SYLLABUS

MTH 100 – Precalculus – Summer 2021

Instructor: Dr. Sofya Chepushtanova

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Class Meetings: MTWR 09:00-11:10 am in SLC 403.

Office Hours: by appointment.

Course Description and Objectives: Precalculus is a course in advanced algebra and trigonometry designed to prepare students for calculus. Topics include functions, inverse functions, logarithms, exponentials, and trigonometry.
Students successfully completing this course should:

- Identify various functions, including polynomials, rational functions, functions with radicals, and piecewise-defined functions. Perform transformations on known functions to generate new functions. Construct selected mathematical models based upon these functions.
- Be able to graph and analyze polynomial and rational functions. Solve polynomial and rational equalities and inequalities. Solve real-world problems using these functions in models.
- Find zeros of polynomial, rational, and selected transcendental functions using various theorems and with technology where appropriate.
- Identify one-to-one functions and their inverses both graphically and algebraically. Apply this knowledge to understanding exponential and logarithmic functions. Use these functions to model and solve real-world problems including (but not limited to) continuous interest, exponential growth, and exponential decay.
- Explore the notion of angles and radian measure. Learn the basics of right triangle trigonometry, and define the six basic trigonometric functions. Analyze properties of the graphs of the trigonometric functions, and apply transformations to analyze the graphs of these functions.
- Define and learn the properties of the inverse trigonometric functions. Prove selected trigonometric identities, and solve selected trigonometric equations.
- Solve real-world application problems using trigonometric and inverse trigonometric functions and their associated models.

Text: Precalculus Essentials, 5th edition, by Robert Blitzer. **MyLabMath access is required to be purchased:** ISBN 9780135902257 (18 week access) or ISBN 9780134759036 (24 month access). The instructor's course ID is **chepushtanova93693**. MyLabMath is required for homework and quizzes, and it also gives you access to an e-copy of the textbook (so you do not need to purchase a physical copy of it).

Prerequisites: It is expected that students enrolled in this class have successfully completed MTH 94 (College Algebra) or have met the Department of Mathematics and Computer Science placement criteria.

COVID-19 Safety Rules: We will follow Wilkes safety protocols as described in *COLONELS COMBAT COVID* guidebook. Make sure to always wear a mask in class, wash your hands or use hand sanitizer frequently, use the same seat in the classroom. No eating is allowed in the classroom. If you are sick, stay at home (and let me know).

Attendance: You are expected to attend all classes, unless you are sick. You are responsible for everything that goes on in class (even if you are not there). *Remember that poor attendance is a major contributor to poor performance!*

Calculator: In this course, calculators can be used as a helpful tool to help analyze functions. However, standard graphing calculators (such as TI-83 or 84) and graphing calculators equipped with CAS (Computer Algebra System) (such as TI-89, TI-92, TI-Nspire, or equivalent) WILL NOT BE PERMITTED for use by students on any semester examinations. **Only a standard scientific calculator, for instance, such as TI-30Xa, is permitted (but not required) for use on semester examinations.**

Homework, Quizzes, and Exams: Three 50-minute midterm exams and a cumulative two-hour final exam will be given. No makeups will be given for exams, except for extreme circumstances (note that going on a vacation on the exam date is not an extreme circumstance!).

There will be regular online homework assignments and quizzes through MyLabMath. All homework assignments, once opened, will remain open until July 15. Note that the online quizzes are only available once the corresponding homework assignments have been attempted, with a score of 50% or higher achieved on each. The quizzes have deadlines throughout the course, so if you fall behind on the homework, you may miss a quiz deadline! Be sure to keep track of when the quizzes are due. Two lowest homework scores and one lowest quiz score will be dropped.

Grading: Your grade in this course is calculated from the following components:

ITEM	Grade %
MyLabMath Assignments	10
MyLabMath Quizzes	10
Highest Midterm Exam Grade	20
Middle Midterm Exam Grade	17
Lowest Midterm Exam Grade	13
Final Exam	30

and your final grade will be assigned from the total percentage you earn as follows:

Raw Score	0 to 59%	60 to 64%	65 to 69%	70 to 74%	75 to 79%	80 to 84%	85 to 89%	90 to 100%
Grade	0	1.0	1.5	2.0	2.5	3.0	3.5	4.0

However, there is an additional restriction for a failing grade on the final exam: if a student does not score at least 50% on the final, the highest grade they are eligible for is a 1.5.

Academic Honesty: By submitting your assignments and exams you certify that this is **your own work**. If there is evidence that work you hand in is not your own, the first time you will receive a zero on the exam and the second time you will receive a grade of 0 in the course. Appropriate deans will also be notified. **Put simply: do not cheat. I have no patience for academic dishonesty.**

Cell Phones should be switched to silent mode (or turned off), and put out of sight during class time. **NOTE: THE USE OF CELL PHONES DURING EXAMS IS EXPRESSLY FORBIDDEN AND WILL RESULT IN A GRADE OF 0.**

Email Etiquette: Please refer to the following tutorial on how to communicate with your instructor via email: `https://marktomforde.com/academic/undergraduates/Email-Etiquette.html`. View an email to a professor as a professional interaction. How you choose to interact conveys your level of seriousness and professionalism.

Tentative Schedule of Coverage and Exams

1. *6/14 - 6/17*
   Sections 1.1 - 1.8

2. *6/21 - 6/24*
   Sections 1.9, 1.10, 2.1 - 2.5
   Midterm Exam 1 on 6/24

3. *6/28 - 7/1*
   Sections 2.6 - 2.8, 3.1 - 3.5
   Midterm Exam 2 on 7/1

4. *7/6 - 7/8 (no class on 7/5)*
   Sections 4.1 - 4.5
   Midterm Exam 3 on 7/8

5. *7/12 - 7/15*
   Sections 4.6 - 4.8, 5.1 - 5.3, 5.5
   Final Exam (cumulative) on 7/15