WHEELER HIGH SCHOOL COURSE EXPECTATIONS
ECE Math 1132

Teacher:	Mrs. Reyes	**Classroom:**	222
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Term:	Spring 2020	Meeting:	5th period each day

This course is given in cooperation with the Early College Experience Program at the
University of Connecticut, ece@uconn.edu, 860-486-1045.

Course Overview
MATH 1132Q: Calculus II Four credits. Offered Spring only.

Prerequisite: MATH 1131Q in the immediately preceding semester. A continuation of MATH 1131Q with techniques of integration, applications of integration, infinite sequences and series, power and Taylor series, polar coordinates and parametric equations, with applications to the physical sciences and engineering.

Eligibility Guidelines: Successful completion of one year of pre-calculus is required. A student must pass MATH 1131Q with a grade of a "C" or higher to continue on to MATH 1132Q. To receive credit for the MATH 1131Q – MATH 1132Q sequence a student must pass MATH 1131Q in the Fall with a C or higher and continue to MATH 1132Q in the following Spring. The sequence must be completed in one academic year.

The main objective of this course is to enable students to utilize their prior knowledge to appreciate and understand calculus conceptually and **provide them a college experience** with its methods and applications. The Early College Experience will help ease the transition to college math courses. The students are held to the same standards of rigor and pace as those taking the class at the University of Connecticut. The course emphasizes a multi-representational approach to calculus; with concepts, results and problems being expressed graphically, numerically, analytically and verbally.

Course Objectives
- Students should be able to work with functions represented in a variety of ways: graphical, numerical, analytical or verbal. They should 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 and explain solutions to problems both verbally and in written sentences.
- 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, experiment, interpret results and support 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.

Wheeler High School Academic Expectations:
- ***Analysis (assessed in this course)***
- Collaboration
- Communication
- Literacy

Required Textbook and Material Required

- Major Text

  Stewart, James. *Single Variable Calculus Early Transcendentals*: 7th ed. Belmont, CA: Brooks/Cole 2012.

- Students are required to have a binder or a section of a binder for this class. Students should keep all assignments to help prepare for the midterm and final exam. Students also need a TI-83/84 calculator and will be issued one for the year if needed. Calculators are used to explore, discover and reinforce the concepts of calculus throughout the course.

Class/ Behavior Expectations
- Be respectful, responsible, honest, and safe to self, others, and all property.
- Be on time and prepared for class.
- Be active and involved in learning.
- All school rules and policies as stated in the handbook apply.
- Cell phones
  - Cell phones should not be on a student's desk <u>unless</u> directed to be used by a teacher for class purposes.
  - Students should not be talking on cell phones during class or during hallway passing time. School phones are available in our main office if a student needs to call home at any time and we encourage this practice if needed.
  - Students should not use their cell phones to ask to be dismissed if they are not feeling good. Instead, students should be evaluated by our school nurse and our school nurse will call home to let a parent or guardian know they need to be picked up.
  - Cell phones should not be used to record or photograph students or teachers without their permission. If this occurs, students will be disciplined appropriately and will automatically lose their privilege of carrying a cell phone during the school day for the remainder of that school year.
  - Cell phones are NOT permitted in bathrooms or locker rooms under any circumstances. A student caught with a cell phone in any of these areas will receive appropriate disciplinary action including a possible in-school suspension.
  - Cell phones are not allowed in classrooms during mid-term or final exams and they cannot be used for their calculator during such assessments.
- Hats
  - Hats may be worn in the hallways and cafeteria only.
  - Students must remove them upon entering classrooms or the library.

Attendance Policy (BOE Policy #5113) – as stated in handbook:

The North Stonington Public Schools believes that regular school attendance is essential for an effective and productive learning experience. The sequential presentation of school learning requires a continuity of instruction. The maximum benefits for each individual child can be achieved only from participation and interaction in daily activity. In addition to instruction, other learning processes take place each day that are vital to a student's overall emotional and social growth. Time lost in school is irretrievable in terms of instructional opportunity and social interaction.

The primary responsibility for adherence to regular attendance rests with the student's parents/guardians and the individual student. The Connecticut General Statutes requires students over five and under eighteen years of age to attend school on a regular basis. Appropriate legal action will be taken against parents/guardians whose children fail to abide by the Connecticut Compulsory Attendance Law.

> *A student is considered to be "in attendance" if present at their school, or an activity sponsored by the school (i.e., field trip), for at least half of the scheduled school day. Any student in school for less than half of the scheduled school day will be considered absent.*
> *A student who is serving an out-of-school suspension or expulsion will be considered absent.*

Excused Absence
The Board believes a student should not be absent from school without the parents' knowledge and consent, therefore verification of an absence should be in writing by a parent or guardian. The first nine (9) absences will be considered excused if a parent approves the absence and if it is properly documented with a signed note from a parent or a notation is made in the student's attendance record by a school official who received either a verbal or electronic communication from the parent. Family vacations are discouraged during the school year.

For the tenth (10) absence and all absences thereafter, absences will be considered excused for the following reasons:

a. Student Illness (verified by a medical professional);
b. Student observance of a religious holiday;
c. Death in a student's family or emergency beyond the control of the student's family;
d. Mandated court appearance e. Extraordinary educational opportunities (i.e., college visits) pre-approved by district administrators and in accordance with SDE guidelines.

There shall be no penalty for an excused absence, however, a phone call from a parent does not necessarily constitute an excused absence. Students are encouraged to bring notes from their parent/guardian or physician to the Main Office on the day of return to school. These notes must specify the reason(s) for the absence and must conform to the Board of Education Policy # 5113. Excused absences will be listed on the morning bulletin of the day the note is received and marked in PowerSchool, and students will be allowed to make up all work missed. When a student is absent for extended periods of time--more than three days-- parents may obtain assignments from the teachers through the counseling office. Failure to make up assignments may result in a grade of zero for each missing assignment. A student may expect to have one day for each day of absence in order to make up missed work. If a student is absent from school, he/she may not be on school grounds. Extenuating circumstances will be dealt with on a case by case basis by the administration.

Unexcused Absence:
An unexcused absence occurs when a student is out of school beyond the first nine (9) absences, parent documentation is not provided for the first nine (9) absences and the absences does not meet one of the excused absence reasons listed above. For every unexcused absence, the student will not be allowed to make up or receive credit for work missed.

Protocol:
When a student reaches ten absences the attendance board at Wheeler will review their days absent in order to determine a plan of action to encourage success for the remainder of the year.

Tardy to Class:
If a student is more than fifteen (15) minutes late for class, other than because of a school-sanctioned event, he or she will be considered absent from class.

Limit on Total Number of Absences (High School Only):
No student will receive course credit for a full year course after having been absent from that course for more than twenty (20) class periods (excused or unexcused) during the school year for reasons other than school sponsored activities (i.e. field trips). The total number of absences will be pro-rated for less than full year courses and for courses which meet other than five times per week.

Grading Policy and Assignments
Students will receive an ECE Math 1132 grade for the second semester only since it is a semester course.
The ECE Math 1132 quarter grade will be calculated using percentages from quiz grades, test grades, and other small assignments. The ECE semester grade will be computed from the third and second fourth grades and the final exam grade but must be within one letter grade of the final exam grade. The final exam is made up using some of the exact problems from the exam given at UConn (65%) and problems that are added (35%).

Tests	70%
Quizzes	20%
Homework/In-class assignments	10%

Tests: You will have a unit test per chapter
Quizzes: You will have a quiz each section/topic
Homework/In-class assignment: You will have a practice assignment each section that will be completed in class and/or for homework

Academic Integrity Statement
The faculty and administration of Wheeler Middle/High School demand high standards of academic performance and academic honesty. Anything less would jeopardize quality education and allow our students to deny themselves needed skills and knowledge. For this reason students who cheat on their assigned work, reports, research papers, quizzes, tests or examination risk prompt and punitive action by both their teacher and the school. Examples of violations may include, but are not limited to:

- Giving or receiving aid on tests and graded assignments
- Unauthorized talking during tests
- Copying regular homework/exercises
- Unapproved discussion of examinations/assignments contents
- Cheating on peer reviews of student work
- Misuse of technology

Documentation of all sources is important to avoid plagiarism, which is the stealing of another's ideas, words, writing, or academic work, and implying that it is original. Both quoting and paraphrasing information from an outside source, including any technology without crediting that source is a form of plagiarism. Students who are found cheating or plagiarizing will be subject to the following guidelines:
    First offense:
- Academic penalty up to and including zero.
- Parent contacted.
- Administration notified (by teachers completing a discipline form).

    Subsequent offenses:
- Academic penalty up to and including zero.
- Parent contacted.
- Disciplinary action by administration which may include office detention or suspension

Make Up work:
Students are responsible for all material covered and assignments during an excused absence. Work should be completed and turned in the next day. In cases of lengthy excused absences, a make-up plan will be devised. Students are encouraged to see me during Xblock for missed information and assignments.

Teacher Availability for Extra help
Seek help immediately. I will be available for students whenever possible during Xblock for extra help. Students need to make arrangements to see me for extra help in advance.

Topics

5 weeks	6.2	Volumes: practice
	6.5	Average Value of a Function
		Unit 6 Quiz
3 weeks	7.2	Trigonometric Integrals
	7.3	Trigonometric Substitution
	7.1	Integration by Parts
	7.4	Integration of Rational Functions by Partial Fractions
	7.7	Approximate Integration
	7.8	Improper Integrals
		Unit 7 Test
4.5 weeks	11.1	Sequences
	11.2	Series
	11.3	The Integral Test and Estimate of Sums
	11.4	Comparison Test
	11.5	Alternating Series
	11.6	Absolute Convergence and the Ration and Root Tests
	11.8	Power Series
	11.9	Representations of Functions as Power Series
	11.10	Taylor and Maclaurin Series
	11.11	Applications of Taylor Polynomials
		Unit 11 Test
1 week	9.1	Modeling with Differential Equations
	9.3	Separable Equations
	9.4	Models for Population Growth
	6.4	Work
		Unit 9 and 6.4 Quiz
	10.1	Curves Defined by Parametric Equations
	10.2	Calculus with Parametric Curves
	10.3	Polar Coordinates
	10.4	Areas and Lengths in Polar Coordinates
		Unit 10 Test
	8.1	Arc Length
	8.2	Area of Surface of Revolution
		Unit 8 Quiz
		Final Exam