

University City High School

AP CALCULUS AB/BC (StLCC: MTH 210/220)

SYLLABUS 2019-2020

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Course Description:

This honors AP course will be a rigorous course, preparing all of its students to take Advanced Placement Calculus Test. Topics included are limits and continuity of functions of a single variable, derivatives and antiderivatives of algebraic functions and trigonometric functions, and applications; BC ONLY: Differentiation and integration of transcendental functions, techniques of integration, improper integrals, parametric equations, polar coordinates, and infinite and power series are among the topics covered. Students will encounter several types of assessment within this course: unit quizzes and exams, comprehensive exams, and experimental investigations that require collecting and analyzing data using technology. AP Calculus students will have the option to take the class for college credit through StLCC (see below).

Textbook:

Calculus for AP. Larson and Battaglia. Cengage Learning, 2017.

Course Expectations:

Students will be expected to bring a notebook and their Chromebook to class every day. Completing assignments, attending class daily, and seeking help when needed are essential components of successfully mastering the rigorous contents of Pre AP Calculus.

Calculators:

A graphing calculator is required for the course. We strongly recommend one in the Texas Instruments TI-Nspire family. A calculator will be issued to each AP Calculus student who does not have one. Some tests and assignments will allow a calculator, others will not, and some will be a combination of the two.

Formative & Summative Assessments:

Each assignment will be worth 10 points in the formative category and will be entered by unit. Unplanned POP Quizzes will be given regularly, and will be scored out of 10 points also in the formative category. Planned Quizzes will be scored out of 50 points in the summative category. Unit Assessments will be scored out of 100 points also in the summative category. Each semester will have a CUMULATIVE (non-multiple choice) final exam.

Grading Scale:

90 – 100 A
80 – 89 B
70 – 79 C
60 – 69 CR
Below 60 NC

Grade Components:

Formative Assessments 30%
Homework (10 pts each)
POP Quizzes (10 pts each)

Summative Assessments 70%
PANNED Quizzes (50 pts each)
Unit Assessment (100 pts each)
Final Exam (200 pts each semester)

College Credit Option

Students may enroll in MTH 210 or 220: Analytic Geometry and Calculus I or II through the St Louis Community College Dual Credit Program. They will earn five hours of college credit. Students will be expected to comply with all StLCC policies and will need to meet a GPA requirement of 2.6+ to be able to register.

Course Content:

Limits & Continuity
Rates of Change & Derivatives
Differentiation
Implicit Differentiation & Other Derivatives
Applications of Differentiation
L'Hopital's Rule and Related Rates
Definite Integrals
Fundamental Theorem of Calculus and Integration Methods
Differential Equations
Integrals as Net Change and Volume
Applications of Integration

BC Only:

Advanced Integration Methods
Parametric and Vector Functions
Polar Calculus
Sequence and Series Convergence
Power and Taylor Series

Because Pre AP Calculus is offered for college credit test retakes are highly discouraged. On campus, test retakes are not administered as a general practice.

Expectations and Procedures:

1. Be respectful of each other and follow all district and school rules (including IDs).
2. Be on time (two feet in the door). District tardy policy will be followed.
3. Come prepared with all materials.
4. Because electronic devices such as cell phones and iPods have the capacity to store formulas and share test questions and answers with friends, **I consider ANY use of a cell phone during a PAPER quiz or test to be cheating. The phone will be taken and appropriate consequences for academic dishonesty will be assigned.** Thank you for helping me to make sure students understand the importance of this rule.
5. **DO YOUR BEST!**

****Academic Dishonesty:* defined as plagiarism, cheating on tests, copying all or part of another student's assignments or papers, and/or forging parent or teacher's signature on document. Any assignment meeting this criterion will result in an automatic zero.

Chromebooks:

Many homework assignment answers will be posted on Google Classroom. It is imperative that students have their Chromebooks in working order. Please contact the technology help desk ASAP if your Chromebook needs repaired or serviced: wo@ucityschools.org or (314) 290 - 4014

Math Help:

The text book comes with CalcChat and CalcView, online help tutoring and example videos. I also routinely post solutions worked out on Google Classroom I am also available outside of "school hours" for tutoring and further assistance: please make arrangements via email or Google Classroom.

It's going to be a wonderful year! Please do not hesitate to contact me at bhieke@ucityschools.org

