

Wilby High School

Pre-Calculus Honors/ATOMS 2016-2017



Contact information

Mr. Ursino Room : 303

E-mail: AUrsino@waterbury.k12.ct.us (best way to reach me)

Phone: (203)-574-8100

Core Values and Beliefs:

The students, faculty, staff, and administration of Wilby High School will work cooperatively with families, members of the community, and the Board of Education to create a safe, welcoming, and academic environment which embraces, challenges, and nurtures the diverse talents, interests, and learning styles of all its students. All students will leave Wilby High School with the self-respect, respect for others, knowledge, and skills necessary to become independent, intellectually curious, and self-fulfilled members of society.

Wilby High School's 21st Century Learning Expectations:

Wilby High School students will be: Effective Reader, Effective Writer, Effective Problem Solver, Self Directed Learner, Respectful Person, Collaborative and Cooperative Workers, and a Community Contributor.

Material Covered

This course provides algebraic and graphical explorations of polynomial, rational, exponential, and logarithmic and inverse functions, with real life applications. In addition, trigonometric functions are studied as circular functions with applications to triangle problems. Topics include trigonometric identities, inverse trigonometric functions and oblique triangle trigonometry. Limits and sequences and series will be introduced if time permits. Extensive use of the graphing calculator will assist the student in a balanced approach to solving problems.

Course Materials:

Notebook (2 subject or 3 ring binder and loose leaf paper)

Writing utensil (preferably a pencil)

Folder

Attendance/Make-Up Policy

Students are expected to complete assignments on the given due date. Should a student be absent when an assignment is given, it is the students' responsibility to make sure he/she asks for the assignment(s). If you are absent for a test or quiz, you will have TWO school days to make-up the material. I will not track you down! You must see me about making up a test or quiz. Accommodations will be made for reasonable circumstances.

Grading

Classwork	20%
Homework	10%
Assessments	60%
<u>Disposition</u>	<u>20%</u>
Total	100%

Tardiness

You are expected to be on time and ready to work as soon as the the bell rings. Like baseball, you will have three strikes. On the third strike you will be issued a detention. Each additional tardy will result in a detention.

Cheating/ Plajarism

There will be ZERO TOLLERANCE for cheating. If you are suspected of cheating, you will receive a zero for the given assignment.

Extra Help

I am available before, during, and after school for help. If you begin to fall behind in the material please talk with me immediately.

Unit 1 – Functions and their graphs

- 1.1 = Lines in the Plane
- 1.2 = Functions
- 1.3 = Graphs of Functions
- 1.4 = Shifting, Reflecting and Stretching Graphs
- 1.5 = Combinations of Functions
- 1.6 = Inverse Functions

Unit 2 – Polynomial and Rational Functions

- 2.1 = Quadratic Functions
- 2.2 = Polynomial Functions of Higher Degree
- 2.3 = Real Zeros of Polynomial Functions
- 2.4 = Complex Numbers
- 2.5 = The Fundamental Theorem of Algebra (+)
- 2.6 = Rational Functions and Asymptotes
- 2.7 = Graphs of Rational Functions (+)

Unit 3 – Exponential and Logarithmic Functions

- 3.1 = Exponential Functions and Their Graphs
- 3.2 = Logarithmic Functions and Their Graphs
- 3.3 = Properties of Logarithms
- 3.4 = Solving Exponential and Logarithmic Equations

Unit 4 – Trigonometric Functions

- 4.1 = Radian and Degree Measures
- 4.2 = Trigonometric Functions: The Unit Circle
- 4.3 = Right Triangle Trigonometry
- 4.4 = Trigonometric Functions of Any Angle
- 4.5 = Graphs of Sine and Cosine Functions
- 4.6 = Graphs of Other Trigonometric Functions (+)
- 4.7 = Inverse Trigonometric Functions

Unit 5 – Linear Systems and Matrices

- 5.1 = Solving Systems of Equations
- 5.2 = Systems of Linear Equations in two variables
- 5.3 = Multivariable Linear Systems (+)
- 5.4 = Matrices and Systems of Equations (+)
- 5.5 = Operations with Matrices (+)
- 5.6 = The Inverse of a Square Matrix (+)
- 5.7 = The Determinant of a Square Matrix (+)

Unit 6 – Introduction to Calculus

- 6.1 = Introduction to Limits
- 6.2 = Techniques for Evaluating Limits
- 6.3 = The Tangent Line Problem