

**Transcript:** [Episode 24 / March 1, 2010](#)

Coming up next on ATETV: Women in engineering.

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Wind energy technology.

Wind energy is really interesting to me because it's clean energy and it's completely renewable.

And simulation and game development.

I go through the entire spectrum, the art, the programming, the production, every single cycle I have a hand in it.

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. Remotely operated vehicles or ROVs are used in a wide range of fields from marine biology to homeland security and all of those industries are looking to diversify. We're headed to the MATE ROV competition to hear from an all women's ROV team.

Look at this camera you can kind of see where you want them.

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 wanted to have like a women team because guys they like to build and if we're like around them then they're not gonna be like let us do anything so we wanted to have experience in hands on doing this by ourselves.

Ok who's the team captain?

I am.

Alright, ok

It feels it's comfortable because you're all women and you know that each of you have to depend on each other whereas a guy normally they'll like to go in there and work on the tools and you kind of stand back and you see that in teams.

As a worldwide industry we require diversity, we need it. Seeing here today that there's all female teams that's what we're gonna hire, that's what we need.

You're really seeing a shift in the traditional role of a woman which is encouraging to see they're taking part of the team, they're the team captain, they're piloting, they're hands on, they're breaking their nails so to speak.

Those women are learning that team work is an important skill that is highly valued by employers; and industry is constantly looking to build a more diverse work force. Be sure to visit your local community college for more on the programs they offer in robotics and remotely operated vehicles.

Have you ever driven by a wind farm and wondered how those wind turbines work or who keeps them working? Let's meet Paul Marquis who's learning how to operate and maintain wind turbines at Laramie County Community College in Wyoming.

My name is Phil Marquis and I'm going to Laramie County Community College and I'm majoring in wind energy. I'd never been in schooling before and I just went from one job to the next. I figured this is a career you know not just a job.

The program here is really hands on; it's a lot of fun. We've done climb exercises, maintenance on the turbine that we have here, we've done torquing exercises, lots of mechanical and electrical information that we're learning. We've been going through maintenance and just how the machines work, how the generators actually work that can transfer to a lot of different jobs. It really does seem like the stuff that we're learning here will apply to what I want to get into and also a lot of the skills that I'm learning can adapt to other industries also.

How come we have a resistance difference in the start winding?

The class size is really nice. We only have 20 students in this program right now and so you can get a lot of one on one time with an instructor. The other classes I mean we do general education courses also and those are just basic first year, second year college courses.

Depending upon on what part of the maintenance schedule you're working on specifically.

Mike Schmidt has really been a mentor for me, he's really inspiring. You can tell he knows what he's talking about.

Here's our cap start motor.

He's been in the industry before. He's not just somebody that has read the book and is teaching you that. I think that's a lot better to learn from somebody that's been in the industry because they know that when it's written in a book it's not the same as going out and getting your hands dirty. Wind energy is really interesting to me because it's clean energy and it's completely renewable. Wind energy is harnessing power from the wind to create electricity.

After this program I'd like to do maintenance on turbines for awhile and then eventually move up to commissioning them which is just going through brand new turbines and debugging them, and eventually I'd kind of like to get into placements of wind farms like measuring annual wind speeds and different things like that. A lot of the jobs now a days are coming from community colleges and industrial training centers and I think that's where people need to start looking. There's a reason that we're looking for new sources of energy and this I think is gonna be a good one.

I think I'll probably be in this industry the rest of my life.

There's no question the field of wind energy will continue to expand and the skills that Paul is learning in his program will help him land an exciting and lifelong career.

Ever thought about turning your love of computer games into a career? Ryan Snell is doing just that. He's enrolled in a simulation and game development program at Wake Tech. Take a look.

My name is Ryan Snell I go to Wake Technical Community College and I am enrolled in the simulation and game design courses here. I would just say I'm a game developer because I go through the entire spectrum of everything that involves game design from like I said the art, the programming, the production. Every single cycle I have a hand in. I was planning on going to Virginia to take classes until my girlfriend found this school and then I was like wow I can stay in North Carolina and do what I love and then that's what made me come here.

One of my favorite courses here was the 212 class. It's where we had to make a game every 2 weeks so that was 8 games we made in that entire semester and it was the greatest experience I'd ever had. It was constantly working my fingers to the bone and just like I've gotta crank this game out, I've gotta make it good, I've gotta do this and I would do it and it showed in the thing even though it was only a 2 week game you could just see the passion in everybody's eyes and they were like oh that's amazing. So it was really cool, it was really rewarding.

This is a game a friend of mine and I created. We went out and bought a just plastic guitar, gutted it, we took a wireless controller, built in a little like this is the circuit board here, we wired the buttons from the wireless controller up into the neck of the guitar so now it's fully functional. Would you like to see a demo?

Rock Renegades the Carolina Games Summit Edition.

So it was kind of like a culmination between our two talents. He's an electronics wizard and I'm a programmer so and its amazing to see that the two of us could accomplish this while there's a company who's making money doing this exact same thing, making instruments that correspond with notes coming down and everything that they have in their game we basically have in a much toned down version of ours. It's the exact same thing, every single element we even have a microphone that's compatible so we're working on drums now, after that watch out, we're coming up.

Programs like that one at Wake Tech encourage students to embrace technology while celebrating creativity, ingenuity and an entrepreneurial spirit.

Be sure to visit your local community college for more on the programs they offer in simulation and game development and for more information on anything you've seen today explore our website at [ATETV.org](http://ATETV.org).

Thanks for watching.