Math 106 Section 005 Fall 2022 Syllabus **Instructor:** Simone Mazzini Bruschi

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IMPORTANT: Always start the subject line of email with the code of the course and section (Math 106-005) followed by the specific subject. For instance and email about office hours should have the following subject line: "Math 106-005 Office hours". I will reply within one business day.

Office hours: Monday: 1:30pm-2:30pm, Wednesday: 4:30pm-6:30pm, in person at Exploratory Hall, room 4221. For an alternative time, please request an appointment by email.

Some your grade will come from doing the work in the online learning management system called Hawkes. There will be 3 collaborative projects.

Text/Online learning system: Viewing Life Mathematically 2nd edition by Denley. Your course fees paid for access to the eBook and online homework system. You do not need to spend any more money on any materials (except a calculator) for this class. You may choose to also purchase the printed book from the bookstore, but most students are fine without it. Follow prompts for **HAWKES** on Blackboard.

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. Many of us use excel in this course and in the Stat section there is a "copy data" button for easy transfer of data to a spreadsheet. If you do not have the Microsoft Office here is a link to get it free:

https://its.gmu.edu/knowledfgebase/how-to-install-microsoft-365-apps-for-enterprise-on-your-computer/

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.

Math 106 Course Description:

Quantitative skills for the real world. Topics include critical thinking, modeling by functions, graphs, growth, scaling, probability and statistics.

- **Final Exam: Thursday, December 8, 1:30pm-4:15pm. It is in person, cumulative and comprehensive exam. See the University Final Exam schedule at** https://registrar.gmu.edu/wp-content/uploads/Fall-2022-Final-Exam-Schedule.pdf

Grading: No tests will be dropped. No make-ups of quizzes and exams. The final exam grade can substitute the lowest exam grade

Assignment	Weight
Projects (collaborative)	10%
Tests (average of 3 in class tests)	40%
In class written quizzes (average of 5 quizzes)	10%
Hawkes Quizzes (average of 6 quizzes)	10%
Hawkes Certify Lessons	10%
Final Exam-Thursday, December 8 - 1:30-4:15pm at Nguyen Engineering Building, room 1103	20%

The **grading scale** will be: A: 90-100%; B: 80-89%; C: 70-79%; D: 60-69%; F: below 60% .
+ or – may be attached to the grade for the upper or lower 2 points in each range

Exams Schedule

	Date
Exam 1	09/22
Exam 2	10/20
Exam 3	11/22
Final Exam	12/8 - 1:30-4:15pm

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 Step-by-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.

Blackboard Login Instructions: All users access Blackboard through the myMason portal. To access Blackboard, log in to mymason.gmu.edu and select the Courses tab. Faculty and students will gain access to their courses from this location.

Diversity, 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.

Religious Holidays: GMU is accommodating to all religious holidays observed by its students and faculty. It is each student's responsibility ***during the first two weeks of the semester*** to inform instructors the dates of any major religious holidays on which the student will be absent or unavailable due to religious observances. https://ulife.gmu.edu/religious-holiday-calendar/

Disability statement: If you are a student with a disability and you need academic accommodations, please contact Disability Services at 703.993.2474. All academic accommodations must be arranged through that office. Your accommodations sheet must be submitted on Blackboard at least one week prior to any assessment that you are requesting accommodations for. https://ds.gmu.edu/

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: https://science.gmu.edu/academics/departments-units/mathematical-sciences/math-tutoring/tutoring-centerhours-and

Academic Integrity: In your application to GMU, you signed an agreement to adhere to the Honor Code, which states that you must not "cheat, steal, plagiarize, or lie in matters related to your academic work."

University Honor Code: You are expected to follow the GMU Honor Code https://oai.gmu.edu/

Student Privacy/FERPA: The Family Educational Rights and Privacy Act of 1974 (FERPA) is a federal law that governs the education records of eligible students. It grants students continuous access to their education records upon request, allows students to amend their records if they feel they're inaccurate, and restricts how and when their education records can be disclosed. https://registrar.gmu.edu/ferpa/

Netiquette: Craft your messages carefully to avoid misinterpretation. Keep these online communication strategies in mind:

- Avoid vague words, jargons, and sarcasm—any rude or disrespectful posts will result in a grade deduction
- Edit meticulously

Additional Resources/Student Services:

- Keep Learning, Learning Services https://learningservices.gmu.edu/keeplearning/
- Counseling and Psychological Services https://caps.gmu.edu/
- University Libraries https://library.gmu.edu/
- See a longer list of Mason student support services posted on The Stearns Center website: https://stearnscenter.gmu.edu/knowledge-center/knowing-mason-students/student-supportresources-on-campus/

Important dates:
Classes Begin - August 22
Last day to drop with no Tuition Penalty - September 6
Last day to drop with Tuition Penalty - September 13
Unrestricted withdrawal Period - September 14 - September 27
Last day of classes: December 03.
Final Exam - December 8, 1:30pm-4:15pm

Tentative of Schedule (any change will be sent through Blackboard announcement and announced in class)

Week 1 (Ratios, Percentages, Rates, and Proportionality) Due 8/28	1.2 Estimating 4.1 Proportions, Percentages, and Ratios 4.2 Using Percentages
Week 2 (Ratios, Percentages, Rates, and Proportionality) Due 9/2	Quiz in class 4.3 Rates, Unit Rates, and Rates of Change 4.4 Using Rates for Dimensional Analysis 4.5 Proportionality
Week 3 (Algebra: Equations, Inequalities, and Functions) Due 9/9	Hawkes Quiz Project - Chapter 4 5.1 Linear Equations and Functions 5.2 Linear Modeling
Week 4 (Functions) Due 9/16	Quiz in class 5.7 Exponential Functions
Week 5 Exam 1 - IN CLASS	Hawkes Quiz Review/Collaborative practice exam in class **Exam 1**
Week 6 (Finance) Due 9/30	6.1 Understanding Interest 6.2 Saving and Investing
Week 7 (Finance) Due 10/7	Quiz in class 6.3 Borrowing Money 6.5 Budget
Week 8 (Numeration) Due 10/20 Fall break this week no class on Tuesday	Hawkes Quiz Project - Chapter 6 7.4 The Metric System

Week 9 Exam 2 - IN CLASS	7.5 Converting between the US Customary System and the Metric System Review/Collaborative practice exam in class **Exam 2**
Week 10 (Probability) Due 10/28	10.1 Introduction to Probability 10.2 Counting Outcomes
Week 11 (Probability) Due 11/4	Quiz in class 10.3 Probability of Single Events 10.4 Addition and Multiplication Rules of Probability
Week 12 (Statistics) Due 11/11	Quiz in class 11.1 Statistical Studies 11.2 Displaying Data
Week 13 (Statistics) Due 11/18	Hawkes Quiz 11.3 Describing and Analyzing Data 11.4 The Normal Distribution Project - Section 11.4
Week 14 Exam 3 - IN CLASS **Thanksgiving break - no class on Thurs**	Hawkes Quiz **Exam 3**
Week 15 Review for Final exam	**REVIEW**
Week 16 Final Exam December 08, 1:30-4:15pm	**FINAL EXAM**