

## Description

### Robotics In The Classroom – For K-12 Educators

Looking for a novel, interdisciplinary approach to teaching complex science, mathematics, or technology topics? This workshop is an introduction to using robots as a multi-faceted teaching tool that appeals to a broad range of interests and many types of learners. Learn how to integrate robotics into your existing curriculum or as an after-school program while gaining content knowledge and hands on experience.

### Expanded Abstract:

Robotics is a practical application of physics, computer science, engineering, and mathematics. By studying robotics students gain a deeper understanding of complex topics and realize a purpose for the content knowledge in these disciplines. In addition robots appeal to a broad range of students and allows multiple points of access to science and technology for many types of learners. While studying robotics, students are acquiring hands on experience in design, construction, and problem solving and encountering the important relationship between science and technology. Students are motivated to learn by creating their own robotic devices, while at the same time gain a deeper understanding of interdisciplinary fields of study.

In order to teach for understanding educators need practical experience and opportunities to learn subject matter knowledge. This workshop will train teachers how to use robotics as an interdisciplinary tool for teaching physical science, technology, and engineering concepts. Robotics allows students to explore many areas of science, technology, and engineering in one application. In addition robotics encourages students to make connections across several disciplines rather than learning topics in isolation. We will provide educators with a solid introduction to using robots in the classroom and share with them our specialized curriculum and experiences in teaching robotics to all grade levels. This workshop will answer important questions about using robotics in education as well as provide a thorough examination of the field.