FIRST® LEGO® League Challenge Professional Development

Remote Course Description

FIRST® LEGO® League Challenge professional development gives participants a strong understanding of how to implement the Challenge program and how to achieve science, technology, engineering, and math (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 Challenge, 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 in a remote setting while modeling how to inspire their students to become confident and creative innovators and collaborators.

Remote Course Requirements

• Computer device with Internet access for remote meetings
• *FIRST® LEGO® League Challenge Set, Team Meeting Guide, Engineering Notebooks, Robot Game Rulebook, Field Mat, and Mission Model Elements
• *LEGO® Education SPIKE™ Prime Set OR LEGO® MINDSTORMS® EV3 Core Set and corresponding software downloaded

*You can use current or prior season Challenge Sets, Team Meeting Guide, and Engineering Notebooks
*Materials are included with a Class Pack or Individual Team Registration and can be purchased through the FIRST® Dashboard.

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 or LEGO MINDSTORMS EV3 robot and program the robot using the corresponding software
• 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