HONORS PRE-CALCULUS

Fall Semester 2020
Teacher: Mrs. Collier
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Queen Anne’s County High School
Prerequisites: Honors Algebra II
Recommended B or better

COURSE DESCRIPTION: This course provides students with the terms and procedures for solving higher level mathematics. The course takes the student’s knowledge of concepts learned in algebra, geometry and algebra 2 to the level of calculus and advanced math. Honors pre-calculus begins with Algebraic functions and then goes into trigonometry topics involving use of the unit circle and graphs of trigonometric functions as well as trigonometric equations. The course is intended to accommodate college-bound students preparing them for higher level mathematics. This course is aligned with Chesapeake College’s College Algebra, Math 115, in order to better prepare students for their future college mathematics courses.

COURSE OUTCOMES: The major outcomes for this course are:
1. Identify and manipulate all types of functions.
2. Solve and apply linear, quadratic, polynomial, radical, exponential and logarithmic equations and inequalities.
3. Solve, graph and apply matrices, systems of equations.
4. Graph, solve and interpret conic and polar equations.

COURSE OUTLINE:

<table>
<thead>
<tr>
<th>Topics/ Unit of Study</th>
<th>Textbook alignment</th>
<th>Approximate Time Frame (No. of Days)</th>
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</thead>
<tbody>
<tr>
<td>H.P.C. Unit 1: Polynomials and Radicals</td>
<td>Larson 1.3, 1.4, 2.1 - 2.5, 8.4</td>
<td>16 days</td>
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<tr>
<td>H.P.C. Unit 2: All functions and Conic Sections</td>
<td>Larson 1.2-1.3; 11.1, 11.3, 11.4 Larson 9.1-9.3</td>
<td>16 days</td>
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<tr>
<td>H.P.C. Unit 3: Rational Functions</td>
<td>Larson 2.6 - 2.7 and supplement sources</td>
<td>13 days</td>
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<tr>
<td>H.P.C. Unit 4: Trig Functions and Graphs</td>
<td>Larson 4.2 - 4.6, 4.8</td>
<td>15 days</td>
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<tr>
<td>H.P.C. Unit 5: Trig Equations and Identities</td>
<td>Larson 4.7, 5.1-5.5, 6.1-2</td>
<td>15 days</td>
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<tr>
<td>H.P.C. Unit 6: Exponential and Logarithmic Functions</td>
<td>Larson 1.6, Chapter 3 all, 8.3</td>
<td>14 days</td>
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**TEXTBOOKS/MATERIALS:**

1. Laptop, charged and ready to go everyday
2. Bound spiral notebook for notes and work (at least 100 pages)
3. Pencils with erasers
4. Colored pencils or pens for note taking
5. Graphing calculator *(highly recommended)*

Text: Precalculus by Larson/Hostetler (books are accessible online, and can be downloaded for offline use)

If a student would like to request to receive a hard copy of the book home please email Mrs. Collier asap.

**PHILOSOPHY OF THE TEACHER**

- All students are capable of learning mathematics – including higher level concepts
- Effort leads to success
- When problem-solving, it’s OK to be incorrect, perseverance is important.
- Making good study habits part of your **routine** is key to success.

**VIRTUAL CLASSROOM EXPECTATIONS**

- All students are expected to be **consistently** respectful, present, prepared, mindful, and responsive.
- When you are **in a video conference**, students are expected to be actively engaged, **taking notes**, asking questions, and completing problems as the teacher assigns and demonstrates. All students are expected to be in a video conference with their cameras **on** and microphone **muted**, until interaction is needed.

**ONLINE LEARNING SCHEDULE - specific to period 3:**

- **Asynchronous Learning** – Monday and Thursday @ 11:55am-12:40pm
- **Synchronous Teacher Led Learning Days** – Tuesday and Friday @ 11:55am-12:40pm
- **Check-in Day and Asynchronous Learning** – Wednesday @ 10:45am-10:55am
- **Office Hours** – Monday, Tuesday, Thursday & Friday @ 8-10:15am & 2-3:30pm

**ONLINE LEARNING EXPECTATIONS**

**Synchronous** – Join the **video conference on time and have materials ready**. These materials include pencil, paper, calculator and any websites needed to complete math work. Have Schoology open and ready to go in a browser. You are expected to be on the video conference for the duration of class. Please find a quiet place in your house and give yourself an area to work. If a student can not attend a video conference for any reason the parent/guardian must contact the front office with an explanation.

**Asynchronous** – Assignments that are asynchronous are to be done on your own; however, I am available for help during the designated asynchronous period. Also during this time you may be asked to attend a video conference for small group instruction. Small group instruction, if assigned, is mandatory.

**Check-in Day** – Every Wednesday there will be a brief 10 minute video conference or interactive check in to provide a brief period of instruction and to ensure all students are on track with the current assignments. **Students will also complete an asynchronous assignment on check-in day.**

**Office Hours** – Every day except for Wednesday there are Office Hours set aside for reteaching, 1:1 or group tutoring, small group instruction and student/parent meetings. **You may schedule a time during office hours for tutoring.** Times should be scheduled by the end of the previous workday: 3:30pm. Office hours are considered part of the school day, so tutoring or conferences scheduled during this time are mandatory. If there is an instructional conflict during the requested time, we will work together to find a time that works.
ATTENDANCE

Attendance is extremely important for a student to excel, especially in math. Since math is a cumulative subject, lack of attendance and tardiness will negatively affect a student’s success. In order to be marked present for each class, each day, students must login to Schoology for each class, each day, and complete any work assigned for that day. Students should contact their teachers and guardians should contact the front office if a student must miss a class, or a full day of classes, in order to ensure that the missed instruction is marked as an excused absence. Students are responsible for making up any and all work missed due to an excused absence in order to receive credit for that work. All make up work must be completed by the established deadline or other arrangements must be made with the teacher.

Online Assignments:

Students will be expected to complete online assignments both in class and at home through the WebAssign and Schoology platforms. Students are responsible for checking their Google email (school provided), Schoology, and WebAssign on a regular basis to keep up with the required assignments and discussions.

Grading Policy:

Progress Assessments: 50%  Progress assessments include classwork, webAssign practice, and group practice. Progress assessments will not be accepted after the Unit test that covers that material.

Mastery Assessments: 50%  Tests and quizzes- most will be through Schoology or WebAssign and work will be required to be submitted electronically. Others will require students to complete solely on paper and submit a picture of their work.

Due to the shift to virtual learning for the Fall semester, the high school grading policy has been adjusted in order to provide students a better method to demonstrate their mastery of the content. The grades will now be divided into two categories: Mastery Assessments (50%) and Progress Assessments (50%). The previously utilized Final Exam category has been incorporated into the Mastery Assessment category in order to better align with online learning. Mastery Assessments will continue to be any assignment that demonstrates the summation of a student’s learning - tests, projects, essays, etc.

Missed work:

Students will have three days from the assigned due date to submit work late; each day after that, the assignment will be docked 10% off the final score. All assignments have a deadline, in which work will no longer be accepted. Deadlines for submissions are as follows:

Progress assessments will not be accepted after the Unit test that covers that material.
Mastery assignments will not be accepted after 5 school days of the assigned date.

In extenuating circumstances, please work with the teacher directly.

Test Retakes

If you score 69% or lower on a mastery assessment you will be given the opportunity to retake an assessment similar to the original assessment. The recorded grade is to reflect the higher of the two grades, up to a 70%. The student must arrange to do this during office hours on a video conference. Per county policy, retakes must be scheduled for a date no earlier than three days after the assessment is returned to the student and within two weeks of the date of the original assessment.
Academic dishonesty and/or plagiarism
All students at Queen Anne’s County High School are expected to conduct themselves with great pride in academics and the community at large. To this end, it is expected that all students will maintain academic integrity in every assignment. Work must be completed individually unless otherwise directed by the teacher. In our virtual learning environment, student work may only include the electronic resources provided or recommended by the teacher. Submitting work copied from non-approved electronic resources such as PhotoMath is still considered plagiarism. Plagiarism (the practice of taking someone else's work or ideas and passing them off as one's own) is a severe offense at QACHS and will result in immediate consequences, such as:

- Parent Contact by email or phone
- Detention or Referral (depending on the severity of plagiarism or assignment)
- Immediate Zero on the Assignment
- Conference with the Academic Dean
- **Membership in the National Honor Society will be in Jeopardy.**

Examples of Academic Dishonesty:

- Using unauthorized materials and/or resources
- Copying work from another student, or from the web
- Working with other students on an assignment intended for individual work
- Having anyone else but you complete any part of your coursework for you
- Using online searches to find answers to your assessment questions
- Posting answers to assessment questions online

**QACPS DISTRICT RECOVERY & REOPENING PLAN**

To access the detailed plan, please visit [QACPS website](#)

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**QACPS Expectations for Virtual Learning**

**Teachers Will.....**
- Connect with students daily through check-ins and/or teacher-led instruction
- Deliver instruction through live and/or pre-recorded sessions
- Provide feedback on assignments
- Connect with students and/or parents during office hours
- Communicate with families using phone, email, etc.
- Respond to parent and student communication within 24 business hours

**Students Will.....**
- Login to Schoology on a daily basis to receive teacher-led instruction, access and complete assignments
- Complete assignments by established due dates
- Maintain academic honesty
- Review feedback from teachers
- Attend regularly scheduled check-ins with teachers
- Contact teacher with questions about assignments

**Parents Will.....**
- Review school specific schedules for distance learning
- Utilize Schoology to monitor student learning
- Support students with timely submission of assignments
- Contact teachers with questions about academic issues
- Contact counselors with concerns about social-emotional issues
- Review school and QACPS messages
Please complete the google form emailed to you from the school stating that you have read & understood the above policies on Mrs. Collier’s Honors Pre-Calculus Syllabus.