Math 106-A02 or A04 (3 Credits) Summer A-Term 2020 Syllabus **Instructor:** K. Crossin

Asynchronous online learning: This class will be taught asynchronously with 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 and grade through discussion board posts sharing math concepts and connections.

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: By appointment or invitation online. Appointments are made by requesting and providing general availability on the discussion board forum labeled REQUEST OFFICE HOURS HERE.

Text: 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.

Equipment: INTERNET, COMPUTER, EXCEL, Calculators: Since this course is taught completely online you will need access to a computer with reliable internet. 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. 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 calculator. If you do not have the Microsoft Office here is a link to get it free: https://its.gmu.edu/knowledge-base/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
Introduction post	5%	5%
Syllabus quiz	5%	5%
Time Management Tools	5%	5%
Weekly Discussion boards		20%
Test 1	20%	15%
Test 2	20%	15%
Hawkes Certify & quizzes	20%	20%
Final Exam **due Friday July 3**	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

Discussion Boards: You are encouraged (option 1 grading)/ required (option 2 grading) to participate in the discussion board as it really helps to discuss mathematics. Please 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. Posting "Me Too" does not count. 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. Credit will not be awarded for images submitted as attachments. 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 may be awarded credit. In order to get full credit for mathematical discussions you need only submit 4 pieces of work. Problems for discussion will be posted by Monday of every week. To get full credit for the discussion during the week, you must post your work by 11:59 Wednesdays. These should be a single problem attempt posted as a picture within an appropriate forum and thread on the discussion board and graded based on effort. Students are limited to posting one question per week in order to make sure everyone has an opportunity to post. There will be no credit awarded for doing extra posts or turning in more written work than required. I will provide feedback on discussion board posts throughout the week and specifically by the end of the day Thursday so that you have some feedback prior to your test or quiz on that Friday.

Discussion rubric – 4 posts, 5 points available for each post,

- Math solution either typed or picture of **handwritten** work posted and image is cropped appropriately AND
- Problem or connection relevant to current material being covered (No points if these two are missing)

- Math process or explanation clearly shown in thread
- Original work or relevant comment/ improvement/ connection (not a duplicate of classmates' work)
- Post before Midnight Wednesday (Possible partial credit for any post before the end of the week)

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 will be accepted for partial credit. 10% deduction for up to 2 days late, 20% for up to 7 days late, 30% for up to 21 days late and 40% deduction for anything later than 21 days through the day before the final exam is due.

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.

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

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, as well as below the syllabus on Blackboard. 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 in this online course where many struggle with time management.

Updated on June 8, 2020

A Term Schedule 2020

You should **DO** things the day **before** they are **DUE.**

Assignments are DUE by 11:59pm

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Everything due from Hawkes is in blue ***Everything due on Blackboard is in green*** ***Self-care boxes are for you— it is not graded*** ***Extra boxes are for your own personal use***	June 1 ☒Self-care check! ☒Syllabus Quiz ☒Hawkes Intro Video Assign ☒Introduction post ☒ ☒	2 ☒Self-care check! ☒2.1 Set Notation ☒2.2 Subsets and Venn Diagrams ☒ ☒	3 ☒Self-care check! ☒2.3 Set Operations ☒2.4 Applications and Survey Analysis ☒ Discussion ☐	4 ☒Self-care check! ☒3.1 Logic Statements, Negations ☒3.2 Truth Tables ☒Write notes for TEST 1 ☒	5 ☒Self-care check! ☒3.3 Logical Equivalences and De Morgan's Law ☒**TEST 1 DUE** ☐ ☐	6 ☒Self-care check! ☐ ☐
7 ☒Self-care check! ☐ ☐	8 ☐Self-care check! ☐Get started on Chapter 4 Learn and Practice!! ☐ ☐	9 ☐Self-care check! ☐4.1 Rates and Unit Rates ☐4.2 Ratios ☐ ☐	10 ☐Self-care check! ☐4.3 Proportions & % ☐4.4 Using Percentages ☐ **Time management tools due** ☐ Discussion	11 ☐Self-care check! ☐7.1 Intro to Probability ☐Write notes for Quiz 1 ☐	12 ☐Self-care check! ☐7.2 + Rules for Prob. ☐7.3 x Rules for Prob. ☐**Quiz 1 Due** ☐ ☐	13 ☐Self-care check! Seriously consider finishing up 7.4 this weekend so you have time to start 7.6, Avg & GPA and 8.1 early next week. ☐
14 ☐Self-care check! ☐ ☐	15 ☐Self-care check! ☐Get started on this week's work!! ☐ ☐	16 ☐Self-care check! ☐7.4 Combinations and Permutations ☐7.5 Extra Credit ☐ ☐	17 ☐Self-care check! ☐Class Avg & GPA Videos ☐Avg & GPA Discussion ☐ ☐	18 ☐Self-care check! ☐1.1 LONG Graphs work ☐Write notes for TEST 2 ☐ ☐	19 ☐Self-care check! ☐8.1 Measures of Center ☐**TEST 2 DUE** ☐ ☐	20 ☐Self-care check! ☐ ☐
21 ☐Self-care check! ☐ ☐	22 ☐Self-care check! ☐Get started on this week's work!! ☐ ☐	23 ☐Self-care check! ☐8.2 Measures of Dispersion ☐ ☐	24 ☐Self-care check! ☐8.3 Measures of Relative Position ☐ Discussion ☐ ☐	25 ☐Self-care check! ☐8.4 Intro to Normal and Standard Normal Distribution ☐Write notes for Quiz 2 ☐	26 ☐Self-care check! ☐8.5 Probability w/Normal Distribution ☐**Quiz 2 Due** ☐ ☐	27 ☐Self-care check! ☐ ☐
28 ☐Self-care check! ☐ ☐	29 ☐Self-care check! ☐Work on final review ☐ ☐	30 ☐Self-care check! ☐Work on Final review ☐ ☐	July 1 ☐Self-care check! ☐Work on Final review ☐ Final Discussion ☐ ☐	2 ☐Self-care check! ☐Write notes for Final ☐ Take the Final? ☐ ☐	3 ☐Self-care check! ☐**FINAL EXAM DUE** ☐Congrats! This class is done! ☺	4 ☐Self-care check!