

Transcript: [Episode 35 / May 17, 2010](#)

Coming up next on ATETV, industry partnerships...

We're very tight with business, so we listen very closely. What are the skills that they need? And then we deliver that to the students.

Architectural technology...

I've always dreamed of being able to design a building completely self-sufficient.

And remotely-operated vehicles...

I was hooked within a month of a couple of classes, like, "Oh, this is what I was meant to do," yeah.

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're interested in hands-on education, with strong ties to industry, then community colleges are a great place to start. Let's have a look at the state-of-the-art fuel cell program happening at Stark State College.

Here at Stark State College, we're very tight with business, so we listen very closely. What are the skills that they need? And then we deliver that to the students.

This loop here with that --

Stark State has a very focused approach of aligning educational curriculum with industry needs.

About the size of that flag.

Here to here.

It's extremely important to, not just talk about math and science, but actually put it into an application and people then realize, "Hey, this is...this is real-life stuff." Rolls Royce, who has their fuel cell headquarters here on our campus, they're going to have five to 14 different test stands that they're going to be building. They're going to use our students.

We're in the process of basically developing technology that will eventually be designed into a product: the stationary solid oxide fuel cell system.

And then you have the humidity sensor, right here.

You know, it's mainly about trying to make as much progress as we can get into the program.

This one's got a really bad.

The thing that we're testing right now are the parts and mechanics of it, and what all would be involved in making something like this actually tick.

First comes the needle valve section...

It gives us the opportunity to work with students, get students into our business to kinda see how things work in the company, and see if there's a good fit between the student and in our business needs. And the college is working to tailor curriculum that aligns with our needs, so it's kind of laying out some of that foundational training before they actually get out of school. Our relationship with students at Stark State College is that we hire students to come and work in our lab. We train them on the equipment that we're using, we teach them about fuel cells, and then they become a really valuable asset to the company.

These students had the opportunity to work on our contracts to develop high-temperature fuel cells. They also have quite a future ahead of them because they're the pioneers in the fuel cell industry.

External partnerships for colleges are critical because it lets us keep our hand on the pulse of what's happening in the fields.

Now your motor's up.

Without those business partners coming back and saying, "Here are the skills that we need for future employees," we'd be shooting in the dark.

Community college programs like the one at Stark State are designed with input from industry and are responsive to industry needs. And the students benefit from experiencing real-world applications of math and science while still in the classroom.

Interested in green building and energy conservation? What about alternative energy technologies, like solar, wind and geothermal power? Let's meet Jon Flynn, a student in a civil architectural engineering program at Sinclair Community College, to learn more.

My name is Jon Flynn. I am with the Sinclair Community College Civil Architectural Technology Program.

Jon, do you want to go to the back side?

How's that?

Actually, I am a returning student to Sinclair. I initially started the architectural program back in '93, I believe.

Eight feet, eight inches.

Changed my major to fire science technology. I received a degree here. I currently work with the City of Dayton Fire Department. In my line of work as a professional firefighter, you can and will get hurt at times, and I needed something else to fall back on to support my family in that case.

What they're doing behind us right now is installing a blower door test.

33... 43...47...

The technology has come so far compared to when I was initially in the Sinclair program. There was no such thing as green building or really a whole lot of emphasis on saving energy.

Model energy code, in a different area, different....replace windows to very low energy-use buildings...

Giving the global warming situation of today, it's sort of a natural thing that clients are looking for a way to save money, particularly in commercial buildings. This just seemed to be sort of a natural fit for me.

In the state of Ohio, there are no requirements for lighting and appliance.

I've always dreamed of being able to design a building for a client, completely self-sufficient, solar power, wind power, geothermal technology. It might be a little bit down the pike, but we are certainly going in the right direction.

Jon is really enjoying his courses at Sinclair. He's building himself a new technology career path as an alternative to firefighting. If you've been thinking about changing careers, but aren't sure about going back to school, your local community college is a great place to start.

The annual Mate ROV competition connects students with employers and career opportunities and promotes the development of problem-solving, critical thinking and team work skills. Check it out.

with this camera you can kinda see where you lined up. And we'll let you know when we think we have a good reading.

This is the Mate International ROV Competition. ROV Competition is Remotely Operated Vehicle. You can think of them as underwater robots.

We are putting the scores as we get them onto the website so you can keep track of your mission scores.

One of the things that this contest does is it opens eyes to disciplines that were otherwise not open. You know, perhaps we have students here who come from a college of engineering, and now they're beginning to see something of oceanography. We have others who are coming from very much of a science background, and they begin to realize that there's a lot of challenges and really interesting questions in the engineering of something.

There is a huge range of careers in this industry. Everything from plumbing to electrical technicians, to engineers, to eventually management. It's a huge industry.

Okay, who's the team captain?

I am.

Right.

I thought I was going towards a certain field in chemical engineering but I've found that since I've done this competition...both competitions, I have grown an interest in electrical engineering, which is something that I had no idea I'd be interested in before getting into this team.

You guys ready for your mobilization period?

One, two, three, four, five, six.

Career paths available actually are varied, and they can range anywhere from marine policy-type situations to, you know, actual engineering design, and building of new instrument systems to being the research scientist. Actually using things like these ROVs to gather data, to gather information about how the oceans work.

NOAAs interest primarily is essentially inspiring and educating the next generation of ocean scientists, engineers, managers...they could even go be lawyers, if they want. But we're hoping to capture an interest in the ocean, in the environment.

What's our time? What's our mission time? You've got four minutes remaining.

I think we've got it.

You got it, dude.

You got it.

I was hooked within a month of it. A couple of classes, was like, "Oh, this is what I was meant to do," yeah. So I just...I love building this kind of stuff and I love the complex problems I gotta work with, you know. Give me a problem and go, so I love that.

The skills those students are learning will help them succeed in a variety of technology career paths. From mechanical and electrical engineering to marine research and exploration. If you're interested in robotics or engineering, be sure to check out your local community college.

And for more information on anything you've seen today, explore our website at atetv.org.

Thanks for watching.