Math 106 (3 Credits) Summer 2023 Syllabus **Instructor:** K. Crossin

Asynchronous SUMMER online learning: This class will be taught asynchronously with all tests and quizzes proctored primarily through honorlock. There may be occasional synchronous activities as requested by students. Most of your grade will come from doing the work in the online learning management system called Hawkes, and there will be opportunities to improve your understanding through discussion board posts sharing math concepts and connections. SUMMER classes move quickly! Many students spend about 10 hours PER DAY on summer classes. Students with a solid math background may be able to get through in much less time. Each day is very similar to a week's worth of material from a regular semester. You can do things early, and some things can be done late for small penalties. The final exam must be completed prior to 11:59PM on Friday June 23. There will be no exceptions to this. No work may be submitted after this date to count towards a grade in this course.

Accommodations: Any accommodations due to disability or distance need to be set up by the end of the first week. Please submit any documentation about accommodations under the tab on blackboard labeled ACCOMMODATIONS AND PROCTORING INFORMATION. Any off campus proctoring centers must be approved well in advance of the two proctored tests.

EMAIL: kcrossin@gmu.edu – I reserve email in this course for questions about grades, or private discussions (not relevant to anyone else in the course). Anything else, post to the discussion board. I answer emails once a day (Monday – Friday). Please communicate through GMU emails only. More info on student privacy and student rights under FERPA here: https://registrar.gmu.edu/ferpa/. When emailing me, or any professor, provide in the subject line, the name AND section of the course you are enrolled in. You also need to include YOUR name in any email you send. This general rule should be used with ALL emails you send – many emails need a little more than a clear subject line to get the entire point across. I do not open or respond to emails without this information. **Most** math questions are not good to ask over email. *ALL math questions should be asked on the discussion board.*

Office hours: Summer Office hours are offered by appointment or invitation only, held using Blackboard Collaborate Ultra, zoom or face to face on the Fairfax GMU campus. Please email me and provide basic information about what you want to work on and all availability for the upcoming days.

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.

Equipment: INTERNET, COMPUTER, EXCEL, Calculators: Since this course is taught completely online you will need access to a computer with reliable internet. There are also some more specific requirements for the proctored online testing, which are described at the end of this syllabus. You will want to have a calculator with an $\mathbf{e^x}$ function and factorial function (**!**). We are recommending the TI-83/84 (ONLY IF YOU HAVE ONE ALREADY) or TI-30II or desmos.com. You will also be prompted to use excel for some more involved calculations. Since there will be no in person tests, you may be able to get by with using an online calculator, but most students do not do as well without a real hand held calculator. 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 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 weights: There are two options for grade calculation. I will calculate both options for every student, and award each student the higher of the two calculations.

Items in Green are submitted on Blackboard. Items in Blue are in Hawkes.

Assignment	Weights with option 1	Weights with option 2
Syllabus quiz on Blackboard, not proctored	5%	5%
Average of Hawkes Proctored Tests 1&2	40%	20%
Hawkes Certify	15%	30%
Average of Hawkes quizzes (proctored)	15%	30%
Proctored Hawkes Final Exam due June 23	25%	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

Optional Discussion Boards: You are encouraged to participate in the discussion board as it really helps to discuss mathematics. The only discussion board posts that will be for an optional grade are the Time management tools and the Introduction post. NOTHING is required on the discussion board in the summer. Please feel free to use the discussion board for ALL content and logistical questions about this course. Please be respectful of everyone and keep in mind the core rules of "Netiquette" when posting to the discussion board. You must carefully craft your communication in the online classroom to avoid misinterpretation.

Make sure you post under the correct forum and either reply to an existing thread or create a new one with a meaningful subject line indicating the unit/ chapter/ section or topic you are discussing. Your post can show your work, ask a question or answer a question. I strongly encourage the use of drawings, colors, tables and descriptions of your thought process. Students who regularly participate in the discussion board tend to earn the highest grades –These students frequently submit incorrect work to the discussion board, and get the DISCUSSION started which is where learning frequently happens. Hand written work is strongly encouraged as most math is hard to type and it must be submitted as a photograph inserted within the discussion board thread. I encourage you to comment on each other's posts and help each other out. Suggestions for improving on a problem, clarifying a diagram, remembering steps or anything that contributes to the discussion and the community of learning is welcome.

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 graded 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.

Late Certify assignments and quizzes will be accepted for partial credit. 1% deduction for up to 1 day late, 2% for up to 2 days late, 10% for up to 7 days late and 20% deduction for anything later than 7 days through the day before the final exam is due. The first three tests will have the same penalties. The Final Exam may not be done late

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. Additional videos at www.hawkestv.com.

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.

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.

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. Email me your accommodations sheet a 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-center-hours-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/

Additional Resources/Student Services:

- Keep Learning, Learning Services https://learningservices.gmu.edu/keeplearning/
- Counseling and Psychological Services https://caps.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-support-resources-on-campus/

Please find the class schedule/calendar below On Blackboard you will find an active link so that you can edit this calendar as you progress through the course. This will be part of the framework for your time management tools assignment. It is meant as a tool to help you stay on track.

Summer 2023 You should DO things the day before they are DUE **{ASSIGNMENTS ARE DUE BY 11:59pm}**

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Wk 1	***May* 21** ☐ Self-care ☺ Hawkes is blue	22 ☐ Self-Care ☐ Syllabus Quiz ☐1.2: Estimating ☐4.1: Proportions, % and Ratios **First Day of Summer Classes**	23 ☐ Self-Care ☐4.2: Percentages ☐4.3: Rates	24 ☐ Self-Care ☐ **Quiz (1.2, 4.1, 4.2, 4.3) DUE** ☐4.4: Dimensional Analysis ***Last Day to Add/Last Day to drop w/ 100% Tuition Refund***	25 ☐ Self-Care ☐4.5: Proportionality	26 ☐ Self-Care ☐ **Cumulative Quiz DUE** ☐7.4: Metric ☐7.5: Conversions	27 ☐ Self-Care
Wk 2	28 ☐ Self-Care	29 **Memorial Day (University Closed)** ☐ Self-Care	30 ☐ Self-Care ☐10.1: Probability ☐10.2: Outcomes ***Last Day to Drop w/ 50% Refund***	31 ☐ Self-Care ☐ **Cumulative Quiz DUE** ☐10.3: Single Events	***June* 1** ☐ Self-Care ☐10.4: Prob + and x	2 ☐ Self-Care ☐ **TEST 1 (1, 4, 10) DUE**	3 ☐ Self-Care
Wk 3	4 ☐ Self-Care	5 ☐ Self-Care ☐ 5.1: Linear Functions ☐ 5.2: Linear Modeling	6 ☐ Self-Care ☐ 5.7: Exponential and Logarithmic Functions	7 ☐ Self-Care ☐ **Quiz (5.1, 5.2, 5.7) DUE** ☐11.1: Stats	8 ☐ Self-Care ☐11.2: Data	9 ☐ Self-Care ☐ **Cumulative Quiz (11.1, 11.2) DUE**	10 ☐ Self-Care
Wk 4	11 ☐ Self-Care	12 ☐ Self-Care ☐ 11.3: Describing & Analyzing Data	13 ☐ Self-Care ☐ Work on 11.4 ☐ STUDY 11.1-11.3	14 ☐ Self-Care ☐ **Quiz (11.1-11.3) DUE**	15 ☐ Self-Care ☐ 11.4: The Normal Distribution	16 ☐ Self-Care ☐ **Cumulative Quiz (4, 10, 11) DUE**	17 ☐ Self-Care
Wk 5	18 **Father's Day** ☐ Self-Care	19 **Juneteenth (University Closed)** ☐ Self-Care	20 ☐ Self-Care ☐Review	21 ☐ Self-Care ☐ **Test 2 (11.1-11.4) DUE—**	22 ☐ Self-Care ☐Review	23 ☐ Self-Care ☐ **FINAL EXAM DUE—**	24 ☐ Self-Care

Proctoring for this summer course will be primarily through a system that is new to GMU. It is called Honorlock and the details are below.
All quizzes and exams in this course will be proctored in one of two ways. You will have the choice of digital proctoring using Honorlock monitoring software or scheduling a time to be proctored in the Mathematical Sciences Testing Center here on the main Fairfax campus.
Regardless of testing options, NO CELL PHONES can be used as your calculator during testing. Any calculator without internet access is acceptable.

Post under "Disability Accommodations, Proctoring Exceptions and athlete schedules" if honorlock is not going to work for you for any reason. The only other option is in person on the Fairfax Campus.

Option 1: Honorlock Remote Proctoring

Online proctoring via Honorlock is available for testing 24/7. All quizzes and exams can be accessed via Honorlock if you would like to take your assessments remotely.

Honorlock Testing Requirements:

1. Google Chrome and the Honorlock Google Chrome extension. Google Chrome can be downloaded by visiting the Google Chrome website. If you are not sure if the Honorlock Chrome extension is installed on your computer, you can use this tool provided by Honorlock to check if the extension has been added. If it has not, you will be walked through the process of downloading and installing the extension. WE RECOMMEND that you download and install both the browser and extension BEFORE the exam and keep them installed over the course of the semester. However, if you are using a computer to access an exam that does not have Chrome or the extension installed, you will be walked through the process of downloading and installing the software at the time of the assessment.
2. A computer running one of the following:
    a. Windows 10 or higher
    b. MacOS 10.14 or higher
    c. Chrome OS (for Chromebook users)**This assessment cannot be taken using a tablet or phone**
3. A working webcam and microphone. If your computer is not equipped with an internal camera and microphone, a webcam/microphone unit can be purchased many places including the GMU Bookstore.
4. A stable internet connection speed of at least 1.5 Mbps download and 750 Kbps upload. Failure to maintain these speeds during the test may trigger a Honorlock proctor "pop-in" and/or flag your exam for further review by the instructor.
5. A quiet testing spot. You need a testing environment free from distractions and interruptions in order to secure your environment. During the test, there should be no other people in the room. If other people are detected in your work area during the assessment, your session may be flagged by Honorlock. Honorlock can detect additional faces within the testing field of vision as well as additional voices (including music, television, etc.).
6. A photo ID that will be used in the student verification process.
7. Please be sure to show your notes and empty paper during the room scan. Show the front and back of notes pages AND EACH blank paper.
8. YOU MAY NOT USE THE CALCULATOR ON YOUR CELL PHONE. NO PHONES DURING TESTING.
9. You may use desmos during testing. **https://www.desmos.com/**

If you do not have access to one or more of these requirements you should consider using the Mathematical Sciences Testing Center to take your quiz or exam. You may also use the Mathematical Sciences Testing Center if you simply feel more comfortable taking the assessment in person or do not wish to install or use the software required by Honorlock.
To take an assessment via Honorlock, click on the tab on the left side of Blackboard titled "Proctored quizzes and tests". Once Honorlock opens, you will need to select Hawkes Proctored Quizzes and Tests to be taken into Hawkes where Honorlock will begin proctoring you. You will be walked through the authentication and setup process. For more about this process, see the description in the course Honorlock link below. Once you are authenticated, you will navigate to the Hawkes assessment where you will be able to begin the test.

Option 2: Proctoring in the Mathematical Sciences Testing Center

The Mathematical Sciences Testing Center has very limited hours during our course, so I only suggest going this route if you do not have the software or physical location needed in order to test from home or another location. If you have small children who will need to come in and out of the room during testing, please let me know and there are a couple work arounds we can discuss. The Mathematical Sciences Testing Center is located in Exploratory Hall, room 4107 on the GMU, Fairfax Campus. The Mathematical Sciences Testing Center provides an ideal setting for you to take any of your assessments for this class. Visit the Mathematical Sciences Testing Center website to see more about the center. Here is some general information about scheduling an assessment in the Mathematical Sciences Testing Center.

To take an assessment in the Mathematical Sciences Testing Center:

- Plan a time to go to the testing center, referring to the limited hours posted on their site Mathematical Sciences Testing Center
- Arrive at the testing center with your photo ID, notes permitted, and calculator. YOU MAY NOT USE THE CALCULATOR ON YOUR CELL PHONE. NO PHONES DURING TESTING. You may use desmos during testing. **https://www.desmos.com/**
- Please be sure to show your notes and empty paper during the room scan. Show the front and back of notes pages AND EACH blank paper.
- You will need to sign in acknowledging your understanding of the honor code being in effect.
- Navigate through Blackboard to the assessment in HAWKES, just as you would for homework.
- Once at the HAWKES assessment you wish to take, it will ask for a password. The proctor in the Testing Center will enter the password for your specific assessment on their specialized display and you will be able to begin.

The testing center does have some scientific calculators to borrow, but they cannot teach you how to use them. **Please be sure to make copies of any permitted notes** on assessments with multiple attempts as the proctors are required to collect your notes before you leave the testing center.