COURSE SYLLABUS & GROUND RULES

INSTRUCTOR: Dr. Cristina Popovici
OFFICE: Exploratory Hall 4309
E-MAIL: cpopovic@gmu.edu
CLASS MEETS: TuTh 5:20PM - 7:10PM in Robinson Hall B104
OFFICE HOURS: TuTh 4:10PM - 5:10PM

TEXTBOOK: *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.
PREREQUISITE: You 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 Schedule.
COURSE OBJECTIVES: The main goal of the course is to provide an understanding of topics in precalculus. Conceptual and computational skills will be developed, with an emphasis on understanding concepts. The pace of the course is fast. A comfortable working knowledge of algebra is assumed. The demands of the course will require serious commitment. You are required to sign on in ALEKS several times throughout the week so that you do not get behind.
HOMEWORK: Homework assignments are posted in ALEKS. The homework average will account for 10% of your final score for the course. If you have difficulties with any of the assigned problems or any other problems in your textbook please see me during office hours or email me as soon as possible.
EXAMS: There will be two in-class Midterm Exams (closed books and notes) and a cumulative Final Exam (closed books and notes) which will be given according to the following schedule:

EXAM # 1 - THURSDAY, OCTOBER 3
EXAM # 2 - THURSDAY, NOVEMBER 7
FINAL EXAM - THURSDAY, DECEMBER 12; 4:30PM - 7:15PM

There will be no make-up exams. You must bring your photo ID to each exam. If your picture is faded or cracked, the ID will not be accepted.

GRADES: The breakdown of your final grade will be as follows:
Homework Average: 10%; Exam #1: 25%; Exam #2: 25%; Final Exam: 40%

Your final letter grade for the course will be determined according to the following scale:
98-100 → A+; 93-97 → A; 90-92 → A-; 85-89 → B+; 80-84 → B; 75-79 → B-;
70-74 → C+; 65-69 → C; 60-64 → C-; 50-59 → D; 0-49 → F

TUTORING: The Math Tutoring Center in the Johnson Center, Room 344, offers help on a walk-in basis. See http://math.gmu.edu/tutor-center.php for the most current schedule.
UNIVERSITY POLICIES: The University Catalog, http://catalog.gmu.edu, is the central resource for university policies affecting student, faculty, and staff conduct in university academic affairs. Other policies are available at http://universitypolicy.gmu.edu/. All members of the university community are responsible for knowing and following the established policies.

HONOR CODE: It is expected that each student in this class will conduct himself or herself within the guidelines of the Honor Code. Among other things, this means that sharing information of any kind about exams (either before or during an exam) will result at a minimum in a grade of zero for all parties involved. Violations will also be reported to the university Honor committee where further consequences such as probation or expulsion from the university may be incurred. See https://oai.gmu.edu/mason-honor-code/full-honor-code-document/ for a copy of the Honor code.

DISABILITY SERVICES: Reasonable accommodations are available for students who have a documented disability. Please contact Disability Services if you require accommodations: Office of Disability Services, Student Union Building I (SUB I), room 4205, Phone: 703-993-2474

COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS): (703) 993-2380; http://caps.gmu.edu

ELECTRONIC DEVICES: Students are not allowed to use any electronic devices (such as laptops, tablets, smartphones, smartwatches, etc.) during class and exams. In particular, cell phones and laptops are not to be used during class. Your cell phone (or any internet capable device) should be on silent or vibrate during lecture and should be stored out of reach during exams. If I notice that you have a cell phone (or any internet capable device) within your reach during an exam, I will assume that it is an Honor Code violation and take appropriate action. This could result in you failing the exam, failing the class, or being suspended from the university.

CALCULATORS: Because this course is designed as preparation for the Calculus 113-114 sequence, one of its primary goals is to help students acquire competence with basic algebraic and functional concepts and relationships. Accordingly, we will use calculators only sparingly. You are encouraged to attempt all homework problems without calculators, though some questions may require one. With rare exceptions, use of calculators will not be permitted during exams. In the event that calculators are permitted, absolutely no sharing of calculators is allowed. Graphing and CAS capable calculators will never be permitted.

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Fall 2019 Academic Calendar:
https://registrar.gmu.edu/calendars/fall-2019/

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COURSE SCHEDULE

WEEK 1 (August 26-30)
Introduction
R.1-R.8 Review of Prerequisites

WEEK 2 (September 2-6)
1.1 The Rectangular Coordinate System
1.2 Circles
1.3 Functions and Relations

WEEK 3 (September 9-13)
1.4 Linear Equations in Two Variables and Linear Functions
1.5 Applications of Linear Equations and Modelling
1.6 Transformations of Graphs

WEEK 4 (September 16-20)
1.7 Analyzing Graphs of Functions and Piecewise Defined Functions
1.8 Algebra of Functions and Function Composition
2.1 Quadratic Functions and Applications

WEEK 5 (September 23-27)
2.2 Introduction to Polynomial Functions
2.3 Division of Polynomials and the Remainder and Factor Theorems
2.4 Zeros of Polynomials

WEEK 6 (September 29-October 4)
2.5 Rational Functions
Review for Exam # 1
EXAM # 1 - THURSDAY, OCTOBER 3

WEEK 7 (October 7-11)
2.6 Polynomial and Rational Inequalities
3.1 Inverse Functions
3.2 Exponential Functions

WEEK 8 (October 14-18)
No class on Tuesday, October 15 - Fall Break
3.3 Logarithmic Functions
3.4 Properties of Logarithms

WEEK 9 (October 21-25)
3.5 Exponential and Logarithmic Equations and Applications
3.6 Modelling with Exponential and Logarithmic Functions
4.1 Angles and Their Measure

WEEK 10 (October 28-November 1)
4.2 Trigonometric Functions Defined on the Unit Circle
4.3 Right Triangle Trigonometry
4.4 Trigonometric Functions of Any Angle

WEEK 11 (November 4-8)
4.5 Graphs of Sine and Cosine Functions
Review for Exam # 2
EXAM # 2 - THURSDAY, NOVEMBER 7

WEEK 12 (November 11-15)
4.6 Graphs of Other Trigonometric Functions
4.7 Inverse Trigonometric Functions
5.1 Fundamental Trigonometric Identities

WEEK 13 (November 18-22)
5.2 Sum and Difference Formulas
5.3 Double Angle, Power-Reducing, and Half-Angle Formulas
5.4 Product-to-Sum and Sum-to-Product Formulas

WEEK 14 (November 25-29)
5.5 Trigonometric Equations
6.1 Applications of Right Triangles
No class on Thursday, November 28 - Thanksgiving Break

WEEK 15 (December 2-6)
6.2 The Law of Sines
6.3 The Law of Cosines
Review for the Final Exam