California State University, Northridge
Summer Academic Enrichment Program

Robotics

Course Overview:

SAEP has partnered with CSUN's robotics club and engineering students in order to create a 5 week-long camp that teaches students the basics of Vex Robotics and, ultimately, provide students with the knowledge necessary to build their own Vex Robot. Students will work together in groups to both design and build a unique robot, and will then enter their robot in a competition against the robots created by other student groups. Through this fun and engaging program, your student will learn the real life applications of science, math, and engineering.

Course Description:

The student will work in groups in order to build a Vex Robot, which will consist of: a chassis, a manipulator and an end-effector. In addition, the student will be introduced to various activities that will challenge and develop their critical thinking skills.

Course Goals and Objectives

1. Goal: To build a Vex Robot.

Objective: Identify specific parts of the robot using appropriate vocabulary.
Objective: Understand basic engineering concepts—torque, speed, design…etc.
Objective: Being able to work as a team efficiently and effectively—sharing ideas, having discussions, sharing responsibilities…etc.

Course Materials:

Students will be provided with all robotics kits and materials to complete their objectives for this course. Students will be required to bring a pencil, eraser, pen (blue or black).

Course Grading

There will not be any homework for this program. However, we will encourage students to do individual research at home. Research will consist of using the Internet to get more information on different types of robot designs and usages.

There will be no letter grades assigned in this course. In place of letter grades, a developmental level will be assigned based upon the stated course objectives throughout the program. Students will receive a final assessment of: beginning, emerging, developing, capable, experienced, or exceptional. "Grading" will be based on overall participation in the learning and building of the Vex Robot in groups.

<u>Classroom Behavior</u>:

The student is expected to demonstrate mature, polite behavior and extend courtesy to everyone at all times:

1. Actively participate, and respectful verbal and nonverbal interaction with all opinions must be shown at all times.
2. Since differing views will be expressed, the teacher and the student(s) will mutually maintain a safe environment for courteous dialogue.
3. Respect is to be shown for all CSUN property.
4. No food or beverages will be permitted in the classroom. Snacks must be eaten outside between the designated breaks.
5. Warnings for behavior / discipline problems will be given once. Any further problems will result in a phone call to the parent(s) or guardian(s) and possible dismissal from the program.

SAEP Electronics Policy

<u>Cell phones, music players and headphones are not permitted to be used during class hours.</u>

a. Please put your cell phone on silent (NOT vibrate).
b. No texting is allowed during class.

You will be given one verbal warning if the above is not followed. Should a second warning be necessary, your cell phone, music player and/or headphones will be confiscated and held by the teacher until after class. If a third time occurs, your cell phone, music player and/or headphones will be confiscated and held in the SAEP office and MUST BE PICKED UP BY A PARENT.

Robotics

~~~~~~

After reading through the syllabus, please sign and date and have your student return it to class. The signature constitutes your commitment to the class as we partner to make the next five weeks a life-long educational experience for your student.

<u>Student/ Parent Agreement</u>:
Please bring this signed and dated **Robotics** syllabus agreement to class tomorrow.

If you do not understand any portion of this syllabus, or if you have any questions regarding this class, please do not hesitate to email the teacher.

We have read and understand the contents of this syllabus.

Student name _____

Student signature_____

Date_____

Parent/Guardian name _____

Parent/Guardian signature_____

Date_____

Phone _____

E-mail_____