



TOT Program

Course Syllabus

Course title: WRO Robot Design and Programming Course

Prerequisites: Basics Robotics Programming & Design

Credit hours: 12

Target audience: Trainers and Teachers

Course Description:

Specialized training for teachers on designing and programming robots for the WRO competition, using the EV3 robot kit and SPIKEPRIME. It focuses on developing solution strategies, explaining key design concepts (for the propulsion system and arms), and key programming applications (such as variables, matrices, PID control systems, and line tracking).

The Content	Duration (hour)
<p style="text-align: center;">Design Approach</p> <p>Subject 1: Interior and exterior structures Subject 2: Arms and lifts Subject 3: Weight distribution and similarity Subject 4: Gearing Systems and Motion Transmission Implementations</p>	6
<p style="text-align: center;">Programming Approach</p> <p>Subject 1: Review</p> <p>Subject 1: Utilizing Variables Subject 2: Arrays Subject 3: Introduction to Control Engineering Subject 4: P and PD controllers Implementations</p>	6