Contact Information:

Teacher: Mrs Nakanishi
E-mail: tnakanishi@aacps.org
Planning period: 3B and 2A
Pride Period availability: Tuesday, Wednesday, Friday, first lunch.
Phone: 410-674-6500

Course Description:

This college level course is the study of differential and integral calculus based on further development of properties, graphs of relations and functions, differentiation and techniques, sequences and series, and vector calculus. Students should be able to work with functions represented in a variety of ways (graphical, numerical, analytical, or verbal) and understand the connections among these representations. Students should understand the meaning of the derivative in terms of a rate of change and local linear approximation and should be able to use derivatives to solve a variety of problems. Students should understand the meaning of the definite integral both as a limit of Riemann sums and as the net accumulation of change and should be able to use integrals to solve a variety of problems. Students should understand the relationship between the derivative and the definite integral as expressed in both parts of the Fundamental Theorem of Calculus. Students should be able to communicate mathematics both orally and in well written sentences and should be able to explain solutions to problems. Students should be able to model a written description of a physical situation with a function, a differential equation, or an integral. Students should be able to use technology to help solve problems, experiments, interpret results, and verify conclusions. Students should be able to determine the reasonableness of solutions, including sign, size, relative accuracy, and units of measurement. Students should develop an appreciation of calculus as a coherent body of knowledge and as a human accomplishment. Students who successfully complete this course will be prepared for the AP Calculus BC test and may be awarded up to two semester of college credit with a successful score. Graphing calculator is required. Prerequisite is a "B" or better in Precalculus

Couse Expectations:

Calculus is primarily concerned with developing the students' understanding of the concepts of the derivative and the integral and providing experience with its methods and applications. Day to day learning activities will include class discussions, drills, problem solving activities, and cooperative group work. Major assessments will be given at the end of each unit, with other assessments given periodically. Homework will be assigned every night. Students will often use technology through the use of a graphing calculator. Graphing is considered one of the four methods used for problem solving. The other three methods are symbolic (algebraic), numerical (use of tables), and verbal (reasoning through language).

Students may redo an assessment after receiving feedback and re-teaching/intervention from the teacher. This may be done during Pride Period or afterschool, arrangements need to be made with their teacher. Students are expected to:

- Complete all assignments**.**
- Complete and have the following for the original assessment:

- o Write the **correct answer** for any problem that was incorrect on the assessment.
- o Rework **any problem that was incorrect on a separate sheet of paper** to get the correct answer/understand the mistake(s) made and attach the correction sheet to the original assessment (**if the student is not able to complete any problem correctly, the student is expected to come in for help during Pride Period and/or after school for help**)

The **higher grade for the assessment will be recorded** in the grade book. Retakes must be completed by the **5th class period after the assignment is returned or on the retake days offered** to students within this time period. Violation of the academic integrity policy is not eligible for redo.

Grading Plan:

The grading system complies with AACPS Board of Education Grading Policy, II-RA. Grades are earned by student to document mastery of course objectives, skills, content, and concepts.

Assessments (3-5 per Quarter) are 65% of the student's total grade. Any assessment given in the last week of the marking period is not eligible for redo. Classwork (at least 6 per Quarter) is 15% and homework (at least 6 per Quarter) is 10% of the total grade. All work must be shown to receive credit for classwork and homework. Classwork and homework are not eligible for redo. The quarterly exam is 10% of the total grade and not eligible for redo.

Students are responsible for making up homework, quizzes, and tests when absent from class. Completion should occur upon returning to school within the time frame of the number of days the student missed. Unexcused absences will result in an automatic zero.

All assignments not submitted on the due date are considered late. Late assignments shall be penalized by a maximum of 50%. Late assignments must be submitted within five school days from the original date in order to receive credit. Late Summative Assessments cannot be resubmitted for a redo or an upgrade.

Grading scale:

Letter grade	Proficiency Level	Number Grade
A	Excellent mastery of standards is evident.	90 – 100%
B	Advanced mastery of standards is evident.	80 – 89%
C	Acceptable, average mastery of standards is evident.	70 – 79%
D	Partial mastery of standards is evident.	60 – 69%
E	Minimal or no mastery of standards is evident.	0 – 59%

Semester grades are determined by 50% from each marking period.