George Mason University

MATH 105 002   Precalculus   Spring 2022

Tuesdays & Thursdays, 8:30 – 10:20
Horizon Hall 1014

Instructor: Stephanie Gaffney
Email: sgaffne@gmu.edu *(Note: Students must use their Mason email to contact me)*
Phone: 772-501-5546 (only use in case of emergency)
Office: Exploratory Hall 4309 (math adjunct offices, knock on the door if it's not open)
Office Hours: Mondays & Wednesdays: 9:15 – 10:15, Tuesdays: 10:30 – 11:30

Course Information

Prerequisites: Students must have either achieved an appropriate score on the Math Placement Exam or completed the Self-paced Algebra Tutorial.

Course Description: This course reviews mathematics skills essential to studying calculus. Topics include equations, inequalities, absolute values, graphs, functions, exponential and logarithmic functions, and trigonometry. This course DOES NOT meet the quantitative reasoning requirement of the Mason Core.

Course Content: The course will cover concepts from chapters 1-6 of the textbook, including: Algebra Review, Polynomial, Rational, Exponential and Logarithmic Functions, and Trigonometry. The pace of the course is very fast and assumes a knowledge of basic algebra. The course requires a significant time commitment. You should expect to spend approximately 8 to 12 hours per week on this course outside of class time.

Class Materials

Text: Precalculus, Miller and Gerken, packaged with ALEKS. You will need a student access code for ALEKS, which is available at the bookstore.

Calculator: Calculators will be used sparingly. You should attempt all homework problems without a calculator, but there may be some occasions where you will need a calculator. I recommend having a basic scientific calculator such as the TI-30XIIS. No graphing calculators will be permitted.

Other Materials: Notebook, Graph Paper, Pencils and Erasers, Dry Erase Markers and Eraser

Class Procedures

Attendance: I take attendance at each class meeting. Attendance is not part of your grade; however, I take attendance into consideration for borderline grades at the end of the semester. You will also need to be present to participate and receive a grade in the in-class quizzes.

Participation: I encourage your participation in class. We will be engaging in several active learning activities. The more you are willing to participate, especially by asking and answering questions, the more you will likely learn and take away from the class.

Electronics: Regarding electronic devices (such as laptops, cell phones, etc.), please be respectful of your peers and your instructor and do not engage in activities that are unrelated to class. Such disruptions show a lack of professionalism.

Safety: All students are required to follow the university's public health and safety precautions and procedures outlined on the university Safe Return to Campus webpage (https://www2.gmu.edu/safe-return-campus). Similarly, all students must also complete the Mason COVID Health Check daily, seven days a week. The COVID Health Check system uses a color code system and students will receive either a Green, Yellow, or Red email response. Only students who receive a "green" notification are permitted to attend courses with a face-to-face component. If you suspect that you are sick or have been directed to self-isolate, please quarantine or get testing. Faculty are allowed to ask you to show them that you have received a Green email and are thereby permitted to be in class.

Facemasks: Students are required to follow Mason's current policy about facemask-wearing. All community members are required to wear a facemask in all indoor settings, including classrooms. An appropriate facemask must cover your nose and mouth at all times in our classroom. If this policy changes, you will be informed; however, students who prefer to wear masks either temporarily or consistently will always be welcome in the classroom.

Announcements: If the campus closes, or if a class meeting needs to be canceled or adjusted due to weather or other concern, students should check Blackboard for updates on how to continue learning and for information about any changes to events or assignments.

Academic Integrity: The integrity of the University community is affected by the individual choices made by each of us. Mason has an Honor Code with clear guidelines regarding academic integrity. Three fundamental and rather simple principles to follow at all times are that: (1) all work submitted be your own; (2) when using the work or ideas of others, including fellow students, give full credit through accurate citations; and (3) if you are uncertain about the ground rules on a particular assignment, ask for clarification. No grade is important enough to justify academic misconduct. *Some kinds of participation in online study sites violate the Mason Honor code: these include accessing exam or quiz questions for this class; accessing exam, quiz, or assignment answers for this class; uploading of any of the instructor's materials or exams; and uploading any of your own answers or finished work.*

Disability Services: George Mason University is committed to upholding the letter and spirit of the laws that ensure equal treatment of people with disabilities. Under the administration of University Life, Disability Services implements and coordinates reasonable accommodations and disability-related services that afford equal access to university programs and activities. Students can begin the registration process with Disability Services at any time during their enrollment at George Mason University. If you are seeking accommodations, please visit http://ds.gmu.edu/ for detailed information about the Disability Services registration process. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email:ods@gmu.edu | Phone: (703) 993-2474

Additional Assistance: You are more than welcome to come see me during office hours if you need additional assistance outside of class time. You may also email me with questions.

The Math Tutoring Center is available to assist you. Check the website for hours of operation. https://science.gmu.edu/academics/departments-units/mathematical-sciences/math-tutoring/tutoring-center-hours-and

Coursework

ALEKS: ALEKS is an online software we will be using for this course. To sign up, you will need to go through the link in Blackboard named "ALEKS." Once you have clicked that link, you will need to click the link that says "ALEKS". This will take you to a registration page. Create an account and enter your access code. If you need any technical support, contact ALEKS at 714-619-7090 or visit http://support.aleks.com for assistance.

Initial Knowledge Check: Once you have gotten access to the course in ALEKS the first thing you need to complete is the initial knowledge check. This is not graded, but is a requirement and something you should take seriously because it will determine the number of objectives you need to complete for the course. The Initial Knowledge Check should be completed as soon as possible. You won't be able to begin working on your homework assignments until this is complete.

Homework: Homework will be completed through ALEKS. You are encouraged to work homework problems in your notebook. We will have a portion of class time dedicated to going over questions on homework. Homework is typically due on Thursdays by 11:59pm.

Online Quizzes: You will have weekly quizzes assigned on ALEKS. The quizzes will be similar to your homework problems. The quizzes may be taken twice before the due date. (You will only retake the questions that you missed.) There are no makeup quizzes. The quizzes must be taken each week by Sunday 11:59pm.

In-Class Quizzes: You will periodically have brief in-class quizzes. If you are absent, you will receive a zero for that particular quiz or project; however, I will be dropping your lowest in-class quiz score.

Exams: You will have 3 mid-term exams. There are no makeups for exams. If you receive an exception due to a documented, excused absence then I will replace your missed exam score with your final exam score.

Final Exam: The final exam will be comprehensive and given according to the registrar's final exam school. No exceptions will be made to the final exam schedule.

Grading

Grades will be calculated as follows:

Homework (ALEKS)	15%
Online Quizzes(ALEKS)	20%
In-Class Quizzes	15%
Exams	30%
Final Exam	20%

Grading Scale:

A+	99-100	A	92-98	A-	90-91
B+	88-89	B	82-87	B-	80-81
C+	78-79	C	72-77	C-	70-71
		D	60-69		
		F	0-59		

Class Schedule *(subject to change)*

Date	Sections Covered
January 25	Syllabus, ALEKS, Initial Knowledge Check
January 27	*Select Topics from Chapter R (Algebra Review)*
February 1	1.1 - 1.2 (Rectangular Coordinate System, Graphing, Circles)
February 3	1.3 - 1.4 (Functions, Relations, Linear Functions)
February 8	1.5 - 1.6 (Linear Modeling, Transformations of Graphs)
February 10	1.7 - 1.8 (Graphs of Functions, Piecewise Functions, Algebra of Functions and Function Composition)
February 15	Catch-up / Review
February 17	**EXAM 1**
February 22	2.1 - 2.2 (Quadratic Functions, Polynomial Functions)
February 24	2.3 - 2.4 (Division of Polynomials, Zeros of Polynomials)
March 1	2.5 - 2.6 (Rational Functions, Polynomial and Rational Inequalities)
March 3	2.7 - 3.1 (Variation, Inverse Functions)
March 8	3.2 - 3.3 (Exponential Functions and Logarithmic Functions)
March 10	3.4 - 3.5 (Properties of Logarithms, Exponential and Logarithmic Equations)
March 14-18	**NO CLASS - SPRING BREAK**
March 22	3.6 (Modeling with Exponential and Logarithmic Functions)
March 24	Catch-up / Review
March 29	**EXAM 2**
March 31	4.1 - 4.2 (Angles, Unit Circle, Trigonometric Functions)
April 5	4.3 - 4.4 (Right Triangle Trigonometry, Trigonometric Functions of Any Angle)
April 7	4.5 - 4.6 (Graphs of Trigonometric Functions)
April 12	4.7 - 5.1 (Inverse Trigonometric Functions, Trigonometric Identities)
April 14	5.2 - 5.3 (Sum, Difference, Double-Angle, Power-Reducing and Half-Angle Formulas)
April 19	5.4 - 5.5 (Product-to-Sum and Sum-to-Product Formulas, Trigonometric Equations)
April 21	Catch-up / Review
April 26	**EXAM 3**
April 28	6.1 - 6.2 (Applications of Right Triangles, Law of Sines)
May 3	6.3 - 6.4 (Law of Cosines, Harmonic Motion)
May 5	Catch-up / Review
May	**FINAL EXAM: To Be Announced**