OneWorld Robotics Competition 2019 – Area Competition

OneWorld Robotics Competition – Smart Cities with Autonomous Vehicles

This year, Actura will be staging its inaugural *OneWorld Robotics Competition*, with "Smart Cities" as its solution category. The aim of the competition is to explore the students' resourcefulness in finding solutions to real-world problems with the help of robotic technology, while encouraging critical thinking, problem solving, teamwork, effective communication and agility and adaptability. Participation will broaden the acquired STEAM-related skills and deepen the critical approach to problem solving, stimulate curiosity and encourage a design-thinking approach.

Students will be able to utilise robots as an integral part of a solution to a real-world problem while allowing for the comparative evaluation of different approaches. The contest will foster collaboration and teamwork between team members as well as other external teams. "One student, one robot, one world" is the motto that in essence strives to create a network of cooperation in the development of learning STEAM skills. It also awards each and every student with an opportunity to master the robotic concepts, apply transferable skills to a wider context, create ideas and finally, become valuable members of future societies.

The adjudication will be carried out by a panel of industry experts and educators. Students will consider the issues surrounding the problems associated with smart cities such as transport congestion, pollution, environmental sustainability and over-crowding. Students will also consider the relevant social, ethical and legal issues surrounding environmental impact, regulating traffic, accident management and control and consequent privacy and cybersecurity risks, in conjunction with their application of robotics techniques to arrive at a solution. The adjudication process will focus on the critical thinking process and not just the technical application of robotics in assessing what the students finally present.

Actura

Actura provides the leading STEAM learning solutions spanning from in-class to out-of-class environments. Our FlipRobot range provides the ultimate robotic STEAM learning solution for the in-class environment. For the out-of-class solution, the CASE Space School International Study program aims to deliver the once in a lifetime, best STEAM experience at the most inspiring organisation, NASA.

Field Attendant

The Field Attendants for the OneWorld Robotic Competition schedule and monitor stage field and equipment usage throughout the competition. These volunteers are also responsible for keeping the stage field clean and free of debris, protecting stage field electronics, and reporting any malfunctions or damage to the field directly to the Volunteer Coordinator/Actura Staff

Responsibilities

- Maintain schedule at the stage fields, monitor flow of teams, ensuring fair field use
- Assist teams in using the wireless equipment provided for the stage fields using the instructions provided
- Report any malfunctions or field damage to the Volunteer Coordinator/Actura Staff
- Ensure that teams are using the stage field in a safe manner

Experience and Skills Needed

- Basic knowledge in making connections to electronic equipment (instructions provided)
- Ability to "take charge"; be assertive
- Ability to keep track of, and secure as required, stage field electronics
- Ability to collaborate with others, work as a member of a team
- Ability to work and interact with volunteers, team members, and Actura staff
- Requires basic knowledge of the game and match process
- Self-directed individual
- Strong interpersonal and communication skills
- Strong organizational skills
- Work well in a fast-paced environment

Volunteer Time Commitment

2-day commitment (Area Competition)

Note: Event schedules vary. Please check the event schedule and talk to your Volunteer Coordinator for detailed information on when you are expected to arrive. Volunteers should arrive on site 15-20 minutes prior to the start of every shift to allow time to check in at the Volunteer Registration table.

Training

Training is on-site but volunteers are encouraged to read this document before arriving on-site.

Reporting Relationships and Supervision

Direct supervision: Volunteer Coordinator

Disclaimer and further information

- Must sign a Conflict of Interest and Disclosure Statement prior to start of service
- have a valid Working with Children number

CASE

California Association for STEAM Education (CASE) is a non-for-profit STEAM education organisation based in Cupertino California USA. It aims to design and deliver the most inspiring and innovative STEAM based educational programs where students will acquire and master critical transferable skills for their future success.