

## **STMBotix Syllabus | 2017 - 2018**

### **Pewamo-Westphalia High School**

#### **Teacher**

Douglas Klein

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#### **Course Description:**

The STMBotix course will provide students with an introduction to the engineering process and provide hands on experience in applying this process. Students will use the VEX building platform to complete a variety of building tasks that apply Physics and Engineering principles. Students will work as a part of a team to design and build robots to accomplish specific tasks. Along the way students will be learning about the concepts speed, power, torque, leverage, gear ratios, DC motors, and computer programming. Students will learn to apply mathematical reasoning to real world scenarios. They will use the skill they gain in these areas to designing and problem solving in order to build and improve their robots.

#### **Mathematics Content**

Writing and Solving Linear Equations

Writing and Solving Proportions

Properties of Circles

Writing and Solving Quadratic Equations

#### **Assignments**

Assignments are due the day after they are assigned, unless students are told differently. Late assignments will be accepted up to one day late for partial credit. After that the assignment will be given a 0. If a student is absent, he/she will be given an extra day to make up any work missed with no penalty.

#### **Grading**

The student's final quarter grade is a weighted average. All student work will be put into two categories and will be weighted as follows. The grading scale is available in the students' planner.

Class work and assignments: 70% of grade

Quizzes/Tests: 30% of grade

#### **Classroom Expectations:**

Students will come to class prepared with materials (pencil and paper)

Students will complete assignments in a timely manner

Students will come to class with a positive attitude

Students will show respect for fellow classmates and teacher

Students will be productive members of the classroom community

Students will leave the classroom space better than when they found it

If a student does not meet any of these expectations, action will be taken to correct the behavior. Action will be determined based on the situation.

#### **Classroom Supplies:**

Most supplies needed by the students will be supplied by the school. Calculators will be used for certain parts of the class and should be brought in by students if available. Students will need these supplies from home: pencils, notebook, folder, and a 1" 3-ring binder