**FIRST® LEGO® League Challenge Professional Development**

**Course Description**

*FIRST® LEGO® League Challenge professional development course is designed for new and experienced teachers, facilitators, coaches, and mentors to enhance their overall *FIRST® program knowledge, giving participants a strong understanding of how to implement all aspects of the program and how to achieve STEM learning objectives. In Challenge, teams of students in grades 4-8 engage in research, problem-solving, coding, and engineering - building and programming a LEGO® robot that navigates the missions of a robot game. Friendly competition is at the heart of the Challenge program, and participants will walk in the footsteps of the students as they engage in hands-on experiences. The course is customized to meet the unique needs of participants while modeling how to inspire their students to become confident and creative innovators and collaborators.*

**Course Requirements**

*FIRST* Provides for use during professional development:

- *FIRST* LEGO League Challenge Set
- Digital access to *Team Meeting Guide, Engineering Notebooks, and Robot Game Rulebook*
- Unbuilt LEGO® Education SPIKE™ Prime Set

Participant Brings:

- Computer device with Internet access
- LEGO® Education software downloaded prior to the first session.
  - OR - web-based SPIKE Prime app: https://spike.legoeducation.com (use a Chrome browser)

**Course Objectives**

*By the end of this course, you will:*

- Participate in the *FIRST* experience from a student's point of view.
- Become familiar with *FIRST* LEGO League Challenge materials and program implementation.
- Learn how to guide students through the science behind the Challenge theme and facilitate the creative design of a solution (or modify an existing solution) to a real-world problem.
- Build a LEGO Education SPIKE Prime robot.
- Learn introductory block-based programming concepts using the LEGO Education SPIKE App.
- Understand how to prepare students for a culminating celebration/competition.
- Be able to foster computational thinking, collaboration, and problem-solving skills.
- 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!