FIRST® LEGO® League Challenge

Course Description

FIRST LEGO League Challenge professional development gives participants a strong understanding of how to implement the Challenge 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 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.

Course Requirements

- Computer with Internet Access (Recommend second screen or device to allow programming and video communication at the same time)
- *FIRST LEGO League Challenge Set: Team Meeting Guide, Engineering Notebooks, Robot Game Rulebook, Field mat, and Mission model elements
- *LEGO 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
*Challenge materials are included with a Class Pack or Individual Team Registration, as well as LEGO products 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 the FIRST LEGO League Challenge Kit and how to implement the program
- 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 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