FIRST EDUCATION

FIRST® LEGO® League Explore Professional Development

Course Description

The *FIRST*® LEGO® League Explore professional development course gives participants a strong understanding of how to implement all aspects of the Explore program and how to achieve science, technology, engineering, and math (STEM) learning objectives. In Explore, teams of students in grades 2-4 focus on the fundamentals of engineering as they investigate real-world problems, learn to design and code, and create innovative solutions made with LEGO® bricks and powered by LEGO® Education WeDo 2.0 or LEGO® Education SPIKE™ Essential. Participants in this course will walk in the footsteps of the students as they engage in the Explore program, gaining technical, engineering, and coding skills through hands-on experience.

Course Requirements

***FIRST*® Provides:**

- *FIRST*® LEGO® League Explore Set, digital copies of *Team Meeting Guide* and *Engineering Notebooks*
- LEGO Education WeDo 2.0 AND LEGO Education SPIKE Essential Core Set

Participant Brings:

- Computer with internet access
- Software downloaded prior to first session – https://education.lego.com/en-us/downloadsSelect WeDo 2.0 or SPIKE Essential and then click on the drop arrow to choose your device for downloading– note: be sure to download, install and restart your computer.

Course Objectives

By the end of this course, you will:

- Participate in the *FIRST*® experience from a student's point of view
- Identify the essential components of the *FIRST* LEGO League Explore program and be familiar with how to use the Explore Set, LEGO Education WeDo or SPIKE Essential materials and software
- Be able to foster computational thinking, collaboration, coding, and problem-solving skills in students
- Know how to engage students in explore, build, and challenge activities
- Collaborate with other participants and share best practices while building a team model
- Design an innovative solution for a real-world problem
- Create and present a team project
- Build a robot and learn to code using LEGO Education WeDo 2.0 or SPIKE Essential software
- Have experience with Project-Based Learning, the Engineering Design Process, and 21st Century Skills
- Implement Diversity and Inclusion practices
- Utilize, model, and reinforce the *FIRST* Core Values