Multivariable Calculus/Differential Equations/IB HL Math
Mrs. Quintana
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Office Hours: Tuesdays and Thursdays 2:30-3:30, other days by appointment

This course is designed to prepare students for the IB HL Exam, as well as serve as two college equivalent courses. Students are expected to take the HL exam or dual enroll through CGCC. A Calculus BC grade of "C" or better is a prerequisite for this class.

CLASS EXPECTATIONS

Tests/Quizzes:
Students will have advanced notice for all tests and quizzes, although there may be pop quizzes. If the student shows understanding and scores higher on the unit exam than on a quiz in that section, test subscores may replace a lower quiz score. There are no retakes or corrections done for points. Dates are subject to change.

Homework:
Homework will be a combination of written work and online submission. We will be using WebWork for online homework, and our textbook for written work. Homework will be assigned daily. Homework will be collected on exam days. Students can earn up to 10 points per collected written assignment. 5 of these points will be based on completion and the remaining 5 points will be based on how well the student demonstrated how to solve the problem. Written homework can be resubmitted any time before the chapter assessment for full points if corrections are made. We learn from our mistakes!

Required Daily Materials:
A. Pencil or pen and extra paper.
B. Math Binder or some way to organize your math work.
C. Graphing Calculator (TI-83 or higher).
D. Calculus Book on occasion, as specified by instructor.
   - Calculus Early Transcendental Functions 7th Ed by Larson and Edwards. ISBN 978-1-337-55251-6.
   - Fundamentals of Differential Equations, 8th Ed by Nagle, Saff, and Snider. ISBN 978-0-321-74773-0
   - Optional text (required for those taking the IB HL Math exam): Mathematics Higher Level (Core), 3rd edition by Cirrito, Buckle and Dunbar. ISBN 1-876659-11-4

Topics to be covered:
- Vector geometry and vector valued functions.
- Functions of several variables and partial differentiation.
- Multiple integrals, and vector calculus.
- Methods to solve first and second order differential equations, including Taylor and Runge-Kutta approximation.
- Applications of differential equations.
- Laplace transforms.
- Homogenous and nonhomogenous linear systems.

Classroom Behavior Expectations:
A. Attend and participate in class every day and be on time.
B. Be prepared and ready to go when the period begins.
C. Use time wisely and in a manner that does not disrupt others.
D. Have a positive attitude.
E. STUDENTS NEED TO BE RESPECTFUL TO THEMSELVES, THEIR PEERS, AND THEIR INSTRUCTOR.
F. All students are expected to be positive contributing members in this class. If a student's behavior prevents the class from functioning, a student may be removed from class or written a conduct referral.
G. No food or drink (besides water) allowed in the classrooms. This is CHS policy.

Attendance:
Students are expected to make-up any work missed due to an excused absence. It is the student's responsibility to get any missed notes either from a classmate or instructor website. Students have the number of days absent to submit their missing work.

Virtual Attendance Statement:
Attendance is based on engagement. If a student is not present for synchronous instruction and does not complete the asynchronous/alternative assignment for the daily class meeting, then the student is considered absent. Teachers will contact attendance clerks once a student is determined to be absent. This policy is tentative and subject to change.

Online Expectations:
Students are expected to follow the school dress code during virtual lessons, and to have an acceptable background for video when needed. During a Google Meet session, students are expected to join muted and follow instructor directions for muting and unmuting during the lesson. Students are expected to use school appropriate language, engage with other students and the instructor respectfully, and follow the appropriate technology expectations.

Cheating:
Cheating means, but is not limited to: copying homework, tests and quizzes or using electronic devices during tests or quizzes. These behaviors are unacceptable. Please DO NOT do it. Students will receive a 0 for the assignment/test/quiz, have to call their parents/guardians, and be written a conduct referral.

Grades:
Grades will be computed on the total points of homework, quizzes, tests and participation. The quarter grade breakdown and percentages are listed below.

	Percentage of Quarter Grade
Tests/Quizzes	70%
Assignments/Participation	30%

The final course grade will be figured by combining the grades from both quarters (40% each) and the final exam (20%). The grading scale is below.

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

All students will take Final Exams.

Electronics Policy:
Electronics are to be used for educational purposes during class. Electronics will not be allowed on assessment days. The Governing Board intends that technological resources provided by the District be used in a safe responsible and proper manner in support of the instructional program and for the advancement of student learning. It is the policy of the Chandler Unified School District to maintain an environment that promotes ethical and responsible conduct in all electronic resource activities by staff and students. The District reserves the right to monitor use of the District's systems for improper use without warning or prior consent. Students shall be informed that computer files and electronic communications, including email, are not private and may be accessed by the District at any time. Inappropriate use may result in disciplinary action and/or legal action in accordance with the law and Board policy. Please visit the student handbook at https://www.cusd80.com/handbooks for further details about appropriate use of technology use.

Diversity Statement:
All individuals have a right to an educational environment free from bias, prejudice and bigotry. As members of the Chandler High School educational community, students are expected to refrain from participating in acts of harassment that are designed to demean another student's race, gender, ethnicity, religious preference, disability or sexual orientation.

Learning Reflections: Research has shown that when students go back and reflect on the learning process, the concepts learned can be moved from short to long-term memory, better study skills can be developed, and an honest self-assessment of learning can be done. In this spirit, students will be required to provide a "Learning Reflection" after each exam. Below is a sample of the format to be used and a sample response from a hypothetical student.

<p align="center"><u>SAMPLE REFLECTION</u></p>

Highlights
- Working together with my group
- Learning how to determine the gradient of a multivariable function
- Explaining a homework problem to a group member

Concerns/Questions
- I have some unanswered homework questions
- This unit of study is becoming difficult (or challenging?)
- I have to miss class next week for the pep assembly; therefore I will need to get my class work ahead of time.

Personal Growth
On a scale of 1-4 give yourself a grade on how well you have done this chapter. 1 would represent not much effort given to 4 representing you gave all your best effort. Explain your reasoning as to why you gave yourself this particular score. 4
- I kept up-to-date on all homework assignments and participated in discussions with my group during class.
- My goal of doing the required homework problems on time has been met so I plan now to do some of the suggested problems for additional practice.

Future Goals (These goals must be something that we can measure. In other words we should be able to see that you met these goals by your grade in the class).
- Next Assessment – I want to earn a 90%.
- Next Homework set- I will come in to get my questions answered as soon as I have them.