conjunction, Disjunction 3.2 Truth Tables: Conditional & Biconditional 3.3
4	9/13-9/19	3.4 Equivalent Statements Quiz 2 (Sections 3.2, 3.3, 3.4, SLO 2) Review for Exam 1 Exam 1 (2.1 – 3.4)
5	9/20-9/26	11.1 Empirical and Theoretical Probabilities Due 11.2 Odds Due Discussion Forum: Probability and Odds Due

6	9/27-10/3	11.3 Expected Value 11.4 Tree Diagrams
7	10/4-10/10	11.5 OR and AND Problems 11.6 Conditional Probability
8	10/11-10/17	Review for Exam 2 <b>Exam 2 (11.1 – 11.6)</b>
9	10/18-10/24	11.7 The Counting Principle and Permutations 11.8 Combinations Discussion Forum: Permutations and Combinations
10	10/25-10/31	11.9 Solving Probability Problems w/Combinations <b>Quiz 3 (Section 11.1, 11.5 – 11.9, SLO 4)</b> 11.10 Binomial Probability Formula
11	11/1-11/7	12.2 Frequency Distributions & Statistical Graphs <b>Quiz 4 (Section 12.2, SLO 5)</b> 12.3 Measures of Central Tendency
12	11/8-11/14	12.4 Measures of Dispersion Review for Exam 3 <b>Exam 3 (11.7 – 12.4)</b>
13	11/15-11/21	6.2 Formulas, 6.3 Applications, 6.10 Functions & Graphs 10.1 Percent 10.2 Personal Loans and Simple Interest 10.3 Compound Interest
14	11/22-11/28  <b>Thanksgiving</b>	<b>Quiz 5 (Section 10.1 – 10.3, 6.10, SLO 6)</b> 10.4 Installment Buying 10.5 Buying a House with a Mortgage
15	11/29-12/5	<b>Quiz 6 (Section 10.2, 10.3, 10.4, 10.5, SLO 3)</b>

		Review for Exam 4 Exam 4 (6.2, 6.3, 6.10, 10.1 – 10.5)
16	12/6-12/12	Review for the Comprehensive Final Exam The Final Exam

The syllabus is subject to change at the discretion of the instructor.

### Institutional Policies and Guidelines

**Grade Appeal Process:** Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook. <[https://build.com.edu/uploads/sitecontent/files/student-services/Student\\_Handbook\\_2019-2020v5.pdf](https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf)>. An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.

<[https://build.com.edu/uploads/sitecontent/files/student-services/Student\\_Handbook\\_2019-2020v5.pdf](https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf)>.

**Academic Success & Support Services:** College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

**ADA Statement:** Any student with a documented disability needing academic accommodations is requested to contact Holly Bankston at 409-933-8520 or [hbankston@com.edu](mailto:hbankston@com.edu). The Office of Services for Students with Disabilities is located in the Student Success Center.

**Counseling Statement:** Any student needing counseling services is requested to please contact Holly Bankston in the student success center at 409-933-8520 or [hbankston@com.edu](mailto:hbankston@com.edu). Counseling services are available on campus in the student center for free and students can also email [counseling@com.edu](mailto:counseling@com.edu) to set up their appointment. Appointments are strongly encouraged; however, some concerns may be addressed on a walk-in basis.

**Textbook Purchasing Statement:** A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a “W” grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw is Monday, July 5th.

FN Grading: The FN grade is issued in cases of failure due to a lack of attendance, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an FN grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

COVID-19 Statement: All students, faculty, and staff are expected to familiarize themselves with materials and information contained on the College of the Mainland’s Coronavirus Information site at [www.com.edu/coronavirus](http://www.com.edu/coronavirus). Students are required to watch a training video, complete the self-screening, and acknowledge the safety guidance at: [www.com.edu/selfscreen](http://www.com.edu/selfscreen). In addition, students, faculty, and staff must perform a self-screening prior to each campus visit. Finally, students, faculty, or staff who have had symptoms of COVID-19, received a positive test for COVID-19, or have had close contact with an individual infected with COVID-19 must complete the self-report tool.

#### Success Tips:

- Schedule your study time and be diligent in sticking with it. It is recommended that you allocate two hours outside of class for each hour in class.
- Find a study partner.  
Studying with another person can help keep you motivated and on task.
- Be an active learner.  
Attend all your classes and be on time.  
Listen carefully, take good notes and participate in class. Review your class notes regularly Read the textbook.  
Do all the assignments.  
Study for all the exams using the reviews provided. Rework homework problems.  
Seek help when something is unclear, don’t put it off.
- Have a positive attitude. You can learn math!
- Use resources that are available.
- Use the instructor’s office hours.

Use the free tutoring that is available in the Math Lab, TVB 1306

MymathLab can be accessed through the Blackboard. Go to MymathLab on the left hand side of Blackboard and click enter. You will be directed directly to the Mymathlab page.

pay for your access to MyMathLab using a credit card or Pay Pal, click the amount, enter the requested information, and follow their lead, or take advantage of the 14 day free trial offer. In the sentence toward the bottom of the page, click Get temporary access without payment for 14 days, on the next page, click yes. Warning! If you choose this option and fail to pay within the 14 days, you will be dropped from MyMathLab and you will lose all the grades you have earned.

To Read the e-text on MyMathLab, Log onto MyMathLab.

Click on your course.

Click on Multimedia Library on the menu on the left.

Select the chapter using the drop down menu.

Check the Multimedia Textbook box.

Click Find Now.

Scroll down. Click on the section you wish to read. Begin reading.

You can move forward or backward through the pages using the right arrow or left arrow at the top of the page toward the left.

To Watch a Video on MyMathLab, Log onto MyMathLab.

Click on your course.

Click on Multimedia Library on the menu on the left.

Select the chapter using the drop down menu.

Select the unit using the drop down menu.

Check the video box.

Click Find Now.

Click on the video title you wish to watch, (there may be more than one).

To do a homework assignment on MyMathLab, 1. Log into My Math Lab:

- Go to [www.mymathlab.com](http://www.mymathlab.com)
- Click the Log In button and enter your Login Name and Password
- Click on the appropriate class
- Click on the ALL ASSIGNMENTS button



- Click on the homework assignment or quiz you wish to do.
- 2. Read the question and instructions for entering the answer carefully, and show all appropriate work in your notebook.
- 3. Enter your answer in the box provided, and then click the CHECK ANSWER button.
- 4. If needed, click the SIMILAR EXERCISE button to redo the exercise.
  
- 5. If the submitted answer is correct, click on the SAVE button to send your results to the gradebook. Your grade will show up in the GRADEBOOK and will be automatically accessible by both you and your professor.
- 6. Click on the next question to continue.