

NORTHLAND PREPARATORY ACADEMY

SYLLABUS:

PRE-CALCULUS (PreCalc)

SCHOOL YEAR 2015 – 2016

TEACHER: Kymberly Stanoff Room 814 e-mail: kstanoff@northlandprep.org

REQUIRED TEXTBOOKS/MATERIALS:

- **Textbook:** Demana, Waits, Foley, & Kennedy (2004). *Precalculus: Graphical, Numerical, Algebraic*. Pearson Education, Inc.
- 2 ½ -inch binder with loose-leaf paper and dividers
- Pencils and Pens (including a colored pen)
- **Graphing Calculator** (TI-83 or TI-84 preferred) *I will not be able to assist with a TI-89 or Casio models.*

COURSE DESCRIPTION:

A major focus of the course is the twelve basic functions: the identity function, squaring function, cubing function, reciprocal function, square root function, exponential function, natural logarithm function, sine function, cosine function, absolute value function, greatest integer function, and logistic function. Students learn to analyze the graphs of these functions, learn the general characteristic of families of functions, and apply this knowledge using real-world data. Emphasis is placed on equation solving and modeling with these functions. After the general overview of the twelve basic functions, students focus on an in-depth study of polynomial, power, and rational functions, exponential, logistic, and logarithmic functions and their applications in real-world situations. Next, the emphasis shifts to trigonometry – the functions (and their graphs), and analytic trigonometry. The latter involves trigonometric identities and applications of the trigonometric functions using the Law of Sines and Law of Cosines. The focus shifts to vectors, parametric equations, polar equations, solving systems (with a focus on matrix operations), analytic geometry (primarily conic sections and their applications in science), and discrete mathematics. This final topic includes the binomial theorem, probability, sequences and series, mathematical induction, and statistics, both graphical and algebraic.

PARTICIPATION/PREPARATION:

Active class participation and preparation in activities and discussions are required components of this course. If you miss class for any reason, it will be your responsibility to get the notes from one of your classmates or as posted on my website.

CLASSROOM RULES:

Along with the rules and regulations put in place by NPA,

- Be courteous and respectful to others.
- Make effective use of every minute of every class period.
- No Cell-Phones. If they are seen for any reason, they will be taken away with no negotiation.
- No Cheating. If you are caught cheating, you will receive a zero for the assignment and be referred to the Dean.
- No food allowed. Drinks are allowed only if they have a non-spill top or lid.

GRADES:

Your quarter grades will be computed using the following approximate percentages:

Homework, Participation, and Class-work: 20%
Projects/Presentations: 10%
Tests and Quizzes: 70%

TESTS/QUIZZES:

- If absent only the day before the test or the day of the test, then the test will be taken the first day back. If absent for more than one day prior to the test, then the test must be taken within 5 school days of returning.
- Students will have the option to *retake ONE Test* of their choice each semester. The retakes are optional and are required to be completed no later than two weeks prior to Final Exam week.
- It is the student's responsibility to meet with me and set dates and times to complete missed tests/quizzes or for retakes.

HOMEWORK:

Homework will be assigned regularly and every assignment will be reviewed for *completion* in the beginning of the following class period. Part of your homework is TO CHECK and CORRECT YOUR ANSWERS. To get credit for homework you must attempt ALL of the problems AND check/correct answers. Credit will not be given if you have not checked your work!

Late homework due to an EXCUSED absence will be given the same number of days that were missed, to be completed for full credit. UNEXCUSED late assignments will result in a zero unless we have spoken PRIOR to the due date. Repeated late assignments will result in detention(s).

- **Specific math expectations**
 - Every answer must be "identified" ($y = 100$ cm) and clearly marked (ie. Boxed in).
 - All units should be included.
 - **Problems that require an "exact" solution should not be rounded.**
 - Any formulas used should be listed within the problem, in their original state. I want to know why you do what you do.

EXTRA HELP:

Students who are having difficulty with the lessons or with the homework should contact me **immediately** for extra help. I am usually available each day (except Thursdays) at 7:15 and will be available after school most days as well. Since quizzes and tests are 70% of your grade, it is in your best interest to see me before you take quizzes and tests if you are having any difficulty at all. Don't wait until the last minute to get help...it won't do you any good.

My main goal besides teaching you cool math skills, is to improve your work ethic, and sense of personal responsibility toward your education.

I reserve the right to make additions, deletions, and modifications to the syllabus and course requirements with reasonable notifications during class and/or as posted on my NPA webpage.

I have read and understand the syllabus for Ms. Stanoff's Pre-Calculus 2015/16:
(a copy of the syllabus is also posted on Ms. Stanoff's NPA website)

STUDENT NAME (print) : _____ Period: _____

STUDENT signature

Date

PARENT/GUARDIAN signature

Date