MOBILE ROBOTICS
(Virtual)

Contest Description
To evaluate each contestant's preparation for employment in the field of robotics with emphasis on the team approach to problem solving in a work environment. To recognize outstanding students for their excellence and professionalism in the emerging field of mobile robotics. Open to a team of two active SkillsUSA members enrolled in a career and technical education engineering program or a program that integrates robotics, engineering or pre engineering techniques as an integral component of the instructional program. Students will ==submit a 5-7 minute demonstration video and engineering notebook== in lieu of an in-person contest.

Regional Competition
This contest will consist of the following:
1. Submission of students digital Engineering Notebook (See REC Rubric)
2. Creation of an autonomous program for the skills challenge based on the robot designed in the digital Engineering Notebook.
3. Submission of a 5-7 minute video of student presenting their engineering design process.

The Engineering Notebook and autonomous program will be designed and based off of this year's VEX Skills Challenge. More details can be found here: https://content.vexrobotics.com/docs/vrc-change-up/AppendixB-08172020.pdf

Students must submit their demonstration video and Engineering Notebook to SkillsUSA California ==by January 30, 2021== (details to follow).

Engineering Notebook
- The engineering notebook is a tool for students to document their designs prior to the competition. It can include pictures, sketches, printed out sections of code or screenshots of code, detailed assembly instructions, etc.
- Each team will be given points for CAD drawings of their robot. These

drawings should be included in the Engineering Notebook.
- Engineering Notebook should be submitted in PDF form and not exceed 40 pages.

Demonstration Video

The submission of a 5-7 min. video in lieu of the in-person demonstration will be required for this contest. Contestants are expected to:
- Demonstrate the knowledge of various visual aids used to present technical information
- Present technical material in a professional manner
- Define team roles and responsibilities
- Demonstrate ability to solve problems as a team in a given time frame
- Demonstrate and document a comprehensive plan to solve an engineering problem

Student Materials List
- Resumes (using SkillsUSA format)
- Engineering Notebook
- A laptop with licensed VEX programming software (for the Cortex microcontroller or V5 system) and presentation software.
- Chromebooks can be used in lieu of a laptop with VEXcode V5 chrome extension added and google slides can be used as a presenting software
- Graph paper, pens, pencils, tape, markers and scissors

Clothing Requirements

Official Dress is NOT required for Regionals. Clothing must be unbranded with no words, images, or logos. SkillsUSA or SkillsUSA California attire is recommended.

Note: Check the Contest Guidelines and/or the updates page on the SkillsUSA website:
www.skillsusa.org/compete/updates.shtml

https://www.skillsusa.org/competitions/skillsusa-championships/contest-descriptions/

All SkillsUSA California contest projects are subject to change due to any unforeseen facility, staffing or site-related issues. Please use these materials as a reference to prepare students for the potential contest project. SkillsUSA California regional and state contest projects are developed by state technical committee members to align with the national technical standards.

Regional 2020-2021 Contest Catalog