AP CALCULUS/CALCULUS AB
COURSE SYLLABUS

Teacher: Mrs. Hess **School Phone: 580-726-5611**
Conference Hour: 9:55 am – 10:45 am **School Hours: 7:55 am -3:30 pm**

COURSE RATIONAL/DESCRIPTIONS: Mathematics is recognized as the key to technology and the bases of many other fields; therefore, it is imperative to prepare students to be competent mathematicians. With the knowledge of mathematics the students will be prepared to incorporate these skills into their personal life and their career choice. This course is designed to expose the students to college level mathematics under the guide line set forth by the advanced placement program. It also serves as a preparation course for those students who will be taking AP calculus exam in the spring.

AP EXAMINATION: This exam seeks to assess how well a student has mastered the concepts and techniques of the subject matter of Calculus AB course. Teach exam consists of two sections, as described below.

Section I: A multiple choice section measures proficiency in a wide variety of topics

Section II: A free response section requires students to demonstrate the ability to solve problems involving a more extended chain of reasoning.

COURSE OBJECTIVES: Upon completion of this course, each student will have developed an understanding of the concepts of calculus and its methods of applications. This course emphasizes a multi-representational approach to calculus, with concepts, results and problems being expressed graphically, numerically, analytically and verbally. At the end of this class, students should be able to:

- Work with functions represented in various ways such as graphical, numerical, verbal, or analytical. Students should understand the connections among these representations.
- Understand the meaning of the derivative in terms of a rate of change and local linear approximation. They should be able to use derivatives to solve a variety of problems.
- 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.
- Understand the relationship between the derivative and the definite integral as expressed in both parts of the Fundamental Theorem of Calculus
- Communicate mathematics both in well-written sentences and orally. Students should be able to explain solutions to problems.
- Model a written description of a physical situation with a function, a differential equation, or an integral.
- Use technology in the form of a graphing calculator, to aid in solving problems such as estimating limits, estimating roots of a function, coordinates of an intersection, experiments such as evaluating in the limits of a function, investigating the derivative of a function, and calculating the values of definite integrals, interpreting results and verifying conclusions such as approximating the value of a function and checking to ensure the answer is reasonable.
- Determine the reasonableness of solutions, including sign, size, relative accuracy, and units of measure.

COURSE CALENDAR: The course is covered in two semesters. The first semester will cover Prerequisites, Limits, and Derivatives. The second semester will cover Integration, Applications, and AP Practice

COURSE EXPECTATIONS: Students will be expected to;

1. Participate in class discussion and other class activities.
2. Make-up work allowed under the following conditions;
    a. Within the allotted time limit according to school policy,
    b. Excused absents for full credit,
    c. School absents for full credit,
    d. UN-excused absents for 50% credit.
    e. Work late do to missed due date will be docked ten points daily.
3. If you know you are going to miss class, check with me or check online about the assignment(s) missed;
    a. Preferred action is to have work turned in be for you miss class,
    b. Otherwise, allotted time limit according to school policy.
    c. For grades given refer to 2b, 2c, 2d and 2e above.

LEARNING ACTIVITIES: Learning activities will be in the following forms, but not limited to;

1. Notes that are given in class or they can be downloaded;
    a. At: http://www.hessk.hobart.k12.ok.us,
2. Assignments that will be given either by,
    a. Online Software,
    b. Handout,
    c. Paper pencil,
3. Vocabulary and formula list,
4. Test.

ASSIGNMENT FORMAT: All student assignments will be expected to be in the following format;

1. Be worked in pencil,
2. Information for assignment place on handout or paper pencil assignments,
    a. Name,
    b. Assignment,
    c. Date,
    d. Class period.

EVALUATION TOOLS: Are as follows;

1. Assignments
    a. Online,
    b. Handout,
    c. Paper Pencil
2. Pop quizzes,
3. Test given at the appropriate time.
4. Accumulative test given at the end of each semester,

SUPPLY LIST: Students will need the following supplies daily;

1. "Calculus for AP" First Edition, Ron Larson & Paul Battaglia, Cengage Learning Company © 2017. ISBN13: 9781305674912,
2. Graphing calculator TI-84 Plus
3. Mechanical pencils,
4. Notebook paper,
5. Ruler,
6. Compass,
7. Protractor,
8. Colored pencils.
9. Copy Paper

A TI-84 plus calculator is recommended for this class. Students may check out a TI-84 plus for use. A contract will be signed to cover the cost of a lost or broken calculator. Students may use any type of graphing calculator, but if not a TI-84 plus, students will be responsible for learning how to run it, class time will not be used for this task.

GRADE POLICY: Grades will be figured as follows. Handouts, homework, and pop quizzes will be 25% of your grade, with test making up the remaining 75% of your grade. Your semester grade will be figured by taking 80% of your nine weeks grade and 20% of the accumulative semester test. If you are exempt from the semester test your semester grade will be figured as 100% of your nine weeks grade. The grading scale will be as follows: A – 90 to 100, B – 80 to 89, C – 70 to 79, D – 60 to 69 and F – 59 and below.

RULES: Students will be expected to:

1. **Leave their cell phones and smart watches turned on silent.**
2. **Leave their cell phones face down on the table or put away.**
3. **Leave their backpacks in their lockers or at the back of the room.**
4. Be seated and working on the quiz or ready to work when the bell rings.
5. Bring all supplies to class; you cannot leave the room once class starts.
6. Remain seated, clean up table area and push in their chair before leaving class.
7. Direct questions to the teacher only.
8. Stay out of my desk and from behind my desk.
9. **Keep** their hands off of other peoples things.
10. Not have candy, food or drink other than water in the room, unless told otherwise.

CONSEQUENCES FOR BREAKING CLASSROOM RULES: Students will be given:

1. A warning.
2. Detention with teacher.
3. Wednesday school.
4. A discipline referral that is sent to principal's office.

The consequence will depend on the severity or the repetitiveness of the rule broken.

CONSEQUENCES FOR BREAKING HANDBOOK RULES: Students will be given:

1. A discipline referral sent to principal's office.

The only way a student will leave the room during instruction time is with office personnel.

NOTE: Place this syllabus and rules page in the front of your notebook.

MRS. HESS
AP CALCULUS/CALCULUS AB COURSE SYLLABUS
&
CLASSROOM RULES

By signing this sheet both the student and parents are stating that they understand the expectation of this class. Please, sign and return this sheet to Mrs. Hess on or before August 31, 2020. Upon the return of this, the student will be given a grade of 100 for their first homework and test grade.

Student Signature

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Parent Signature

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Date

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