Math 106 Section 10 Spring 2021 Syllabus

Instructor: Shahryar Sarkani
EMAIL: ssarkani@gmu.edu
Class time: Class is Asynchronous
Meeting Tool: Blackboard Collaborate Ultra
Office hours: Tuesdays and Thursdays from 6:00 to 7:30 via BB Collaborate Ultra Course Room Meeting Session

Class Delivery Method: This class will be taught **asynchronously** which means all the lectures will be delivered via recording. You will be viewing the recordings of the lectures at your convenience. The recording for each session will be available on BB each Tuesday and Thursday at 6 PM.

Textbook: Viewing Life Mathematically (Custom for GMU) by Denley. We will be using the online learning management system called Hawkes for this class and digital version of Textbook is available on Hawkes for free. Therefore, you do not need to buy hard copy of textbook unless you prefer a hard copy.

Hawkes System: You need to purchase a Hawkes license to be able to do the assignments and quizzes. You can purchase the license from bookstore or directly from Hawkes. Do a comparison shop for best price. You will get a Hawkes free trial license for a short period at beginning of the course. Please use the free trial when you start using the Hawkes system just in case after a week or so you decide to change your plans. 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 $\mathbf{e^x}$ function and factorial function (**!**). We are recommending the TI-83/84 (ONLY IF YOU HAVE ONE ALREADY) or TI-30II. You can also 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.

Week 1 Due Jan 29	**1.3 and 2.1 Estimates, Set notation**	**~ time 150 min (+quiz)**
Week 2 Due Feb 5	**2.2 & 2.3 Subsets, Venn and Set operations**	**175 (+quiz)**
Week 3 Due Feb 12	**2.4 Applications and Surveys**	**120 (+quiz)**
Week 4 Due Feb 19	**3.1 & 3.2 Logic, negations, truth tables**	**80 (+HW)**
Week 5 Due Feb 26	**3.3 Logical equivalence and DeMorgan's**	**106 + TEST1**
Week 6 Due Mar 5	**4.1-4.3 Rates, Ratios, Proportions and %**	**170 (+quiz)**
Week 7 Due Mar 12	**4.4 Applications of % and 7.1 Intro Probability**	**115 (+quiz)**
Week 8 Due Mar 19	**7.2&3 Addition and Multiplication Rules Prob.**	**170 (+quiz)**
Week 9 Due Mar 26	**7.4 &7.5(ec) Combinations and Permutations**	**100 + TEST2**
Week 10 Due Apr 2	**1.1 Data graphs, 8.1 Measures of center**	**185 (+quiz)**
Week 11 Due Apr 9	**8.2 Measures of dispersion**	**190 (+quiz)**
Week 12 Due Apr 16	**8.3 Measures of relative position**	**90 (+quiz)**
Week 13 Due Apr 23	**8.4 & 8.5 Normal Distributions**	**120 (+HW)**
Week 14	**Final Exam review**	

Grading: Your grade will be weighted as depicted in the table below. No tests will be dropped.

All Quizzes and Tests are administered via Hawkes. There are two handwritten HW that need to be posted to BB.

Final Exam: Administered via Hawkes on Tuesday 5/6 from 4:30-7:15 PM. All students must take the exam at this time.

Assignment	**Weight**
Syllabus quiz	5%
2 Handwritten HW Posted to Blackboard	10%
Hawkes Certify & Quizzes	20%
Test 1	20%
Test 2	20%
Final Exam	25%

The grading scale will be: A: 90-100%; B: 80-89%; C: 70-79%; D: 60-69%; F: below 60%.
+ or – will 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.

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.

Disability statement: If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Resources at 703.993.2474. All academic accommodations must be arranged through that office. 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.

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

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/

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