

**Transcript:** [Episode 28 / March 29, 2010](#)

Coming up next on ATETV: Environmental technology.

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And Biomanufacturing internships.

In this lab here we produce proteins that can then be used by pharmaceutical companies to produce drugs.

Now, on ATETV. From across the country to your own backyard, ATETV shows you the many advanced technological education opportunities available at your local community college. If you've thought about a green career that gives back to your community, then studying environmental technology could be for you.

So we are at well number two on college campus. Here at four Cs and we're going to sample the water.

So you're going to start with the bailer and I'll start calibrating the probe.

All right.

My name is D-Jay Laffoon, I go to Cape Cod Community College and I'm in the environmental science program. I graduated from Upper Cape Tech and I took the environmental program there for four years and I'm just trying to keep going with it. To go out into the field and, you know, being outside and collecting data, it's just something that really interested me from the beginning and I seem to be pretty well at science and math, and it wasn't always my strongest point but so far it's working out pretty well and I enjoy doing it.

Sixty-eight-feet down, plus five-tenths. Sixty-eight-and-a-half feet.

And I'm in the instrumentation class right now. The classes are really interesting, they're pretty challenging.

And then when you press enter, that will accept the calibration.

Okay.

In terms of support, the school does pretty well. You sign up with a guidance counselor like almost right away and they, you know, they have a lot of knowledge of what you need to do to earn the certificates or degrees you're looking for.

Okay. So just one second. So what you want to do is --

There are free tutoring programs, as well, for any student that needs it, whether math or whatever they need it for. And all the teachers are usually pretty open and available for questions and e-mail and all of that.

Okay.

I feel very confident that I should be able to get a job. They have a lot of programs to help the students find jobs and internships.

Just press enter right now. Okay. And it should save it. Very good. Now --

I think environmental technology is definitely a future. A lot of people trying to be less fossil fuel reliant, renewable energy, and I think the only way to go from there is forward.

In five years, I see myself hopefully in a nice career instead of jumping from job to job and something, you know, reliable, and I should have, you know, the degrees and the certificates and I should feel, you know, wanted in the workplace and hopefully I can get a place of my own and, you know, go from there.

Okay. And you are set to turn it off and reel that up, please.

It's a real good experience and I'm having a good time.

Advanced technological education programs are designed to help students gain instrumentation skills and get them on track towards promising technology careers. If you'd like to learn more about environmental technology, be sure to visit your local community college.

If you have a strong science background and are interested in technologies that not only have the potential to increase the quality of life, but that can actually save lives, then biomanufacturing could be for you. We're headed to Great Bay Community College for a look at their biomanufacturing and internship programs.

Hi there, gang. How's it going?

This is a biomanufacturing class. Biotechnology though is maturing all over the nation and the globe and it's maturing into production and it's also where all the jobs are -- technician jobs. It's a very interesting area. The bioeconomy means that you're going to be really using cells that you genetically modify to act as the factories for your product, which is -- which are proteins. Protein is both a structural element in the cell, but it's also all the functional elements. So anything that a cell does is really dependent on proteins and therefore they are the products of the industry, and that's what our students learn to do. They learn to do the jobs that are found in a biomanufacturing facility, but particularly in production and quality control.

In this lab here, we basically produce proteins that can then be used by pharmaceutical companies to produce drugs.

This program at Great Bay Community College really affords a student a peek at a career path and I feel really excited about the fact that we're able to send a student off to an apprenticeship.

I had the opportunity to become an apprentice, which is a paid internship at a real biopharmaceutical company in the area. I worked for Lonza Biologics as an employee -- three months -- in upstream manufacturing. You get paid for it, you get hands-on training. If they like you a lot they'll be able to hire you.

The apprentices are able to go into the industry early on in their education and spend the whole summer at a job in biomanufacturing.

I want now to go into biomanufacturing and industrial work because of this apprenticeship.

They feel very powerful. They do stuff that no one else their age is able to do and it makes them feel really just like a sports hero. They're appreciated for their knowledge when they're so young.

The careers that I can pursue range from manufacturing at Lonza Biologics all the way up through research at the CDC depending on how far I decide to carry my education.

So it's really an opportunity at these community colleges to get an advanced head start on your career. You can make money while doing your apprenticeship.

Although I'm considering going all the way to my Ph.D., I started here at Great Bay Community College because it was a really good place to start, help me get connections with the industry and in the academics here in the field, and it was very affordable and very practical education. My lab skills are very good due to all of the lab time I've had and has really given me a boost at UNH and hopefully onwards as well.

Apprenticeships, or paid internships, where students learn to perform cutting edge production and quality control procedures help them to develop skills that will make them highly marketable.

For more information on biomanufacturing or internship programs or for more on anything you've seen today, explore our web site at [ATETV.org](http://ATETV.org).

Thanks for watching.