

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.
 - <https://education.lego.com/en-us/downloads> - Be sure to download, install, and restart your computer.
 - - 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!