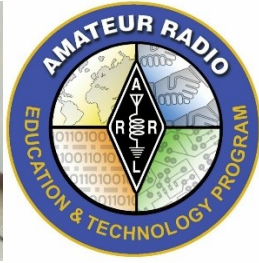


# The 2018 ARRL Teachers Institute on Wireless Technology

Expenses Paid Professional Development Opportunity



Teachers Institute opportunities are virtually free for the participants. The grant to attend a TI covers transportation, hotel, a modest per-diem to cover meals. Instructional resources for the electronics, microcontroller, and robotics segments of the course, and a resource library of relevant ARRL publications are provided to participants of the introductory Teachers Institute (TI-1). Hands-on instructional resources and equipment applicable to the topic of the advanced Teachers Institute (TI-2) are also provided through donations to the Education & Technology Program Fund and through in-kind contributions from our industry partners. A \$100 enrollment fee is required.

## Applicant Eligibility

Applicants must be teaching in a school, college, or professional educational organization serving grade levels 4-12+, or leading a school-affiliated enrichment program in an official capacity.

An Amateur Radio license is NOT required to attend the introductory seminar (TI-1), but IS required to attend the advanced Teachers Institute seminars.

## Applying for the Teachers Institute

Download and complete the application and the pre-workshop survey. Send a cover letter on school letterhead, signed by you and a school administrator, stating that you would like to attend, along with the application. Please be sure to review the requirements and the reimbursement guidelines provided in the application. A \$100 enrollment fee is required. (The enrollment fee will be returned if you are not accepted or upon your completion of the Institute.)

**Application deadline is May 1, 2018.**

**Register with us** to receive our e-newsletter with news from classrooms and notifications about Education & Technology Program opportunities.

***Class sizes are limited-- don't delay.***

## Summer 2018 Teachers Institute

<u>Session</u>	<u>Location</u>	<u>Dates</u>	<u>Instructor</u>
TI - 2	Newington, CT	July 9 <sup>th</sup> - July 12 <sup>th</sup>	Matt Severin
TI - 1	Dayton, OH	July 16 <sup>th</sup> - July 20 <sup>th</sup>	Larry Kendall
TI - 1	Newington, CT	July 23 <sup>rd</sup> - July 27 <sup>th</sup>	Tommy Gober

<http://www.arrl.org/teachers-institute-on-wireless-technology> for more information

# Introduction to Wireless Technology Curriculum and Agenda

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## **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

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.