Pre-AP Calculus

Newcastle High School

Contact Information

Instructor: Mr. David Stewart
Office Hours: 7:30 – 8:05am and 3:00 – 3:15 Mon – Fri
Planning Period 6th period
Classroom: 112
Classroom Telephone: 387-4304 ext 6316
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Course Content

This course is primarily designed to prepare students for advanced placement or college calculus. Topics extend from previous studies are functions, systems of equations, complex numbers, sequences and series, and analytical geometry. This course will relate, apply and explore all concepts of trigonometry, including identities, equations, and vectors when solving real world problems. The course will complete with the estimating and evaluating of limits, derivatives, integrals and the introduction to the fundamental theorem of calculus

Class Schedule

In the first 9 weeks we will cover continuity, end behavior, limits, extrema, average rates of change, parent functions and transformations, power, radical, and polynomial functions and their graphs, exponential and logarithmic functions, properties of logarithms, exponential and logarithmic functions, and modeling with nonlinear regression

In the second 9 weeks we will cover angles and radian measure, right angle trigonometry, trigonometric functions on the unit circle, graphs of sine and cosine functions, graphs of other trigonometric functions and inverses, Applications of trigonometric functions, and law of sines and cosines

In the third 9 weeks we will cover trigonometric identities, sum and difference identities, double-angle, power-reducing and half-angle identities, product to sum identities, matrix solutions to linear systems, matrix operations, determinants and cramer's rule, the ellipse, hyperbola and parabola equations, conic section rotation, vectors, dot products, and dots and vectors in three-dimensional space.

In the forth 9 weeks we will cover polar coordinates, graphs of polar equations, polar forms of conic sections, complex numbers and de moivre's theorem, sequences, series and sigma notation, estimating limits graphically and algebraically, Tangent lines, derivatives, integration, and the fundamental theorem of calculus

Course Materials

Text

Precalculus by Glencoe/McGraw-Hill.

Supplies

- TI-84(plus/silver/c) graphing calculator (this is the calculator I will use in class)
- Three ring binder(does not have to be independent from other subjects)
- Standard ruled filler paper(200 pages)
- Graphing paper(50 pages)

Course Policies and Procedures

Respectful and attentive behavior is expected and required

Respectful and attentive behavior includes these practices:

Treat school and/or my property better than you treat your own.
Raising your hand and being acknowledged before speaking.
Please do not talk to your neighbor unless working in groups.
Stay in your assigned seat for the duration of class.

Disciplinary steps

- 1st Offense - Warning
- 2nd Offense - Student-Teacher Conference
- 3rd Offense – Disciplinary Referral to the Principal

Hall passes are required to leave the classroom. Only one student at a time will be permitted to have a hall pass. You must have the hall pass on you while you are outside my classroom. The office must call me in order for you to leave for any other purpose (i.e. being checked out)

Grading Policies

Late work
1 assignment per 9 weeks will be accepted, can be no more than 1 week late
Once progress reports are finalized, the grades from that time frame are final

Grade calculation
Assignments – 10 Points (approx 50)
Quizzes – 50 Points (approx 16)
Tests – 100 Points (approx 8)
Semester Tests – 10% of semester grade

Points
All assignments are equally weighted except the semester exam

School Writing Assignment Requirement

All students will be required to complete one assignment each week that involves writing. Often times, this assignment will be also tied to a reading assignment, and this assignment will be graded and recorded. All students will be expected to write in complete sentences. Beginning September 10th, written responses not written in complete sentence form will receive a point deduction equivalent to 50% of the point value for that particular question. For example, if a question is worth 10 points and the student writes the correct answer, but it is not in complete sentence form, the student will lose 5 points on that particular question.

Beginning on the first day of school, and continuing through September 7th, students who receive a 50% reduction on any particular question for not answering in complete sentence form will have their graded paper returned to them and be given two days to change the answers into complete sentence form. If a student follows this procedure, any point reductions that were a result of incomplete sentences will be removed. It is important to note this opportunity is being offered as a transition time for students to meet our expectation of communicating and writing in complete sentences. Beginning September 10th, students will receive a 50% point reduction for each item not answered in complete sentence form, without the opportunity to redo the assignment.