

# Precalculus AB Honors

Learning begins today. We can't change yesterday. But together, we can know where learning begins today and chart the best course toward the brightest possible tomorrow.

## **Teacher contact information:**

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Sunrise Mountain High School 2575 Los Feliz St. Las Vegas, NV 89156 702-799-7207

# **Course Scope:**

This one-year course is designed for the motivated, above-average student with a strong background in advanced algebra. In addition to reviewing topics from trigonometry, this course includes problem-solving techniques using analytic geometry, vectors, matrices, relations and functions and their graphs, series and sequences, probability and statistics, and the introductory concepts of calculus. This course is distinguished from precalculus by the instructional pacing and delivery of advanced content. Instructional practices incorporate integration of diversity awareness including appreciation of all cultures and their important contributions to our society. The use of technology, including graphing calculators and computer software, is an integral part of this course. This course will fulfill one of the mathematics credits required for high school graduation.

## **Course Goals:**

- 1. To understand and use the vocabulary and notation of mathematics.
- 2. To develop a variety of problem-solving strategies necessary for advanced mathematical or scientific studies.
- 3. To construct and analyze the graphs of polynomial, rational, trigonometric, exponential functions and their inverses.
- 4. To solve equations and inequalities, including those involving complex numbers.
- 5. To solve problems and study real-world applications of sequences and series, vectors, complex numbers, and matrices.
- 6. To validate mathematical conjectures using mathematical induction.
- 7. To graph equations using the polar coordinate system
- 8. To develop an intuitive understanding of the basic concepts of calculus including limits, areas under curves and slopes of curves.
- 9. To solve real-world problems applying the techniques of descriptive statistics.
- 10. To communicate effectively using the language of mathematics in both oral and written

#### **Course Structure:**

#### First Quarter:

- Functions
- Polynomial and Rational Functions
- Exponential and Logarithmic Functions

## **Second Quarter:**

- Trigonometric Functions
- Trigonometric Identities

#### Third Quarter:

- Vectors and Polars
- Systems and Matrices
- Conic Sections

#### **Fourth Quarter:**

- Probability and Statistics
- Concepts of Calculus (Limits and Derivatives)

# Textbook(s):

• Larson, R., Hostetler, R., & Edwards, B.H. (2008). *Precalculus with Limits: A Graphing Approach*. Boston, MA: Houghton Mifflin. ISBN: 978-0-618-85152-2.

#### **Mountain Mindset:**

These are the four core principles that will make you a successful student at Sunrise Mountain High School and it is our hope that development of these character traits will help Sunrise Mountain students be successful in all of their future endeavors.

- Show RESPECT for your community, school, family, peers, and most importantly YOURSELF.
- Demonstrate KINDNESS.
- COMMIT to education for your future.
- PERSEVERE Climb YOUR mountain!

# **Grading:**

Sunrise Mountain High School has adopted a school-wide grading system of utilizing a modified version of the Minimum F. All grades will be calculated and entered into the grade book with the lowest possible score being 50% of the total points, provided an effort has been made and the assignment has been completed and turned in to the teacher. IF an assignment is missing for any reason (refused to complete the assignment, absent, etc....) the grade will be entered into the gradebook as a "0%". The teacher will allow the student to make-up the assignment and the new grade will replace the "0%". IF the student does not make-up the assignment, the grade of "0%" will remain in the gradebook. All assessments in a class will be entered into the grade book under two different categories as follows: Formative, 20% of the quarter grade and Summative, 80% of the quarter grade. Teachers will determine into which category (formative or summative) graded activities will be placed. Typically, formative assessments are activities such as homework, classwork, journal entries, short quizzes, etc. which are used on a daily basis to measure students' progress toward mastery of standards; whereas, summative assessments are activities such as unit tests, embedded assessments, research papers/projects, performances, etc... which are used at the end of a unit of study to measure students' mastery of standards.

## **Semester Grades:**

- 40% first/third nine weeks
- 40% second/fourth nine weeks
- 20% semester/final exams

Quarter and semester grades will be issued in keeping with the CCSD Grading Scale as follows:

- A = 100 90
- B = 89 80
- C = 79 70
- D = 69 60
- F = 59 and below

#### **Grade Access:**

Parents and students may access grades at any time using the Infinite Campus Portal. Grades will be accurate in real time as teachers input assessments into their grade books.

## **Academic Dishonesty:**

Academic dishonesty will not be tolerated. If a student is caught cheating on any assignment, a Minimum F will be issued. During a test or quiz, talking is considered as cheating and the grade will result in a Minimum F. Students caught cheating will also be referred to the Deans' Office for additional behavior consequences.

# **Supplies:**

Students are expected to have and maintain the following supplies all year: adequate paper supply, pens/pencils. Optional materials include: graph paper, ruler, scissors, colored pencils, high-lighters, and colored pens.

# Tardiness and Make-up Work:

- Tardy Policy (School Wide): Tardy lock-outs occur every period, every day. You must be in class BEFORE the late/tardy bell. Students who are late to class will be sent to the deans' office to get a tardy pass and the following disciplinary actions will be enforced if you are tardy to class:
   1<sup>st</sup> Tardy Deans' Detention (After School). Failure to attend Deans' Detention will result in Required Parent Conference (RPC) before returning to school.
  - 2<sup>nd</sup> Tardy Required Parent Conference (RPC). Parent must come to meet with deans' office before returning to school.
  - Additional Tardy Required Parent Conference (RPC).
- Make-up Work (School Wide): Students need to make arrangements with their teacher after an absence to obtain and complete missing work.
- Late Work (School Wide): In order to ensure student mastery and success, students are permitted, encouraged and should, turn in all work, including late work. Students who do not turn in their work will be assigned an academic detention. A 10% reduction in points will be assessed on all late assignments not completed in academic detention.

## **Progressive Discipline Policy:**

- First Offense: Verbal Warning
- Second Offense: Written Warning & Conference with Student
- Third Offense: Phone Call ParentsFourth Offense: Dean's Referral

#### **Student Conduct**

- Respect the rights of others and accept the responsibility for your own behavior.
- Participation in class activities should be done politely and cooperatively.
- Be in class on time and be fully prepared to work.
- All school regulations will be enforced at all times.
- Be reasonable. The way you treat people is usually the way they will treat you.
- Request corridor passes during class transition times, not during instruction.
- Assist in creating a respectful classroom vibe. Do not distract your classmates.

# **Policies/Procedures**

- Daily Materials have pencil, notebook out, learning attitude
- Upon entering classroom obtain necessary handouts, be seated before bell rings
- Class dismissal follow your teacher's instructions

- Electronics expected to be put on silent during class unless otherwise stated or permitted by the teacher. Should not be used during instructional time
- Food & Drink only water in classroom
- Dress & attire follow school code. Hall monitor will be requested otherwise
- Respect Property at all times

# Sunrise Mountain High School Commitment Contract

- 1. I have read the information contained in this document.
- 2. I agree to follow the rules and guidelines of the Clark County School District and Sunrise Mountain High School.
- 3. I agree to follow all behavior guidelines for students.
- 4. I agree to make the commitment to work as hard as possible to become the best student I can be.
- 5. I understand that violations of the rules described herein may result in meeting with the teachers, detention, parent conference, and/or Deans' Office referral.

| Name of Student: (please print)                                |
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| Signature of Student   |
| Student E-mail Contact   |
| Name of Parent/Guardian (please print)                         |
| Signature of Parent/Guardian                                   |
| Parent/Guardian E-mail Contact                                 |
| Parent/Guardian Phone Number                                   |
| Primary language spoken in the home: English / Spanish / Other |