

**Transcript:** [Episode 19 / January 25, 2010](#)

Coming up next on ATETV, precision agriculture.

I have shown them what they could do with their tractor to get the maximum input out of their field's best seeding ratios, we can get the best output with it too.

Laser and photonics technology.

Laser technology, they use them in phone lines, television screens, the military uses them.

And Biomanufacturing.

Biomanufacturing is the growing of cells in order to create a drug that you might want to cure disease.

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.

With the advent of GPS technology, agricultural production has been changed forever.

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Let's meet Joe Tarrence a second year student at Kirkwood Community College to find out more about Precision Agriculture.

My name is Joe Tarrence. This is my second year. I will graduate in May. We came here and talked to the dean and asked him what he thought would be the best program to get into right now for agriculture and he said the GPS technology. And he mentioned some things about it, what we would be doing in class, showed me some maps people have made, descriptions and kind of fell in love with it from there.

And showed them what they could do with their tractor to get the maximum input out of their field's best seeding ratios, not much overlap, we can get the best output with it too.

I work for Green Valley Ag and Turf at Mount Vernon. I talk to customers about what they could do to maximize their inputs, sell them equipment for their machinery and then I support it.

My advice for students here that plan on coming or thinking about it is just do it, it's good, the sky is the limit with this precision farming. The dealerships are hiring and we need the people.

What I do after this program is I am going to go back to Green Valley, I am going to stay working for them. They have offered me a full time position there, so I plan on just staying with those guys, I have met a lot of good guys, there, customers. They like working with me, I like working with them.

It sounds like Joe has some really exciting career opportunity ahead of him.

Want to learn more about precision agriculture?

Be sure to visit your local community college.

Let's meet Jazmine Murphy at Central Carolina Community College and find out more about the emerging medical and manufacturing career opportunities in the world of laser and photonics technology.

I am Jazmine Murphy. This is my first year here at Central Carolina Community College under Laser Photonics program.

I was studying engineering in high school, I took a couple of technical classes. I decided to come to a technical college because Mr. Beasley talked at my senior class about the laser photonics program and I found it interesting, so I decided to come and attend the program.

As you can see here we have the same size beam that goes on and on and on and on.

I set aside a day a week for recruiting and not only into just lasers and photonics, I try to recruit them in just technology period.

The negative lens which diverges the beam and the next lens...

And I target someone who is going to come into a program and work real hard and study real hard.

Vary it somewhat, the detector.

We need to be on cutting edge so we need strong students out of high school entering into the field of technology.

Laser technology, they use them in phone lines, television screens, and the military uses them.

Oh yes, one of these lenses when it comes out it is called the diverging lens...

After I graduate I hope I will be making lasers for the military. They use like the laser beams off of body heat, they use the undercover fire like in the forest and stuff like it.

Looks like Jasmine will be able to set her sights on several career opportunities in the laser and photonic technology field.

If you are interested in this cutting edge technology, be sure to visit your local community college.

Have you ever wanted to know how vaccines and insulin are created, then you might be interested in the world of Biomanufacturing. Take a look.

Using like organic materials to manufacturer things.

It might be body parts...

Or a biodiesel fuel.

Enzymes eating garbage or something.

I have no idea.

Biomanufacturing is the use of living organisms or parts of them to produce many pharmaceutical products such as vaccines and insulin, things like that.

Biomanufacturing is the growing of cells in order to create a drug that you might want to cure disease. Using cells that you genetically modify to act as the factories for your biomanufactured product.

Some examples would be tissue plasminogen activator. That is a clot buster and would be injected into say, somebody who had a stroke to dissolve the clot. This is a product of the biotech industry and that is what our students learn to do.

You can start your career in Biomanufacturing in as little as two years and your local community college can help.

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

Thanks for watching.