**The 2018 ARRL Teachers Institute on Wireless Technology**

**Expenses Paid Professional Development Opportunity**

[](http://www.arrl.org/images/view/Licensing__Education_/Teachers_Institute/TeacherWkshp0804-Robots-lrg_1.jpg)

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.

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**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**](http://www.arrl.org/teacher-registration) 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

**Session            Location                       Dates                            Instructor**

**TI – 2                Newington, CT             July 9th – July 12th       Matt Severin**

**TI – 1                Dayton, OH                   July 16th – July 20th       Larry Kendall**

**TI – 1                Newington, CT             July 23rd – July 27th      Tommy Gober**

[**http://www.arrl.org/teachers-institute-on-wireless-technology**](http://www.arrl.org/teachers-institute-on-wireless-technology) **for more information**

## Introduction to Wireless Technology Curriculum and Agenda

**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.