St. Mary Catholic Schools
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Pre-calculus Syllabus

I.   PHILOSOPHY
The St. Mary Mathematics Department believes that our students deserve and need the best mathematics education possible; one that enables them to fulfill personal ambitions and career goals in an ever-changing world. Those who understand and can do mathematics will have significantly enhanced opportunities and options for shaping their futures. The St. Mary's staff needs to provide for the mathematical needs of students by giving attention to:
- The acquisition of necessary basic skills,
- Critical thinking in multidisciplinary areas,
- Problem solving,
- And the use of tomorrow's technology.

The St. Mary's staff recognizes that this should be accomplished incrementally through continued practice. Continued practice
- Means that fundamental skills and concepts are practiced and reviewed throughout the year.
- Provides the time and experiences necessary for concepts to become a part of the student's long-term learning.

II.   PRE-REQUISITES
Algebra I , II, and Geometry

III.   COURSE DESCRIPTION
This course will follow the South Dakota State Content Standards adopted in 2004. The students will work extensively with graphs of functions and apply algebraic techniques to a variety of problems. They will extend their knowledge of polynomial and rational functions and their graphs, exponential and logarithmic functions, trigonometry and analytic geometry. They will also explore limits and continuity.

IV.   COURSE OUTLINE
1. Linear Relations and Functions
2. Systems of Linear Equations and Inequalities
3. The Nature of Graphs
4. Polynomial and Rational Functions
5. Trigonometric Functions
6. Graphs of Trigonometric Functions
7. Trigonometric Identities and Equations
8. Vectors and Parametric Equations
9. Polar Coordinates and Complex Numbers
10. Conics
11. Exponential and Logarithmic Functions
12. Sequences and Series
13. Combinatorics and Probability
14. Statistics and Data Analysis
15. Introduction to Calculus

V.   COURSE REQUIREMENTS
- Completion of all daily work, graded assignments, quizzes, projects, and tests
- Completion of binder
- There will be behavior points daily
- Tests will be given at the end of each chapter. There will be weekly concept quizzes (if applicable).
- The grading for daily work will also be changing. They will receive 5 points for completing the 4-6 practice problems in class with all work shown and correct answers. They will receive 5 points for completing all the homework that was assigned with work shown. If they only do half the homework assigned and/or does not show work, they will receive 3 points. If they do not do the assignment at all, it will be a zero.
- Occasional problem solving, cooperative learning, or journal writing activities will be done in class. These will be graded on a basis of complete or incomplete.
- Students will need a TI-83 Plus or better Graphing Calculator. (School has some available if a deposit is put down.)

VI. GRADING SCALE
     Class grades and grade points are issued based on percentage ranges.

Percent	Grade	Grade Points
100+	A+	4.0
97-99	A	4.0
94-96	A-	3.66
91-93	B+	3.33
88-90	B	3.0
86-87	B-	2.66
83-85	C+	2.33
80-82	C	2.0
77-79	C-	1.66
74-76	D+	1.33
71-73	D	1.0
68-70	D-	.66
67-below	F	0

VII.   INSTRUCTIONAL MATERIALS
     Textbook: "Advanced Mathematical Concepts – Precalculus with applications"
                    Glencoe-McGraw Hill, 2006

Assessment
        Daily work/behavior (25.72%), quizzes/vocabulary tests (15%), tests (35%), semester exams(14.28%), projects, Binder grade (10%)

Goals for a SUCCESSFUL Classroom:
        a. Be in the classroom on time, with all necessary tools (Book, assignments, paper, pencil, and calculator)-You will receive one freebie and any times after that will be a tardy
        b. Actively participate in classroom activities. This will be an important factor in how well you learn the material and succeed in this class. Please ask questions. Remember there are no dumb questions and someone else may be wondering the same thing you are.

      c. Be respectful and supportive of your classmates, your teacher, your school, and the property of others. In other words, treat others as you would want to be treated!

Supplies
      a. Paper, pencil, calculator, assignments, and textbook are required **every day** in class. A 3-ring binder is also needed for our portfolio.

Hall Passes
      b. To go to another classroom, you will need to have a pass from that teacher before coming to class.

Absences/Assignments
      c. If you are absent, it is your responsibility to see me about the notes/assignments for the day(s) you missed. You will have two days to complete the make-up work for each day you were gone.
      d. If you know ahead of time that you will be absent, you will need to see me to get the assignment before you leave.
      e. We will follow the school policy on tardies.

Retakes
      f. You will be allowed to re-write any test that you have scored an 85% or less on and receive ½ points back.

Extra Help
      g. I will be available in my room before school from 8:00-8:45 and after school until 4 unless previous arrangements have been made. You may also call me at home before 9 p.m. at 428-4907.
      h. I will be available on Tuesday and Thursday until 4:30 or 5 for tutoring. If you are struggling, I strongly encourage you to seek help at this time. However if no one is here by 4, I will leave.
      i. I want you to be successful in this class!! Get extra help as soon as you encounter difficulties. Don't wait until you are behind on a whole chapter's work.

Together
Everyone
Achieves
More