Chandler Unified School District
MAT400A Precalculus
SY 2023-24

Course Overview
Course Description
The course explores algebraic manipulation, graphing, and application, to explore functions, mathematical modeling, exponential and logarithmic equations, discrete mathematics, and trigonometry. Precalculus strengthens students' conceptual understanding of problems, mathematical reasoning, and mathematical modeling in solving problems. This course combines concepts of trigonometry, geometry, and functions to prepare students for studies in STEM-related classes and college and career-entry mathematics courses. Students will use the standards for mathematical practice to engage with the subject matter.

AP/IB/Dual Enrollment
Maybe offered for Dual Credit.

Prerequisite/Fee(s)
Algebra 2

Course Materials
Materials: organizational binder& 5 tabs, notebook & graph paper (college ruled) and pencils (required)

Suggested Calculator: TI-83, TI-83+, TI-84+ (not provided)

Adopted Resource(s)
Precalculus with Limits 3rd Ed., Larson (Cengage) & Precalculus 5th Ed., Blitzer (Pearson)

An asterisk will indicate a resource containing sexually explicit materials per legislative definitions. CUSD has determined that all resources listed above are of exceptional educational value.

Site and Faculty Information
School name and address:
Hamilton High School, 3700 S Arizona Ave, Chandler, AZ 85248

Building principal:
Michael Delatorre
delatorre.michael@cusd80.com

Teacher:
Susan Dorinski B.S. & M.Ed.
dorinski.susan@cusd80.com
Office hours: Tuesday/Wednesday 2:20-3:20

Course Access
This course is taught in-person at Hamilton High School. Students will have access to the curriculum and instruction in the classroom. Google Classroom is the primary location for students to access material when absent from classes taught in person.

Help
Academic Support
- Contact the teacher to schedule an appointment during office hours
- [Ed Tech](cusd80.com/Page/45109) support for students, parents/guardians, and community link (cusd80.com/Page/45109)

Mental Health Support

- CUSD mental health support cusd80.com/Domain/10528 or 480-573-8808 (talk or text)
- Suicide & Crisis Lifeline: 9-8-8 hotline
- 24-hour Crisis Line Talk: 602-222-9444, Text: 741-741

Student Conduct, Success, and Responsibilities

Student Handbook
Students must follow the policies and procedures established in the Student Handbook. Copies of the handbook can be found at cusd80.com/handbooks. Printed copies will be provided upon request.

Student Responsibilities
It is the student's responsibility to do all of the assigned work.

Write down the original problem and all supporting work.

A list of answers is not acceptable.

In this course, we will use WeBWorK as a web-based 3rd party tool to complete assignments. Students will be required to submit work and/or download information from these tools.

Late work
Cheating will not be tolerated and will result in a grade of ZERO and a referral. Late work will be accepted, provided that it is due to an excused absence.

No makeup quizzes will be given.
If you miss a quiz and the absence is excused, then you are excused from that quiz.
If you miss a quiz and the absence is unexcused, then you will receive a score of zero for that quiz.

You have the number of days you were absent to turn in late homework or to take a test. Work not made up within the appropriate time frame may result in a score of zero. It is the student's responsibility to turn work in within the appropriate time frame.

Assessments and Assignments

Students will complete assessments during each unit of study to assess their understanding. Students will complete the CUSD Common Final at the end of the first and second semesters. The Common Final will count for 20% of the student's final semester grade in grades 9-12 and 10% in grades 7-8 (some exceptions may apply at the Junior High level). Common finals will be in ELA, Math, Science, Social Science, and World Language.

Final exams will be given during the CUSD Jr High/High School Early Dismissal days in December and May, as identified on the District Calendar.

If students are requested to participate in a survey, the survey questions will be provided to parents/guardians seven days before student contact.

Grading

Grade Percentage

A	B	C	D	F
90% - 100%	80% - 89%	70% - 79%	60% - 69%	<60%

Quarter grades
Evaluation each quarter will be based on tests, quizzes (approximately 85%) and homework (approximately 15%).

Semester grades
Semester grades are calculated using 40/40/20: Each quarter accounts for 40% of the semester grade and the final exam accounts for the remaining 20%.

Units of study

1. Demonstrate conceptual understanding of asymptotes, continuity, end-behavior, rates of change of polynomial, absolute value, rational, radical, exponential, logarithmic, logistic, power, composite, and piecewise functions and complex roots of polynomial functions in preparation for Calculus.

2. Determine the length of an arc, area of a sector, and linear and angular velocity.

3. Use the unit circle to determine angle and reference angle measures in radians and degrees and convert between them.

4. Determine triangle measurements using trigonometric ratios and law of sines and law of cosines.

5. Analyze (graphically, numerically, algebraically, and verbally) the trigonometric functions and their inverses.

6. Use inverse trigonometric functions in solving equations.

7. Verify trigonometric identities.

8. Use identities in solving trigonometric equations.

9. Solve applications involving vectors, their components, and visual representations.

10. Model real world situations graphically, numerically, algebraically, verbally, and interpret solutions using a variety of mathematical techniques.

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Parent/Guardian

Acknowledgment

Parents/Guardians should indicate if they "Acknowledge" or have a "Potential Conflict" with their student's participation in the following units by checking the appropriate box for each unit of study listed. Students cannot opt out of a standards-based unit. Marking "Potential Conflict" will prompt the teacher to make contact regarding assignment alternatives.

Unit of study	Acknowledge	Potential Conflict
1. Demonstrate conceptual understanding of asymptotes, continuity, end-behavior, rates of change of polynomial, absolute value, rational, radical, exponential, logarithmic, logistic, power, composite, and piecewise functions and complex roots of polynomial functions in preparation for Calculus.	☐	☐
2. Determine the length of an arc, area of a sector, and linear and angular velocity.	☐	☐
3. Use the unit circle to determine angle and reference angle measures in radians and degrees and convert between them.	☐	☐
4. Determine triangle measurements using trigonometric ratios and law of sines and law of cosines.	☐	☐
5. Analyze (graphically, numerically, algebraically, and verbally) the trigonometric functions and their inverses.	☐	☐
6. Use inverse trigonometric functions in solving equations.	☐	☐
7. Verify trigonometric identities.	☐	☐
8. Use identities in solving trigonometric equations.	☐	☐
9. Solve applications involving vectors, their components, and visual representations.	☐	☐
10. Model real world situations graphically, numerically, algebraically, verbally, and interpret solutions using a variety of mathematical techniques.	☐	☐

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By signing and returning this form, the parent/guardian acknowledges they have reviewed the resources and units of the study included in the syllabus.

☐ As the parent/guardian, I understand that I may contact the teacher if I have questions about the resources, content, or units of study.

☐ As the parent/guardian, I understand I can check my student's grades in Infinite Campus anytime during the school year.

Student name (printed) _____

Student signature _____

Parent/Guardian name (printed) _____

Parent Signature _____

Date _____

_____

Please return this page to your student's teacher.