



Fairfield Ludlowe High School - Fairfield Warde High School

PRE-CALCULUS HONORS

Insert Teacher Name

Insert Room Number

Insert Full Year/Semester

Insert Period

Insert Email Address

COURSE DESCRIPTION

In this course, students will build upon their Algebra 1, Geometry and Algebra II course knowledge. They will extend factoring skills to include more advanced factoring and applications to conic sections. Rational Functions will be analyzed through operations, solving, inverses and graphing characteristics. Students will develop an understanding of a logarithmic function as the inverse of an exponential function; analyzing the properties of logs, operations and solving logs and graphing characteristics. Additionally, students will continue to develop an understanding of trigonometry that builds upon their right triangle trigonometry concepts from Geometry and Algebra II. The course includes a strong emphasis on circular and triangular trigonometric functions and identities and trigonometric equations. Furthermore, the conclusion of this course will end with an introduction to calculus with the investigation of limits, vectors, parametrics and polars. In preparation for Calculus, this course includes additional standards and rigorous content above the Pre-Calculus course. Strong Algebra skills required.

COURSE ENDURING UNDERSTANDINGS

Students should:

- Extend factoring skills to more complex expressions..
- Explore Conic Sections and their properties, specifically circles, parabolas (vertical and horizontal) and ellipses.
- Apply basic operations to rational expressions including addition, subtraction, multiplication, division, composition, inverses and simplification.
- Graph rational functions and analyze the characteristics of the graph..
- Define the logarithmic function as the inverse to the exponential function.
- Apply property of logs to simplify and evaluate expressions.
- Solve exponential and logarithmic equations.
- Extend the trigonometric functions to include secant, cosecant and cotangent.
- Define and evaluate inverse trigonometric functions and their restricted domains.
- Solve trigonometric equations.
- Model periodic phenomena with trigonometric functions
- Prove and apply trigonometric identities
- Apply trigonometry to oblique triangles
- Define a limit and extend to one sided limits.
- Evaluate limits algebraically, graphically and numerically.
- Define and determine discontinuities and how they are related to limits.
- Represent and model vectors and parametric equations.
- Graph and perform operations on vectors and graph parametric equations.
- Determine the characteristics of a vector.
- Define a polar equation and graph.
- Translate between vector, polar and parametric form.

UNITS OF STUDY

- Functions and Graphs
- Conics
- Polynomial and Rational Functions
- Logarithmic Functions
- Trigonometry
- Limits
- Parametrics, Vectors, and Polars

COURSE POLICIES AND REQUIREMENTS

GRADING (see FPS BOE [Policy 6146.1AR](#))

Cumulative/In-Progress Grade:

- 10% of the grade will be based on formative assessments, homework completion, or behavior
- 90% will be based on summative assessments, of which there will be a minimum of eight, with no fewer than 2 per quarter, for this full-year course; these may include Unit Tests, Mid-Unit Tests, Projects, Performance tasks, Summative Quizzes, etc.

End-of-the-Year Grade:

- 80% of the overall course grade will reflect the student's mastery of course content and skills during the school year through the Cumulative/In-Progress Grade.
- 10% of the End-of-the-Year course grade will be based on the Mid-Year Assessment
- 10% of the End-of-the-Year course grade will be based on the Final Assessment.

Grade Reporting

- All grades will be communicated through Infinite Campus
- Summative assessment results will be reported back to the student within ten school days from the date of submission or the due date.
- Formative assessment results will be reported back to the student within five school days from the date of submission or the due date, whichever is later and prior to any subsequent assessment..

Guidelines for Late Work:

- Late work will be accepted for both summative and formative tasks within a defined timeline agreed upon between the student and the teacher for excused absences..
- The total points may be reduced as a penalty for late work for unexcused absences. Students will earn a zero (0) if the assignment is not submitted or is submitted after the deadline for late work.

Reassessments:

- Any extenuating circumstances may be discussed with administration to allow alternative reassessment opportunities with administrative approval.
- Reassessment opportunities are defined as twice per year (with a maximum of one per quarter) for assignments that students met the original required deadlines and do not violate the academic integrity policy. Reassessment does not apply to midyear assessments or final assessments.
- Gradebook impact of Reassessment: original and reassessment scores will be averaged in the gradebook.

MATERIALS

Precalculus 7E, *Blitzer*

[MyMathLab](#)

(Insert Course Materials Here, ie. Textbook, Binder, Calculator, Highlighters)

EXPECTATIONS OF STUDENTS

(Insert Course Expectations Here)

EXTRA HELP

(Insert Course Expectations Here)

(Insert Additional Information Here)