

Transcript: [Episode 13 / December 14, 2009](#)

Coming up next on ATE TV...

Agricultural technology.

I did an internship at Crop Tech Services out in Ely. They did a lot of Ag technology with the GPS and soil sampling, so we went out and tested different soil types throughout the field.

Biotechnology.

I'm concentrating the green fluorescent protein in this sample into a more concentrated pure sample.

And medical electronics technology.

This is an embedded processor class. These students are in their last semester before they graduate, and they are getting their hands on the processor for the first time.

Now on ATE TV.

From across the country to your own backyard,

ATE TV shows you the many advanced technological education opportunities available at your local community college.

Interested in hands on biology and chemistry? Want to work with cutting edge technology while still in college? How about connecting one on one with your instructors, and being a part of a team in a laboratory environment? Well community colleges offer all that and more through their diverse programs in bio technology.

I got my first microscope when I was 5, and I was using it to look at bugs and all the little preloaded slides of tree bark and cork; very interesting stuff, I really liked it. then in high school, taking chemistry, I just really enjoyed chemistry. It was so amazing, fascinating, because it wasn't just purely just academic, it's something I could really make a career out of; something that was in demand that could really help people. And that has just been fantastic.

I'm concentrating the green fluorescent protein, GFP, in this sample, into a more concentrated pure sample that I'll put in here. I came to Great Bay Community College because it was affordable, and it was a really practical program they had here where I could work hands on with the real machines, the real technology that's used in the field. I wouldn't just be learning about it, I got to use it.

Now I'm going to go turn off the lights so I can show how really awesome this is.

I got a lot of one on one time with my instructors, really got to know all of my instructors very well. I still keep in touch with them.

All of the other students were just very really enthusiastic about the program, and they were great to work with in the labs, and it was really good building team work and leadership by actually performing the real operations in these labs. It's a very real world class.

I had the opportunity to become an apprentice, which is a paid internship at a real bio pharmaceutical company in the area. I worked for Lonza Biologics through the summer of 2007, 3 months, as an employee in upstream manufacturing.

My lab skills that I acquired here at Great Bay Community College were very helpful in both my apprenticeship and my further education. And now I'm a microbiology major at UNH, after transferring there from here, and just continuing down the road.

Although I'm considering going all the way to my PhD, I start here at Great Bay Community College because it helped me get connections with the industry, and it was very affordable and very practical education.

My lab skills are very good due to all the lab time I've had, and has really given me a boost at UNH and hopefully onwards as well.

Shane made a smart and affordable move by starting at a community college, and then transferring to a 4 year university working towards a bachelor's degree and beyond. He's combined his love for biology and science into a potentially satisfying and high paying career.

Do you have a love for the outdoors along with a love for technology?

Community colleges offer courses that will help you get started in a career in agricultural technology.

I'm Kelsey Myerhoff, I go to school at Kirkwood Community College.

Agricultural technology is anything that can help farmers get a better precision Ag, which is better crop production, better inputs, better exports, better income, any way to help improve their lifestyle and their ability to plant and raise their crops.

Well I actually came out here for a Junior Ag Day when I was a junior in high school. I did the GPS workshop and I also did the crop production workshop.

The classes would be like the GPS classes with the art view, the software aspect of it, and then the precision Ag hardware where you learn to install your units, or where you learn to add your accessories onto your implements.

Alright, so we're going to start putting on the air clutches on this side, this group here is....

The makeup of the class is pretty much all guys, 2 or 3 girls. Pretty interesting, but it's pretty fun and it's just a challenging push through and you don't look at it as something that holds you back. It just kind of helps you really.

I did an internship and Crop Tech Services out in Ely. They did a lot of Ag technology with the GPS and soil sampling, so you went out and tested different soil types throughout the field.

I see myself in 5 years hopefully working at either a dealership or a Co-op helping farmers save their money while getting the most out of their crops and their input.

Kelsey is on her way to helping farmers save money and improve crop production by applying what she's learned in the agricultural technology program at her local community college.

Thinking about a job in the medical profession, but also have a strong interest in engineering? If so, you may want to pursue a career in the high paying secure field of medical electronics.

I'm Richard Le Blanc.

I'm chair of the electronics department here at Benjamin Franklin Institute of Technology.

We 2 majors working here today. One is a broad electronics major, the other is medical electronics. In here they will learn to repair all the electronic equipment that you see in the hospitals.

This right here is DMM, Digital Multi Meter.

This is an embedded processor class. These students are in their last semester before they graduate, and they are getting their hands on the processor for the first time, and they're doing a simple experiment just trying to see an LED blink and watch what happens with the LED.

We have our class instructions, so it'll be 3 hours of lecture and 2 hours of lab. So there's plenty of time to see that everything that we discussed in the classroom, and everything we worked on for homework, when you come to the lab everything actually does indeed work.

There is a lot of math involved. They will need to develop good skills in algebra and trig. The math allows us to predict the results that we would have when we put a circuit together. For the electronics we also will have them study Calculus 1 and 2, but that's primarily to enable them to go on to further education.

We have to know a lot of electronics and math, and basic communications with other people because you will be working as a group when you leave school, you'll be working with different people, fixing different equipment. And basically your first year of work is going to be learning the equipment and talking to the people around you.

I meet with industry. There isn't anyone in those meetings that doesn't talk about how important communications is. As much as the students think that the only thing that's important is the technical aspects, the people from industry will get most excited when somebody brings up the communication topic; more so than the technical.

I originally graduated from the institute myself, went on to the work place as a technician, continued my education for a bachelor's and master's degree at Northeastern, became an engineer and decided to come back and share my knowledge before I retire.

Many of my students have gone on to 4 year schools, some of them schools that they originally applied to and couldn't get in. I've had some that have good grades that get into their 3rd year, so they didn't loose any time.



The students have come back and said it's easy, and I've had the faculty of those schools come back and say, send us more like that student.

If you have a strong foundation in math and science, are good at communicating with others, and looking for an affordable way to further your education, check out the engineering programs at your local community college.

For more information on anything you've seen today, explore our website at ATE TV.org.

Thanks for watching.