

Math 106-012 Fall 2022 Syllabus**Instructor:** Scott Carson

Some of your grade will come from doing the work in the online learning management system called Hawkes. There will be some handwritten assignments described below.

Email: scarson4@gmu.edu (*Expect replies to emails within 24 hours on weekdays and on Mondays if sent over the weekend.*)

Office hours: 9am – 12pm on Mondays.

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 for this class (*except a calculator*). 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, Calculator.** You will be required to have a calculator for the course with an (e^x) exponential function and factorial function (!). We are recommending the TI-83/84 (only if you have one already) or the 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/knowledgebase/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 **MATH 106 Course Description** is as follows: Quantitative skills for the real world – topics include critical thinking, modeling by functions, graphs, growth, scaling, probability and statistics. 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.

Exams and Grading: The **Final Exam** will take place on **Thursday the 8th of December in HORIZON 3010**. For grading, your grade will be weighted as shown in the table below. 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.

<u>Assignment</u>	<u>Weight</u>
In class collaboration	10%
Average of 3 Midterm Exams	45%
In class written quizzes	10%
Hawkes Certify & Quizzes	20%
Final Exam on Thursday 8th December in HORIZON 3010 from 4.30pm to 7.15pm (Note this is earlier than the usual class.)	15%

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).

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.

Getting help with HAWKES: Additional videos can be found at www.hawkestv.com. Contact Hawkes with any technical questions, including creating your username and password, finding your Access Code or license number, or completing your work. Please find their contact details below:

Phone: [1-800-426-9538](tel: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/knowning-mason-students/student-supportresources-on-campus/>

Schedule: Here is the schedule for this class. Please note that this is a tentative plan only and any changes will be announced through Blackboard and announced in class a week in advance. *General Rule: Quizzes will be assigned and completed during Thursday classes and Homework will be assigned on Tuesday classes to be completed for the following Monday. Reviews and Collaborative Practice Exams will be completed on Tuesdays in class and Midterm Exams will be completed on Thursdays in class. These will be announced at the start of the week too.*

<u>Week:</u>	<u>Topics Covered:</u>
1)	• 1.2 Estimating • 4.1 Proportions, Percentages, and Ratios • 4.2 Using Percentages
2)	• 4.3 Rates, Unit Rates, and Rates of Change • 4.4 Using Rates for Dimensional Analysis • 4.5 Proportionality
3)	• 5.1 Linear Equations and Functions • 5.2 Linear Modeling
4)	• 5.7 Exponential Functions
5)	• Review of Topics covered from Week 1-5 • Collaborative Practice Exam 1 • Midterm Exam 1
6)	• 6.1 Understanding Interest • 6.2 Saving and Investing

7)	• 6.3 Borrowing Money • 6.4 Budget
8) Tuesday Classes do not meet this week.	• 7.4 The Metric System • 7.5 Converting between the US Customary System and the Metric System
9)	• Review of Topics Covered from Week 6-8 • Collaborative Practice Exam 2 • Midterm Exam 2
10)	• 10.1 Introduction to Probability • 10.2 Counting Outcomes
11)	• 10.3 Probability of Single Events • 10.4 Addition and Multiplications Rules of Probability
12)	• 11.1 Statistical Studies • 11.2 Displaying Data
13)	• 11.3 Describing and Analysing Data • 11.4 The Normal Distribution
14)	• Review of Topics Covered from Week 10-13 • (Optional) Collaborative Practice Exam 3 • Midterm Exam 3
15)	• Midterm Exam 3 • Review of Topics Covered from Week 1-13
16)	• Final Exam on Thursday 8th December in HORIZON 3010 from 4.30pm to 7.15pm (Note this is earlier than the usual class.)