

**Transcript:** [Show 26 March 19 2012](#)

Up next on ATE TV, pursuing the educational pathways to a career working with lasers and photonics. A degree in lasers and photonics requires a combination of several types of math and science courses in order to understand the use and application of lasers in today's world.

Now this century is the century of photonics, and of lasers like 20th century was the century of electricity. You will align the interferometer with the Helium Neon laser.

Every day there's a new application coming out for lasers, and not enough technicians to support those applications and those companies. We need students to go into technology programs like ours – lasers and photonics.

Photonics is a science and technology that deals with generation, transmission, and utilization of light energy.

In a class of photonic measurements, we can measure a billion times smaller than a meter, which is a nanometer, and that's what we use to measure light. First year the core classes are electronics. For second year the core classes are photonics -- controlling light energy.

We not only teach out of the book and the science of it and the theory, we also do a lot of lab work. We have high-powered laser labs, we have a lot of hands-on activities and a lot of experiments. It's not that we're just getting talked to all day, we're actually doing it ourselves.

They know how to build circuits, how to test circuits, and use the equipment.

952 nanometers and 476 nanometers.

They have to have a understanding of science, and a understanding of math entering into the program.

Half it, and we get 532 nanometers, okay?

We do a lot of algebra and trig functions. There's math in every one of the science classes to come up with the formulas, so. Students graduating from this program may go into many different areas. They may go to work building and testing lasers, and then there's the service end of it. 'Cause lasers are used in the medical field, they're used in the doctor's office, dentist's office, someone has to go there and maintain those lasers, someone has to go there and troubleshoot the lasers, and teach the people how to use them.



Those are field service engineering jobs. We prepare people to be outstanding employees in the industry. They have special skills to how to work with lasers, how to assemble optical elements and structures. That is why they are in high demand.

For more information on anything you've seen today, explore our website at [atetv.org](http://atetv.org).

Thanks for watching.