MATH 105 - PRECALCULUS, FALL 2021
SECTION 002, TR 7:20-9:10PM

Instructor: Simone Mazzini Bruschi (She/her)

Office:	Exploratory Hall, room 4219
Office hours:	Monday & Wednesday 2:00-2:30pm & Tuesday 2:30-3:30 pm & Thursday 6:00-7:00pm and by appointment
Email:	sbruschi@gmu.edu (please, include Math105-002 in the subject line)

Textbook and Materials: *Precalculus*, by Julie Miller and Donna Gerken, packaged with ALEKS. You will need a student access code for ALEKS, which is available at the bookstore.

Aleks: Aleks is a website which you will use for all online homework assignments, quizzes and tests. The class code is PTCXV-RKHCP Please refer to https://www.aleks.com/highered/students for support.

Prerequisites: Students must have either passed the Math Placement Exam or completed the Self-paced Algebra Tutorial, Math 108

Course description: The course covers concepts from chapters 1-6 of the textbook, including: functions and relations, polynomial and rational functions, exponential and logarithmic functions, trigonometric functions, analytic trigonometry, and applications of trigonometric functions. For a more detailed description, see the attached Course Weekly Schedule

Testing schedule:

	Date
Quiz 1	Thursday, September 9
Midterm 1	Thursday, September 16
Quiz 2	Tuesday, October 05
Midterm 2	Tuesday, October 19
Quiz 3	Thursday, November 04
Midterm 3	Thursday, November 18
Final	Thursday, December, 9 7:30pm-10:15pm

Course Weekly Schedule:

- Week 1:

08/24 Review of Prerequisites - R1-R8
08/26 Review of Prerequisites - R1-R8

- Week 2:

08/31 The rectangular Coordinate System, Circles - Sections 1.1, 1.2
09/02 Functions and Relations - Section 1.3

- Week 3:

09/07 Linear Equations in Two Variables and Linear Functions, Applications and Moddelling - Sections 1.4, 1.5
09/09 Quiz 1 - Applications of Linear Equations and Moddelling, Transformations of Graphs - Sections 1.5, 1.6

- Week 4:

09/14 Analyzing Graphs of Functions and Piecewise Defined Functions, Algebra fo Functions - Sections 1.7, 1.8
09/16 Midterm 1
- Week 5:

09/21 Function Composition, Quadratic Functions and Applications - Sections 1.8, 2.1
09/23 Introduction to Polynomial Functions, Division of Polynomials, the Remainder Sections 2.2, 2.3
- Week 6:

09/28 Factor Theorems, Zeros of Polynomials Sections 2.3, .2.4
09/30 Rational Functions - Section 2.5
- Week 7:

10/05 Quiz 2 -Polynomial and Rational Inequalities, Inverse Functions - Sections 2.6, 3.1
10/07 Inverse Functions, Exponential Functions - Section 3.1, 3.2
- Week 8:

10/12 No class
10/14 Logarithmic Functions, Properties of Logarithms - Sections 3.3, 3.4
- Week 9:

10/19 Midterm 2
10/21 Exponential and Logarithmic Equations and Applications and Modelling - Sections 3.5, 3.6
- Week 10:

10/26 Modelling with Exponential and Logarithmic Functions, Angles and their Measures - Sections 3.6, 4.1
10/28 Trigonometric Functions Defined on the Unit Circle, Right Triangle Trigonometry -Sections 4.2, 4.3
- Week 11:

11/02 Right Triangle Trigonometry, Trigonometric Functions of Any Angle - Sections 4.3, 4.4
11/04 Quiz 3 - Graphs of Sine and Cosine Functions - Section 4.5
- Week 12:

11/09 Graphs of Other Trigonometric Functions, Inverse Trigonometric Functions - Sections 4.6, 4.7
11/11 Inverse Trigonometric Functions, Fundamental Trigonometric Identities - Sections 4.7, 5.1
- Week 13:

11/16 Sum and Difference Formulas, Double Angle, Power-Reducing, and Half-Angle Formulas - Sections 5.2, 5.3
11/18 Midterm 3
- Week 14:

11/23 Double Angle, Power-Reducing, and Half-Angle Formulas, Product-to-Sum and Sum-to-Product Formulas - Sections 5.3, 5.4
11/25 No Class - Thanksgiving Break
- Week 15:

11/30 Trigonometric Equations, Applications of Right Triangles - Sections 5.5, 6.1
12/02 The Law of Sines, The Law of Cosines Sections 6.2, 6.3
12/9 Final Exam - 7:30pm-10:15pm

Homework: There will be weekly homework through ALEKS.

Grading:

Aleks:	15%
Quizzes:	15% (5% each)
Midterms:	45% (15% each)
Final Exam:	25%

Your course total (out of 100) will be converted into your letter grade by the following table.

A-, A	90 – 100
B-, B, B+	80 – 89
C-, C, C+	70 – 79
D-, D, D+	60 –69
F	0–59

+ or − may be attached to the grade for *approximately* the upper or lower 2 points.

Academic integrity: To promote a stronger sense of mutual responsibility, thrust, and, fairness among all members of the Mason community, and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code:

Student members of the George Mason University community pledge not to cheat, plagiarize, steal, lei in matters related to academic work

For the remainder of the code, see: http://oai.gmu.edu/mason-honor-code

Students with Disabilities: All academic accommodations must be made through the Office of Disability Services (ODS) at 703.993.2474. Students must provide a copy of their Faculty Contact Sheet in order to receive accommodations. Note that accommodations are not retroactive. 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 feelings of inequity in this course.

Attendance Policy: Students are expected to attend all classes and are responsible for all information presented. If a student misses a class, it is their responsibility to get notes on what they missed.

Tutoring Center: 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
http://math.gmu.edu/tutor-center.php
https://science.gmu.edu/academics/department-untis/mathematical-sciences/math-tutoring/tutoring-center-hours-and

Important dates:

Classes Begin - August 23
Last day to drop with no Tuition Penalty - September 7
Last day to drop - September 14
Final Exam - December 9, 7:30pm-10:15pm