Combined *FIRST*® LEGO® League Discover and Explore Professional Development

Course Description

The Combine *FIRST*® LEGO® League Discover (grades PreK-1) and Explore (grades 2-4) professional development course gives participants a strong understanding of how to implement all aspects of the Discover and Explore programs and how to achieve science, technology, engineering, and math (STEM) learning objectives.

Participants will spend the first day and a half walking in the footsteps of the students as you engage in the Explore program, gaining technical, engineering, and coding skills through hands-on experience. The second half of day two will cover the *FIRST*® LEGO® League Discover when you will use a playful approach to introduce STEM concepts to younger children while igniting their natural curiosity and building their habits of learning. Participants will explore hands-on activities for the classroom and at home using LEGO® DUPLO® bricks.

Course Requirements

***FIRST*® Provides:**

- *FIRST*® LEGO® League Discover and Explore Sets, digital copies of *Team Meeting Guide* and *Engineering Notebooks*
- LEGO Education STEAM Park and SPIKE Essential Core Set

Participant Brings:

- Computer with internet access
- Software downloaded prior to first session – https://education.lego.com/en-us/downloads Select 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 Discover and Explore program using the Discover and Explore Sets, LEGO Education STEAM Park and SPIKE Essential materials and software
- Build a robot and learn to code using LEGO Education SPIKE Essential software
- Practice LEGO® Six Bricks activities and learn how to facilitate Discover in your classroom
- 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 model and poster
- 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
- Explore ways to bring learning home to families through interactive activities using the *FIRST* LEGO League Discover More take-home set of materials