Mathematics and Engineering School Year 2020-2021

Alexander Herman
Hello. My name is Alex Herman. I have been teaching at Queen Anne’s County High School since the 2015-2016 school year. I am certified to teach Mathematics, Business, German, Digital Electronics (PLTW Engineering 3), and Engineering Design and Development (PLTW Engineering 5, the Capstone). This year I am teaching Algebra 2, Geometry, Pre-Calculus, Engineering 3 and 5.

Let’s take a look at what learning at QACHS will look like during the first semester of the 2020-2021 School Year.
Schoology

Courses

- **Pre-Calculus**
  Section 2
  Queen Anne's County High School

- **Digital Electronics**
  Section 1
  Queen Anne's County High School

- **Geometry**
  Section 7
  Queen Anne's County High School

- **Algebra II**
  Section 4
  Queen Anne's County High School

- **Engineering Design and Development**
  Section 1
  Queen Anne's County High School

- **Geometry**
  Section 8
  Queen Anne's County High School

- **Queen Anne's - Introduction to Schoolology Courses**
  Queen Anne's County (Ariel) Innovation Schools

- **Self-Paced Getting Started with Schoology**
  Section 3
  Dairy Schools

PowerSchool

Homework Assignment
Schoology

qacps.schoology.com

Schoology is the online learning management tool that you will need to log into daily to access materials and submit your assignments.

Attendance:

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.
Communication
Communication

The main way that we will communicate throughout this course is on Schoology, through email, live online chats, and live classroom discussions if/when we return to school.

You will need to use the following tools, and possibly more, on a daily basis:

Schoology: Updates, Assignments, Feedback

Your school Gmail account: I check emails daily between 7:30--3:30

Google Meets: This will be our main tool for delivery of direct instruction. Lessons will be recorded and posted in Schoology.

You should be well versed in the use of the Google Suite of applications, including but not limited to:

Google Docs
Google Slides
Google Sheets
Online Class Meetings

We will meet live two times per week. Please check the online calendar for your class meeting time.

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.
Pre-Calculus Syllabus
Pre-Calculus Syllabus:

Available on My Teacher Web Page

https://www.qacps.org/Domain/1930
Digital Electronics Syllabus
Digital Electronics Syllabus:
Available on My Teacher Web Page

https://www.qacps.org/Domain/1930
Geometry Syllabus
Geometry Syllabus
Available on My Teacher Web Page

https://www.qacps.org/Domain/1930

In this course, students will explore the relationships among points, lines, and planes in space. The concept of logical reasoning and the exploration of complex geometric situations lead students to make formal mathematical arguments. Geometric shapes are described and characterized. Equations, relations pertaining to geometry such as congruence and similarity, along with spatial, coordinate geometry, circles, spheres, and transformations are studied.

50% Mastery (at least) & 50% Progress (at least 70)
Students may take a Mastery Assessment (unit test) if they score below a 70%. Mastery assessments could be unit tests, quizzes, or a cumulative assessment for the course.

50% Progress grades can be from classwork, homework, warm-ups, quizzes, and/or other work completed for the course. Work will be considered LATE after 3 school days and deduction of points will occur. Assignments will not be accepted after 10 school days.

Materials
- Notebook/binder
- Pens/pencils/erasers
- Lap top/technology
- Calculator

Academic Honesty
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. Plagiarism is a serious offense at QACHS and will result in immediate consequences. The use of Photocopy and other educational resources is a form of plagiarism.

Attendance
Students must log into our classroom on schoology every school day to be counted as present. Students should complete daily work to keep up with the class. The teacher should be contacted if a student will be absent from class. Students are responsible for all missing work due to an absence.

Online Learning Expectations
Synchronous - Join the video conference on time and have materials ready. These materials include pencils, paper, calculators, 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.

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

Check-in Day - Every Wednesday there will be a brief 10-minute video conference or check-in to provide a brief period of instruction and to ensure all students are on task 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 available for reteaching, 1:1 or group tutoring, small group instruction, and student/teacher meetings. You may schedule a time during office hours for tutoring. You may also attend tutoring or instructional video conferences during office hours. 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.

Course Topics
1. Sets and Subsets
2. Basic Trigonometry
3. Proportions to Co-ordinate Geometry
4. Deductive Reasoning and Logic
5. Lines and Transformations
6. Properties of Triangles
7. Special Lines and Points in Triangles
8. Congruent Figures and Polygons
9. Orthic Triangles
10. Circles and Tangents
11. Similarity and Congruence
12. Applications of Similarity
13. Polygons
14. Pythagorean Theorem & Special Formula
15. Right Triangles and the Isosceles
16. Right Triangles and the Hypotenuse
17. Right Triangles and the Hypotenuse
18. Right Triangles and the Hypotenuse
19. Right Triangles and the Hypotenuse
20. Line and Segment in Circles
21. Arcs, Chords, and Tangents
22. Angles and Sections of Circles
23. Radius and Circumference
24. Pyramids and Cones
25. Solids
26. Geometric and Coordinate Properties
27. Properties of Circles

https://www.slidesmania.com
Conclusion
Conclusion

I look forward to seeing you in class!!!

If you made it this far, congratulations! Please enjoy some pictures of my pets and hobbies.
Randolph-Macon College
Are you really still reading? Ok, fine… here is a shameless plug for my Alma Mater Randolph-Macon College in Ashland, VA.

I taught most of the students pictured below in high school. They recently graduated from RMC. One is earning a Masters in Engineering from Georgia Tech, and the others all got jobs right away!
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Sharing is caring!