



ARRL Education & Technology Program Teachers Institute on Wireless Technology: Introduction to Wireless Technology (TI-1)

Monday / Day 1

- I. Introductions & Logistics
- II. Educational Context for Wireless Technology
- III. Basic Electronics
- IV. Soldering 101 (24-hour digital clock kit)

Tuesday / Day 2

- I. Day 1 Review
- II. Understanding Signals - The Science of Wireless Technology
- III. Digital Signal Processing (DSP) Fundamentals
- IV. Radio applications in the Classroom (satellites, foxhunt, HF, EmComm, etc.)

Wednesday / Day 3

- I. Day 2 Review
- II. Introduction to microcontrollers
- III. Programming fundamentals
- IV. Input/Output circuits

Thursday / Day 4

- I. Day 3 Review
- II. Programming concepts
- III. Robot Assembly
- IV. Motion and servos
- V. Robot navigation

Friday / Day 5

Note: anything that was not completed on Days 1-4 will “flow” to Day 5 for completion.

- I. Day 4 Review
- II. Advanced robotics projects/builds
- III. Complete paperwork (survey, expense reports, etc.)
- IV. Participant action plans
- V. Program feedback and good-byes

Throughout the program, participants will learn about application topics such as working with your local ham radio club, career/scholarship opportunities for students, the Education & Technology Program grants criteria, and what to expect if you participate in the TI-2 Session.