MATH 106 - QUANTITATIVE REASONING, FALL 2021
SECTION 07, TR 4:30-5:45PM

Instructor: Simone Mazzini Bruschi (She/her)

Office:	Exploratory Hall, room 4219
Office hours:	Monday & Wednesday 2:00-2:30pm & Tuesday 2:30-3:30 pm & Thursday 6:00-7:00pm and by appointment
Email:	sbruschi@gmu.edu (please, include Math 106-007 in the subject line)

Textbook and Materials: Viewing Life Mathematically (Custom for GMU) by Denley. Please use the free trial when you start using this system just in case after a week or so you decide to change your plans. Follow prompts for HAWKES on Blackboard. PLEASE NOTE THAT YOU WILL NEED TO PAY (less than $100) for this system after the first week of class in order to continue accessing the learning system, homework and some quizzes/tests.

Testing schedule:

	Date and Time
Quiz 1	Thursday, September 9
Midterm 1	Thursday, September 23
Quiz 2	Thursday, October 14
Midterm 2	Tuesday, November 02
Quiz 3	Tuesday, November 16
Final	**Tuesday December 14, 4:30pm-7:15pm**

Weekly tentative schedule:
- Week 1:

08/24 - Sections 1.1, 1.2

08/26 Estimates, Set Notation - Sections 1.3, 2.1
- Week 2:

08/31 Subsets and Ven Diagramas Section 2.2

09/02 Set Operations Section 2.3
- Week 3:

09/07 Applications and Surveys Section 2.4

09/09 Quiz 1 - Logic and Negations, Section 3.1
- Week 4:

09/14 Truth tables - Section 3.2

09/16 Logical equivalence and DeMorgan's Law - Section 3.3
- Week 5:

09/21 Rates and Unit Rates - Section 4.1

09/23 Midterm 1
- Week 6:

09/28 Ratios - Section 4.2

09/30 Proportions and Percentages
- Week 7:

10/05 Using Percentages

10/07 Introduction to Probability - Section 7.1 (BST - 4.1)
- Week 8:

10/14 Quiz 2 Addition Rules for Probability - Section 7.2 (BST - 4.2)
- Week 9:

10/19 Multiplication Rules for Probability - Section 7.3 (BST - 4.3)

10/21 Combinations and Permutations - Section 7.4 (BST - 4.4)
- Week 10:

10/26 Combining Probability and Counting Techniques - Section 7.5 (BST - 4.5)

10/28 Data graphs - Section 1.1 (BST - Ch 2)
- Week 11:

11/02 Midterm 2

11/04 Measures of center - Section 8.1 (BST - 3.1)
- Week 12:

11/09 Measures of dispersion - Section 8.2 (BST - 3.2)

11/11 Measures of Relative Position - Section 8.3 (BST -3.3)
- Week 13:

11/16 Quiz 3 Introduction to Normal and Standard Normal Distribution - Section 8.4 (BST 6.1, 6.2)

11/18 Introduction to Normal and Standard Normal Distribution - Section 8.4 (BST 6.1, 6.2)
- Week 14:

11/23 Finding Probability with a Normal Distribution - Section 8.5 (BST 6.3)

11/25 Thanksgiving
- Week 15:

11/30 Review

12/14 4:30pm-7:15pm Final Exam

Needed equipment: INTERNET, COMPUTER, EXCEL, Calculators: You will be required to have a calculator for the course with an e^x function and factorial function (!). We are recommending the TI- 83/84 (ONLY IF YOU HAVE ONE ALREADY) or TI-30II. You will also be prompted to/ permitted to/ encouraged to use excel for some more involved calculations.

Course Description This course meets the quantitative reasoning requirement, one of the Foundation requirements of the University General Education program. The goal of the Foundation requirement is to help ensure that students are equipped with the tools and techniques necessary to succeed in college and throughout their lives and careers. The learning objectives for this requirement are:

(1) Students are able to interpret quantitative information (i.e., formulas, graphs, tables, models, and schematics) and draw inferences from them.

(2) Given a quantitative problem, students are able to formulate the problem quantitatively and use appropriate arithmetical, algebraic, and/or statistical methods to solve the problem.

(3) Students are able to evaluate logical arguments using quantitative reasoning.

(4) Students are able to communicate and present quantitative results effectively. The course will introduce the following material: Inductive and Deductive Reasoning, Sets, Logic, Counting, Probability, Statistics and Finance.

Grading: Your grade will be weighted as follows. On Hawkes, your quizzes will be (50%) of your Hawkes grade, and your homework will be (50%) of your Hawkes grade. No tests will be dropped.

Hawkes:	20%
Quizzes:	15% (5% each)
Midterms:	40% (20% each)
Final Exam:	25%

Your course total (out of 100) will be converted into your letter grade by the following table.

A-, A	$90 - 100$
B-, B, B+	$80 - 89$
C-, C, C+	$70 - 79$
D-, D, D+	$60 - 69$
F	$0-59$

$+$ or $-$ may be attached to the grade for *approximately* the upper or lower 2 points.

HOW TO USE HAWKES

Each lesson of the software offers three modes:

(1) Learn is an interactive presentation of the material found in your textbook and includes instructional video clips and example problems.

(2) Practice gives you access to unlimited practice problems, provides error- specific feedback for commonly made mistakes, hints for all incorrect answers, and includes an interactive Tutor with Stepby-Step guidance and fully worked out solutions. Note that every question type from Certify can be found in the Practice mode.

(3) Certify is the homework portion of the lesson. After answering the set of questions without exceeding the available strikes (or lives), you will receive a perfect 100% score for your homework. If you are not able to Certify in your attempt, you are able to start a new set of questions over again with no penalty. In the meantime, you may wish to spend more time in the Practice mode before attempting Certify again. You have unlimited attempts in each lesson to receive full credit before the due date.

Additional videos can be found at www.hawkestv.com.

GETTING HELP

Contact Hawkes with any technical questions, including creating your username and password, finding your Access Code or license number, or completing your work.

Phone: 1.800.426.9538 available Monday-Friday, from 8:00am-10:00pm ET.

Email: support@hawkeslearning.com

Chat: www.hawkeslearning.com/chat   Chat support is available 24/7.

Academic integrity: To promote a stronger sense of mutual responsibility, thrust, and, fairness among all members of the Mason community, and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code:

Student members of the George Mason University community pledge not to cheat, plagiarize, steal, lei in matters related to academic work

For the remainder of the code, see: http://oai.gmu.edu/mason-honor-code

Students with Disabilities: All academic accommodations must be made through the Office of Disability Services (ODS) at 703.993.2474. Students must provide a copy of their Faculty Contact Sheet in order to receive accommodations. Note that accommodations are not retroactive. https://ds.gmu.edu

Equity and Inclusion: George Mason University is an intentionally inclusive community that promotes and maintains an equitable and just work and learning environment. We welcome and value individuals and their differences including race, economic status, gender expression and identity, sex, sexual orientation, ethnicity, national origin, first language, religion, age, and disability. Please email me if you have any concerns about any feeling of inequity in this course.

Attendance Policy: Students are expected to attend all classes and are responsible for all information presented. If a student misses a class, it is their responsibility to get notes on what they missed.

Tutoring Center: GMU Math Tutoring Center: The Math Tutoring Center will be offering online tutoring services to students currently enrolled in undergraduate Math courses at GMU. More information can be found at

http://math.gmu.edu/tutor-center.php

https://science.gmu.edu/academics/department-untis/mathematical-sciences/math-tutoring/tutoring-center-hours-and

Important dates:

Classes Begin - August 23

Last day to drop with no Tuition Penalty - September 7

Last day to drop - September 14

Final Exam - December 14, 4:30pm-7:15pm