

# KENTUCKY

## Career and Technical Education



### Greetings from the Associate Commissioner

**G**reetings CTE Champions! Welcome to the 2015 KACTE Summer Conference. It's hard to believe, but in just a few short weeks, we will begin our new school year.

It's an exciting time to be involved in Career and Technical Education. The value of our programs is more apparent to people now, than at any other time since I began my career as a teacher many years ago.

One of the big reasons for that positive attention is because of you, the CTE educators, administrators and support staff. Thank you for the difference you are making in the lives of our students.

As the spotlight grows brighter for CTE, so grows the need to continually look for ways to improve instruction, implement program standards, collaborate with business and industry, and provide relevant work experiences so our students are prepared to make a successful transition from high school to the world of work and postsecondary training.

The annual CTE Summer Program is one way to stay on the continuous improvement path. You'll find a wealth of information available to you, and we hope you are able to take advantage of as many learning opportunities as possible during your time here.

All CTE program disciplines are represented and there truly is something for everyone. This is the largest professional learning event for CTE in the Commonwealth, and your participation in this event will benefit you greatly in the coming school year.

As we continue to elevate and integrate career and technical education, I look forward to learning about the best practices and innovative initiatives you will implement in 2015-2016.

Again, thanks for all you do and enjoy the summer program.

### YES Agreement Building Momentum with State Industries

**S**PRINGFIELD, Ky. – Toyotomi, USA has become the newest member of a growing number of companies utilizing an agreement between the Kentucky Department of Education and global human resource agency Adecco.

The Kentucky YES (Youth Employment Solutions) agreement allows students to be more involved in a co-op experience while alleviating some major legal issues for business and industry partners that have hindered co-op programs in the past.

With the creation of the Tech Ready Apprentices for Careers in Kentucky (TRACK) pre-apprenticeship initiative in 2013 high school students are getting an opportunity to begin real apprenticeship training at an earlier age.

However, a major barrier in the TRACK program and most cooperative-types of educational programs has been the age issue. Many companies have policies that prevent them from employing high school students under the age of 18.

Adecco's YES agreement eliminates that barrier allowing companies more flexibility in hiring co-op or TRACK students. Students are employed by Adecco and placed on an assignment at companies participating in the program.

Mike Donta, Deputy Commissioner with the Kentucky Labor Cabinet and President, National Association of State and Territorial Apprenticeship Directors (NASTAD), is also the Supervisor of Apprenticeship. He stated that the renewed interest in apprenticeships coupled with programs like TRACK and the YES Agreement is positioning Kentucky as a model for other states to follow.

"We are seeing the revitalization

of apprentice education across the country but it is here in Kentucky we see partnerships developing that are moving forward the process of getting more students and industries involved in a way that is drawing positive attention from the federal level," he said.

Toyotomi's first wave of high school pre-apprentices are students at the Marion County Area Technology Center (ATC). Principal Brandon Bardin said the YES program has opened doors for more students to participate in work based learning opportunities currently available in Washington and Marion Counties.

"In the past anyone under the age of 18 has been very limited on what they can do in manufacturing facilities, due to liability concerns, which often times results in the students performing a low skilled monotonous task," he said. "This program expands what the students are able to do at these facilities and allows them to showcase the skills they have gained through their training at the ATC. The program is a win-win for students and employers alike."

Amy Riney, the career counselor at Marion County ATC said the partnership with Toyotomi is a tremendous opportunity for both students and employers.

"Students are getting school credit, earning money, and they are getting a one-of-a-kind training experience. I consider myself lucky to get to work with so many exceptional students at the ATC," she said. "These students are not only intelligent, but talented, skilled, and extremely adaptable in various work environments and they're eager to prove their worth and are excited to work."

Riney added by fostering this type of learning environment and



placing these students into a work place environment, a strong future workforce will be established.

Holly Brady, the assistant Human Resources manager at Toyotomi said the company has had a need for quality engineers, maintenance and machine tool team members but by participating in the YES program and through the assistance of Adecco, they are building their own future workforce.

"We're hoping to grow our future workforce and the ATC does a good job of getting their students ready for the workplace," she said. "We can tell who has that background from the ATC and it was difficult to decide which students to take because they all had excellent interviews."

Marion County ATC's Justin Doughty, an information technology student, Aaron Spalding, who is enrolled in the schools industrial maintenance program and Carlos Cabrales, an engineering and computer aided drafting student were ultimately chosen to participate. Each wants to further their education and feels this program will help in those efforts.

"Participating in the co-op with Toyotomi opens a lot of doors in the manufacturing industry and opens my mind to different career opportunities," said Doughty. "It is a privilege to be a part of such

a great industry and company. I plan on going to St. Catharine's College and getting a degree in management. I would like to manage my own computer/electronics business one day."

Spalding said participating in the program has helped him really understand what's involved in industrial maintenance.

"Being able to follow real workers around all the time and having a hands-on experience is something I couldn't have obtained in the classroom," he said. "I'm planning on going to school at Elizabethtown Community and Technical College and then go into the maintenance field after I graduate. This co-op proved to me this is the field I want to go into."

Cabrales said having the opportunity allows him to get some of the job experience and some of the hands on work he will be doing in this profession.

"Since being in the co-op program at Toyotomi I have been able to network with individuals I would not have otherwise had the opportunity to collaborate with," he said. "I hope to stay employed at Toyotomi and attend Sullivan College of Technology and Design to major in Mechanical Engineering."

## Health Science Informatics



**S**HELBYVILLE, Ky. – While Career and Technical Education (CTE) enjoys a rich heritage of offering traditional, skills-related programs to students across the state, new programs are being developed and implemented which are taking students

in directions once not thought of as being CTE.

Karen Smith and her students at the Shelby County Area Technology Center (ATC) are pioneering a new Health Science Informatics (HSI) class that brings different CTE programs together to create a one of kind unique learning experience.

"It is a crossroads between health, business and information technology," she said. "It's a way of maximizing health data in our communities."

Smith emphasized the program is not just about electronic health records or health information technology.

"It is the over-reaching umbrella of all that is digital in healthcare and how we make decisions about healthcare," she said.

Smith said there are unlimited possibilities as to what this digitized healthcare world can be used for including looking at its quality.

"One of our projects is entitled 'To Err is Human' and it looks at medical and human errors in healthcare and how much of that is poor data and not getting correct information to the right place at the right time," she said.

Much of the involvement in this program, when looking at the curriculum, is project-based. The standards are linked with Common Core math standards, English, language arts and Next Generation science standards, allowing students to get both the career aspect of the program along with required academics, noted Smith.

Paige Harbst is a sophomore student enrolled in HSI. She said the program seemed to be very hands-on, something she likes and, with an interest in the health field anyway, this seemed to be a good fit.

"The whole healthcare aspect of the program seemed interesting to me

having already taken a bio-medical technology class. I like being challenged while I'm learning," she said. "And I find the data we have researched to be a good learning experience."

But it's not just about numbers. One of the classroom projects involved looking at area obesity rates and the possible relationship to diabetes. Harbst said you have to look at the overall picture when analyzing this data.

She also said that components of the program, such as looking for data information, is the responsibility of the students and driven by the students.

"I think, over time, we'll learn more about what to look for and how to gather and use this data so that maybe someday, we will be the actual data source," said Harbst. "Through the data that we've already collected, we have discovered quite a few things."

Smith said right now the program looks at data already created but it's exciting to think that students will come up with new discoveries as they move through the process.

Alex Sea, another HSI student said she wants to be a pediatrician and thinks doing all the "data mining" in this class will help her get there faster.

"This class enables me to find data and information and keep track of it," she said. "I'm a visual learner so being able to work in this hands-on environment is more helpful to me than lectures and notes."

In collecting the information, the students then break it down into smaller pieces such as in graphs or word documents in a way that becomes easier to "digest" and understand, much the same way a doctor would do with a patient.

"I think it's easier for us to see the big picture of what the data can represent when we break it down into smaller pieces," said Harbst.

Smith said in looking at that "big picture" each project has an essential question such as how can data mining be used as it relates to community healthcare, how do obesity rates relate to other ailments or how can changes be made in medical or human errors that happen.

"Through that process, there are a series of questions which break down that overarching essential question," she said. "When the students start manipulating the information to find the answers, they have to drill into the information."

With the program in its infancy, Smith and her students are setting the stage for other schools and students.

And while they don't necessarily look at themselves as "pioneers" the thought of finding information that could one day save lives is exciting for both teacher and students.

## Former CTE student used machine tool program to launch engineering career

MAYSVILLE, Ky. – If you ask Landon Garrison what the key to his success at becoming a manufacturing engineer was, he is quick to say the Career and Technical Education training he received in high school.

The former Mason County Area Technology Center machine tool technology student now works with other apprentices at Stober Drives where he served as an apprentice, as well.

He began working at Stober in 2005, starting as a machinist apprentice. From there he would continue his education through the apprenticeship program at Maysville Community and Technical College.

After receiving his associate's degree, Garrison continued in the apprenticeship program allowing him to gain his engineering degree from Northern Kentucky University (NKU).

All of his education was achieved through Stober and without accruing any college debt.

"I basically owe my career to the tech center. As a junior, I didn't know exactly what I wanted to do and that's a lot of pressure on a young man or young woman; your junior or senior year you really have to decide, "What am I going to do with the rest of my life," he said.

Garrison credits that year he spent at the ATC in helping him answer that question. He said what he learned at that level and at the community college made the transition into the bachelor's program so much easier.

"I knew the nuts and bolts and practical purposes of it; I knew what the metal would do when I cut it," he said. "When I went on to the bachelor's program at NKU they got more into the science side of it so I had those coming together and it was excellent. I couldn't have asked for anything better than that."

Today Garrison is passing that knowledge on to a new group of apprentices and pre-apprentices at

Stober. Currently four students from the ATC are enrolled in the TRACK program taking a similar route as Garrison did on their way to life-long careers.

Dale Winkler, Kentucky Department of Education associate commissioner said the idea that participation in CTE at the high school level can make the transition into postsecondary education and/or the workforce smoother is evident by the success being made from those students who have actually been a part of the CTE system.

"We have long seen the benefits of getting a start at the secondary level for many postsecondary endeavors be it two or four-year college, apprenticeships, job training programs or certification programs," he said. "Landon is a perfect example of someone who has taken careful steps from one level to the next to achieve his ultimate goal."