

VEX Robotics Syllabus

Teacher: Mackowick

Grade: 9 - 12

Credit/Length: 1 semester ½ Credit

Course Description, Goals, & Options:

VEX Robotics Curriculum is divided up into twelve primary units and one optional unit. In a flexible format, students learn about engineering and engineering problem solving. They will be given introductions to the VEX Robotics Design System and Autodesk Inventor while learning key STEM principles through a process that captures the excitement and engagement of robotics competition. However this course is structured in such a way that teachers and students who want to include a more Computer Science heavy layer with the course can do so.

Course Outline:

Introduction to Robotics

Introduction to VEX

Programming your robot

Gears and Power Transmission

Speed Power and Torque

Introduction to Engineering Design Process

THE GAME!

Drivetrain Designs

Lifting Mechanisms

Object Manipulation

Design and Build your Robot

Classroom Expectations:

- Prompt
- Prepared
- Participate
- Polite

For the safety of yourself and others students are accountable for understanding and following all safety rules while in the lab and classroom.

Grading:

- Daily work, quizzes, tests, and Lab points are weighted the same.
- Student is accountable for getting makeup work when gone. WIN sessions will be a great time to make up labs or get help on homework.
- Retakes of assignments and tests are allowed to get if student demonstrates they have studied.
- Students will create a portfolio to document their work in class and make a final presentation.
- Student will also be graded using the CTE Career Ready Rubric designed to evaluate the students work ready skills.
- Final grades will be calculated: Q1 50% and Q2 50%

Hybrid Learning (If needed):

- Complete work on Assigned Due dates. These will be added to Schoology
- Teacher will respond to emails during school hours.
- Schoology is the learning management system where you will receive all your assignments/tasks.

Virtual Learning: (This portion will be updated if virtual learning happens)

- Be prepared by keeping your iPad firmware up to date and charged.
- Check Schoology and Email daily
- TEAMS Etiquette:
 - Keep Microphone off unless speaking
 - Turn Camera On. I want to see your face
 - Locate yourself in a quiet space
 - Use the Chat as a source of communication
 - Make sure you have proper dress attire

Communication:

- Preferred communication tool is Email: bmackowick@west-fargo.k12.nd.us
 - Try not to use Schoology to send a message.
 - If your question is detailed and requires more than 2 emails about a topic please set up a call on TEAMS. You can visit Schoology for a link to my “Teams Office Hours”
- Check PowerSchool grades often to make sure students work is completed and correct.
- Parents will be able to see the students’ progress through photos and comments placed on SeeSaw.me. There is an app you can also download call Seesaw.

Don’t hesitate to talk to me or email me with any questions or concerns.