



**Math 1300 Pre Calculus Syllabus
OUC/ CHS Mathematics Department**

Contact Information: Parents may contact me by phone, email, or visiting the school.

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Teacher Contact Websites:

- Google Classroom
- Blackboard

CCSD Vision Statement: The Chillicothe City School District will provide tomorrow's leaders with a high quality education by developing high expectations and positive personal relationships among students, staff, and community members.

CCSD Mission Statement: The Chillicothe City School District empowers students to learn, to lead, and to serve.

Course Description and Prerequisite(s) from Course Handbook:

Pre Calculus – OU276 (College Credit Plus Course – Ohio University's Math 1300)

State Course #: 111600

Prerequisite: College ready scores in English and Reading AND Qualifying Math score equivalent to a minimum of 24 on the Math ACT OR successful completion of Math 1200 (College Algebra)

Elective

Grade: 9-12

Weighted Grade

Credit: 1

Course Description:

Course provides a rigorous treatment of graphs, inverses, and algebraic operations of polynomial, rational, exponential, logarithmic, and trigonometric functions, trigonometry and analytic geometry. The course also includes introductions to linear systems, polar coordinates, vectors, conic sections, sequences and series. Recommended only for students intending to enroll in MATH 2301 Calculus I.

Learning Targets: Defined below for clarity are the Unit Titles, Big Ideas of every Unit taught during this course, and the Essential Questions to be answered to better understand the Big Ideas. A student's ability to grasp and answer the Essential Questions will define whether or not he or she adequately learns and can apply the skills found in Big Ideas. This will ultimately define whether or not a student scores well on assessments administered for this course.

- **1st or 3rd Quarter**
 - **Unit I Title: Relations and Functions (Chapter 1)**
 - **Big Idea #1:** I can identify key features and graph various functions.
 - *Essential Question #1: How do I write sets of real numbers using interval notation?*
 - *Essential Question #2: How do I find distance and midpoint on a plane?*
 - *Essential Question #3: How do I graph functions on the coordinate plane?*
 - *Essential Question #4: How do I identify and describe the key features of a function?*
 - **Big Idea #2:** I can use function notation and perform arithmetic with functions
 - *Essential Question #1: How do I use function notation to represent functions algebraically?*
 - *Essential Question #2: How do I find the sum, difference, product, and quotient of functions?*
 - *Essential Question #3: How do I use functions to model real world situations?*
 - **Big Idea #3:** I can analyze functions.
 - *Essential Question #1: How do I analyze the behavior of a function in order to graph and vice versa?*
 - *Essential Question #2: How do I identify transformations of a function and use them to graph?*
 - **Unit II Title: Polynomial Functions (Chapters 2 and 3)**
 - **Big Idea #1:** I can write, graph, analyze, and model using linear and quadratic functions.
 - *Essential Question #1: How do I write the equation of a linear function?*
 - *Essential Question #2: How do I graph and analyze linear functions?*
 - *Essential Question #3: How do I use linear functions to model real world situations?*

- *Essential Question #4: How do I write the equation of a quadratic function?*
 - *Essential Question #5: How do I graph and analyze quadratic functions?*
 - *Essential Question #6: How do I use quadratic functions to model real world situations?*
- **Big Idea #2:** I can solve and graph inequalities involving linear and quadratic functions.
 - *Essential Question #1: How do I solve linear inequalities?*
 - *Essential Question #2: How do I solve quadratic inequalities?*
- **Big Idea #3:** I can graph, analyze, and model using polynomials, as well as use different methods to find the zeros of polynomial functions.
 - *Essential Question #1: How do I graph and analyze polynomial functions?*
 - *Essential Question #2: How do I use polynomial functions to model real world situations?*
 - *Essential Question #3: How do I determine the exact values of the zeros of a polynomial function?*
- **Unit III Title: Rational , Composition, and Inverse Functions (Chapters 4 and 5)**
 - **Big Idea #1:** I can write, graph, analyze, and model using rational functions and inequalities.
 - *Essential Question #1: How do I graph and analyze rational functions?*
 - *Essential Question #2: How do I use rational functions to model real world situations?*
 - *Essential Question #3: How do I solve equations and inequalities of rational functions?*
 - **Big Idea #2:** I can compose functions.
 - *Essential Question #1: How do I compose two or more functions?*
 - *Essential Question #2: How do I determine if the composite of two functions exists?*
 - **Big Idea #3:** I can find the inverse of functions.
 - *Essential Question #1: How do I determine if functions are one-to-one functions?*
 - *Essential Question #2: How do I find the inverse of a function?*
 - *Essential Question #3: How do I determine if two functions are inverses of one another?*

- 2nd or 4th Quarter
 - **Unit IV Title: Exponential and Logarithmic Functions and Systems of Linear Equations**
 - **Big Idea #1:** I can write, graph, and analyze exponential and logarithmic functions.
 - *Essential Question #1: How do I rewrite exponential equations as logarithmic equations and vice versa?*
 - *Essential Question #2: How do I graph and analyze exponential and logarithmic functions?*
 - **Big Idea #2:** I can use the properties of exponents and logarithms to solve equations and inequalities.
 - *Essential Question #1: How do I solve exponential equations and inequalities?*
 - *Essential Question #2: How do I solve logarithmic equations and inequalities?*
 - *Essential Question #3: How do I use exponential and logarithmic functions to model real world situations?*
 - **Big Idea #3:** I can solve systems of linear equations using Gaussian Elimination.
 - *Essential Question #1: How do I put a system into triangular form?*
 - *Essential Question #2: How do I use Gaussian Elimination to solve a system?*
 - **Unit V Title: Foundations of Trigonometry**
 - **Big Idea #1:** I can use angle measures and the trigonometric functions to model real world situations.
 - *Essential Question #1: How do I convert angle measures between degrees, degrees minutes and seconds, and radian measure?*
 - *Essential Question #2: How do I use the unit circle to find the sine and cosine of a function?*
 - *Essential Question #3: How do I use the unit circle and sine and cosine to determine values for the other four circular functions?*
 - **Big Idea #2:** I can use trigonometric identities to simplify expressions and determine identities.
 - *Essential Question #1: How do I use trigonometric identities to simplify trig expressions?*
 - *Essential Question #2: How do I use trigonometric identities to verify if trigonometric equations are identities?*
 - *Essential Question #3: How do I use trigonometric identities to determine exact values for angles?*

- **Big Idea #3:** I can graph circular functions and their inverses.
 - *Essential Question #1: How do I graph and analyze the circular functions?*
 - *Essential Question #2: How do I graph and analyze the inverse circular functions?*
 - *Essential Question #3: How do I use the graphs of circular functions and their inverses to model real world situations?*
- **Big Idea #4:** I can solve trigonometric equations.
 - *Essential Question #1: How do I solve trigonometric equations?*
 - *Essential Question #2: How do I use trigonometric equations to model real world situations?*
- **END OF COURSE EXAM**

Course Materials:

- Google Chromebook
- Calculator (TI-84 preferred)

Textbook:

- Stitz, Carl, and Jeff Zeager. *Precalculus*. 3rd. Corrected ed.

Course Expectations:

- Be **RESPECTFUL** at all times.
- Employ the **4P's** every day.
 - Be **PROMPT!**
 - Be **PREPARED!**
 - Be **POSITIVE!**
 - **PARTICIPATE!**

Work from **BELL TO BELL**.

3 Before Me!

Be **HONEST!**

NEVER GIVE UP!

Procedures:

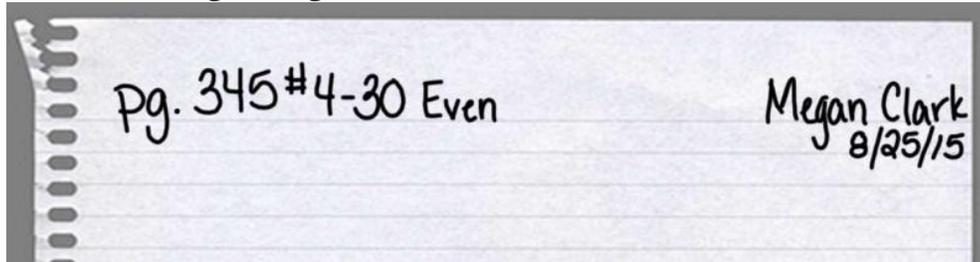
Entering the Classroom:

1. Enter **quietly** and sit down in your assigned seat.
2. Get out your Chromebook, notebook, pencil, and homework (if assigned) and start on your Bell Ringer (**BR**) up on the SMART Board.
3. You may quietly talk to the person next you **UNTIL THE TARDY BELL RINGS!**
4. Once finished with your **BR** wait quietly in your seat for us to go over it together.

5. BR's are collected at the end of each week so make sure you keep them on a document separate from all other work and each *day* is clearly dated.

Heading your papers:

- Top Left of the paper put the assignment.
- Top Right place your First and Last Name and the Date assigned.
- Ex. If assigned Pg. 345 # 4-30 Even



Turning in Homework and Assignments:

- 1) Look to make sure you headed the paper correctly.
- 2) You will be asked to place all assignments in the appropriate colored folder on the table by the door.
 - a) 1st Period: Orange
 - b) 2nd Period: Green
 - c) 3rd Period: Blue
 - d) 5th Period: Gray
 - e) 6th Period: Purple
 - f) 7th Period: Red
- 3) More than one page:
 - a) Students need to make sure their name is on all pages.
 - b) They are to staple all the pages together in the correct order.

Taking Notes:

Students are to have a notebook, their book, and a pencil with them to take notes.

Pencil Sharpening/Getting a Tissue:

- Students can quietly get up one at a time to grab a tissue or pencil at anytime, unless if testing, and sit back down without bugging or talking to anyone else. **If testing the student needs to ask for permission first.**
- If the teacher or anyone else is up talking:
 - Student needs to walk to the back of the classroom and around to the electric sharpener by on the white shelf, or to the tissues on Miss. Clark's Desk, and then take the same

trip back. This way you are not distracting others by crossing in front of the board or the person talking.

- There is a trash can beside my desk so students do not need to walk all the way across the room to throw their tissues away.
- **USE HAND SANITIZER AFTER BLOWING YOUR NOSE!** We don't want your germs, and I will call you out in class and make you go back and use it.

Tests and Quizzes:

1. Once the tardy bell rings, students will need to clear their desks of everything but a blank scrap piece of paper, their assigned calculator, and a pencil. All other things need to be placed at the front of the room and this includes cell phones!
2. **There is to be no talking at all!** Unless the teacher has given permission to do so, for instance if you have raised your hand to ask a question. All other talking will be considered cheating and will result in the test being taken and the student given an F.
3. Once finished with the test they are to put their test/quiz in their class's folder.
4. **No electronic devices except for the calculator will be permitted during a test!** If seen it will be considered cheating and the test or quiz will be taken from the student and they will be given an F.
5. **Making up a test or quiz is the student's responsibility!** If they are absent on the day of a test or quiz the student is to come to Miss. Clark either at the very beginning or very end of class to setup a time to take it. **I will not chase down students to take tests!** If they forget to make it up they will receive an F for the Test or Quiz!

Electronic Devices:

1. Students will be required to have their electronic devices, cell phones, iPods, mp3 players, and etc., in their bag or in the holder by the door.
2. Students will only be allowed to use them when instructed for class use.
3. Students may use their devices to independently listen to music during their work time in class, as long as they are working. **If this power is abused and students begin to listen with no work I will take the privilege away permanently.**
4. Students will not be permitted to listen to music during instructional time. All ear buds should be out of ears!

Graded Assignments:

With the exception of test and quizzes all graded assignments will be placed in the student's period Crate, crates are under the assignment

board. Students will be given the opportunity to go over and get their graded assignments during any free time they have in class. This box will be cleared out and papers will be trash after every quarter.

All tests and quizzes will be passed back out by Miss. Clark, once all students have finished or made up the test or quiz. Tests and quizzes will not be passed back until that time. In addition, students will not be allowed to keep their tests and quizzes. They will be recollected after students have been able to ask their questions.

Books:

Students assigned a book: Books will be kept in their subject's cabinet in my room. They will be able to use the online book for homework and any work outside of the classroom. If in a class they do not have an online book they will be permitted to take their book home with them every day.

For classes without an online book: If a student does decide to leave their books in my room they are still responsible for it! So if it gets lost or damaged while in my room it is not my responsibility to replace it, it is that student's and his or her guardian's responsibility. So, store at your own risk!

Grading:

Your grade will be calculated using the following weights:

Online Homework 10%

Quizzes 25%

Exams 40%

Final Exam 25%

****You must show all of your work on your quizzes/exams to receive full credit. If you do not show all of your work you may receive very little credit, even if you have the correct solution.***

Grading Scale:

A	=	93 – 100 %	C	=	73 – 76 %
A-	=	90 – 92 %	C-	=	70 – 72 %
B+	=	87 – 89 %	D+	=	67 – 69 %
B	=	83 – 86 %	D	=	63 – 66 %
B-	=	80 – 82 %	D-	=	60 – 62 %
C+	=	77 – 79 %	F	=	below 60 %

Late Work: Late work will be subject to the following policy which was agreed upon by the instructor and the Dean of Ohio University Chillicothe.

- Regardless of the absence type (excused, unexcused, OSS, etc.), students are expected to make up work and be held accountable for learning all material they missed.
- Any student who is absent from school will receive one (1) additional day for every day he/she missed to make up his/her work for full credit (100%).
- Any student who exceeds the allotted time to turn in an assignment for full credit may still submit work late for partial credit up to 2 class days.

Academic Integrity:

Cheating will not be tolerated. If you are caught cheating you will receive an F for the course and your case will be turned over to the university authorities for further disciplinary action.

The Student Code of Conduct, which applies to all OU students, can be found on-line at http://www.ohio.edu/judiciaries/conduct_policy.cfm. It is a good idea for every student to read this. I would also recommend reading the OU Student Handbook at <http://www.ohio.edu/students/handbook/policies/index.cf>, so that you are aware of your rights and responsibilities as a student. Follow the links on that page to access the whole handbook.

Statement from Institutional Equity:

In compliance with the Americans with Disabilities Act (ADA), all students who have a documented disability are entitled to reasonable academic accommodations. If you are a student with special needs, it is your responsibility to be registered with the Institutional Equity representative here in Student Services. In addition, you need to inform your instructors each quarter before the end of the second week of class.

Performance Based Section: Writing Assignments/Exams/Presentations/Technology

One or more of the End of Unit Exams may be Performance Based. According to the Ohio Department of Education, “Performance Based Assessments (PBA) provides authentic ways for students to demonstrate and apply their understanding of the content and skills within the standards. The performance based assessments will provide formative and summative information to inform instructional decision-making and help students move forward on their trajectory of learning.” Some examples of Performance Based Assessments include but are not limited to portfolios, experiments, group projects, demonstrations, essays, and presentations.

CHS Math 1300 Pre Calculus Course Syllabus

After you have reviewed the preceding packet of information with your parent(s) or guardian(s), please sign this sheet and return it to me so that I can verify you understand what I expect out of each and every one of my students.

Student Name (please print):

Student Signature:

Parent/Guardian Name (please print):

Parent/Guardian Signature:

Date:
