

MA 104: Precalculus**Winter 2016-17****Instructor:** Sarah Brewer**Email:** sbrewer@asms.net (best way to contact me)**Office:** S201**Office Phone:** 251.441.2127**Course web site:** brewermath.com**Office Hours:** 7th period MonTuesWedFri; 2nd period Thurs; 3:45 Wed**Math Lab (free tutoring):** Monday-Thursday 7:00-9:00pm in S201**Khan Academy Coach Code:** 2WSVWY

Course Description: Precalculus is a survey of topics necessary for calculus, including polynomials, rational, exponential and logarithmic functions, matrices, sequences and series, and the binomial theorem.

Prerequisite: Trigonometry.

Text: *Precalculus: Graphs & Models*, 3rd ed. By Bittinger, Beecher, Ellenbogen & Penna.**Coverage:** 1.2-1.7, 2.1, 2.3-2.4, 3.1-3.7, 4.1-4.6, 8.2-8.3, 10.1-10.3, 10.7**Grade determination:**

Quizzes (~weekly) ~10x10-20 points each

Tests 3x100 points each

Final Exam 1x200 points

Homework will be assigned daily, both from the textbook and online at Khan Academy. No grades will be given for homework, but your understanding of course content is dependent on homework completion. Because homework problems may appear on quizzes or tests, students are encouraged to complete homework early and attend Math Lab to make sure they know how to work all problems.

Quizzes will be given approximately weekly and will be a combination of theory memorization (rules, definitions, and formulas) and problems similar to homework. Quizzes can occur any day of the week and may be announced or unannounced. There will be no make-up quizzes. If you miss a quiz with an excused absence, you will have fewer total possible points. Quizzes missed due to unexcused absences will receive a grade of 0. The lowest quiz grade will be dropped.

Tests will consist primarily of material covered since the prior test, but will also include some review questions. The lowest of the four test grades will be dropped. The final exam will be comprehensive (though weighted heavily on chapters 4, 8 & 10).

Tentative test dates: Week 3, Week 5, Week 8, Week 10

Make-up policy: Any quizzes or tests missed due to unexcused absences will receive a grade of zero. There will be NO make-up quizzes. Arrangements to make-up tests must be done BEFORE the test is missed. In case of unexpected illness, this can be done via email.

Note: make-up assignments will, in general, be more difficult than the original.

Cell phone policy: Phones should be SILENT (not on vibrate) and away. I reserve the right to confiscate any phone that I deem a distraction. Use of cell phones during quizzes or tests will result in a grade of zero.

Attendance and Tardiness Policy: Three tardies count as one unexcused absence. A student with three unexcused absences may be assigned a grade of WF for the course. Students are responsible for acquiring any missed notes and assignments (as these are posted on the web, this should not be a problem).

Precalculus Winter 2016-17 Tentative Schedule

Week 1 – Nov 7-11

- 1.2 - Functions and Graphs
- 1.3/1.4 - Linear Functions
- 1.5 - More on Functions
- 1.6 - The Algebra of Functions

Week 2 – Nov 14-18

- 1.7 - Symmetry and Transformations
- 2.3 - Quadratic Equations, Functions and Models
- 2.4 - Analyzing Graphs of Quadratic Functions

Week 3 – Nov 28-Dec 2

- Test #1
- 3.1 - Polynomial Functions and Modeling
- 3.2 - Graphing Polynomial Functions

Week 4 – Dec 5-9

- 3.3 - Polynomial Division: the remainder and factor theorems
- 3.4 - Theorems about zeros of polynomial functions

Week 5 – Dec 12-16

- 3.5 - Rational Functions
- Test #2
- 3.6 - Polynomial and Rational Inequalities

Week 6 – Jan 5-6

- 3.7 - Variation and Applications
- 4.1 - Inverse Functions

Week 7 – Jan 9-13

- 4.2 - Exponential Functions and Graphs
- 4.3 - Logarithmic Functions and Graphs
- 4.4 - Properties of Logarithmic Functions

Week 8 – Jan 17-20

- Test #3
- 4.5 - Solving exponential and logarithmic equations
- 4.6 - Applications: exponential growth and decay, compound interest

Week 9 – Jan 23-27

- 8.3 - Matrices and Systems of equations
- 10.1 - Sequences and Series

Week 10 – Jan 30-Feb 3

- 10.2 - Arithmetic sequences and series
- 10.3 - Geometric sequences and series
- Test #4

Week 11 – Feb 13

- 10.7 - The Binomial Theorem
- Final Exams – Feb 14-17