# Phillips PULSE

## Phillips Education Community Newsletter

February 2024

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## Lindsay's Latest

Dear Educators,

It's already shaping up to be an excellent 2024, and I am excited to see everything you are accomplishing in your classrooms and programs. SkillsUSA competitions begin this month, and we will be announcing our regional HTEC conference locations soon – there will be three in the Phillips territory, and we hope you'll plan to join us as we show off some beautiful programs and facilities!

If you follow me on social media, you probably saw that I spent most of January visiting with some of our global schools and partners in India and the United Arab Emirates.

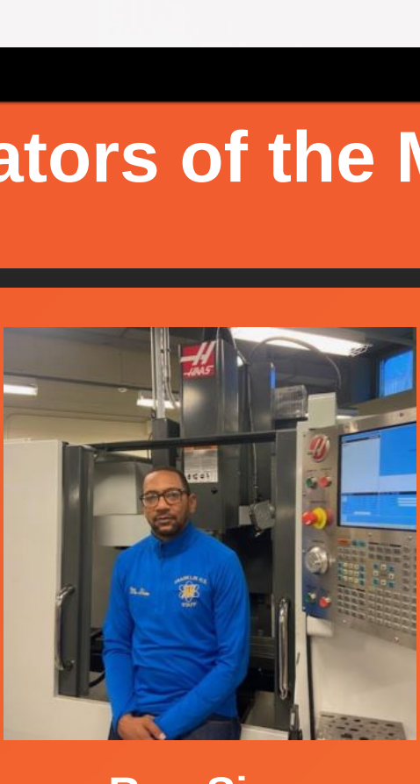
Phillips is known worldwide for our technology and expertise, and it was incredible to see how both are being used in manufacturing programs abroad. Please stay tuned for some exciting news about our global education programs and how you and your students can be part of them.

Hope to see you all at a Skills competition or HTEC conference soon!

Thanks for all you do,

Lindsay

## Educators of the Month



### Ron Sizer

Secondary Educator of the Month

My name is Ronald Sizer and I am the CNC Machining Instructor at Benjamin Franklin High School. This program is the only program of its kind in the School District of Philadelphia. My father was a machinist at Elkay Manufacturing and ever since I was a young child, he taught me the machining trade through his love of racing and building. As a young man, I didn't understand how being there and helping my father with the small tasks he assigned me, was preparing me for a great career as an adult.

After High school, machining and manufacturing was the only pathway I considered. I worked in various metal and wood shops as a Machine Operator and through my travels in the industry, I landed an opportunity at Marmetal Industries in the early 2000's. The company's owner saw my potential with the CNC machines and paid for my training to further my CNC knowledge. I was sent to the Haas Factory Outlet in Bensalem, PA and the National Center of Defense Manufacturing and Machining in Latrobe, PA to learn and then received numerous certifications and began working on Naval contracts for Marmetal.

Years later, after the company was sold, I began my travels again where I was introduced to 4th and 5th axes attachments, and 4 axis horizontals. Eventually, I found a home in the aerospace industry at Penn Manufacturing. Around 2013, their sister company, American Manufacturing & Engineering, was in need of machinists so I decided to move over where I would be making medical parts.

In 2017, my youngest daughter and I attended a high school fair. She was interested in cosmetology, so we went straight to the Career and Technical Education table. As she was speaking to the ladies, I looked through the programs offered in the district and asked why there was not a Machining Program. As I began to explain my background, the man behind the table grabbed a packet, opened it up, and showed me they did teach CNC at Benjamin Franklin High School and they were looking for an instructor. After our conversation, he went on to say he needed me to take over the program and asked for my contact information. I thought this man was crazy, and didn't even give it a second thought until a week later when I saw an offer letter in my email. After thinking and speaking with my family about it, I realized if I want to make a change, this is my chance to pass down the skills that I learned from my father and all the skills learned on my journey to become a CNC machinist. After years of being the only black machinist in the many shops I worked, I knew that I could make the difference in Philadelphia's communities and help diversify the manufacturing field. I accepted the offer in 2017 and haven't looked back!

### Eddie Humphries

Postsecondary Educator of the Month

My name is Ladell Humphries and I am the Program Manager for Machining & CNC Technology at Central Carolina Technical College, in Sumter South Carolina. I am married with four children, two of which are in college and two in high school.

I began my journey as a Machinist when I decided at the beginning of my sophomore year, that the four-year education route, while majoring in education, was not for me. Then, my only exposure to machining was working during a summer cleaning and repainting for the machine shop where my mom worked. I was intrigued by the machines and how machining was done to create the part that was detailed on blueprints. I guess at that time that is what implanted the thought of being a machinist.

I enrolled at CCTC as a student in Fall of 1999. I went through the program and learned about all of the operations used in milling, turning, and grinding. I was taught minimal CNC programming and setup, but like many, I thought I knew it all when I graduated.

Upon graduating in 2000, I was employed by a machine shop as an turning center operator. This was an eye-opening experience. I was thrown quickly into setup and proved myself a fast learner. The shop foreman approached me with an opportunity to learn programming on the job, but it would mean that I had to learn on my own after-hours and off the clock. I worked hard at learning CAM software and Conversational Programming and in a very short time, took the lead in the CNC Turning Department.

I devoted 10 years to that machine shop, learning and absorbing all that I could. In 2007, I received a call from my former instructor at CCTC for an opportunity to teach Machining at night as an adjunct instructor. This opportunity was just what I wanted and after teaching as an adjunct for four years, I was given the opportunity to become the Program Manager. I have now been with the college for 12 years, full-time, and have enjoyed training the next generation of machinists in the newest technology.

## School Spotlights

WHEN I AM AT PEACE
...MY MIND GETS CLEAR OF THE WRONG THINGS...
...I WILL FINALLY BE FREE OF RESENTMENT...
...ALL IS SILENTLY CHEERING

### Benjamin Franklin High School

**Secondary School of the Month**

CNC Machining at Benjamin Franklin High School prepares students to apply technical knowledge and machining skills in shaping material to produce parts using computer numerical controlled machines. Instruction involves understanding work dimensions, tooling, and feeds and speeds of machining. Emphasis is placed on the operation of the machines such as CNC Lathes, CNC Mills, grinders, drill presses, sheers and bandsaws. Instruction also includes the use of measuring instruments such as layout tools; micrometers and veneers; indicators; methods of machining; print reading; and geometrical dimensioning and tolerancing (GD&T). Instruction prepares students to operate all types of computer controlled machines as well as prepare them to perform quality assurance duties. Students are trained in CAD/CAM in their senior year. This training is performed in class using CamInstructor and Mastercam software.

Instruction is split between machining theory and machining applications. In this course, students are assigned projects, which become more advanced as skills are mastered. These skills will be tested with written, virtual, real world quizzes, tests, exams, and projects. This course is heavily reliant upon mathematics. It is critical that the student learns to envision 3D environments, work holding, machine processing, material removal, and tolerances to be successful. The students will progress from Safety( OSHA 10 Manufacturing Certification), through operations and quality control, up to programming and setting up computer operated machines. Students will work independently and in joint teams to produce projects involving real world parts. In this course, the students gain experience with teamwork in a machining environment.

Students will have the opportunity to participate in field trips to local manufacturers and machine shops. There will be guest lecturers as well as job coaching (Soft Skills) and interviewing experiences. More importantly there is job placement, BFHS Machining program is partnered with the Navy Talent Pipeline, which gives all Machining graduates a CNC Machining offer in the Philadelphia Naval Yard with various companies. Students will take 5 certification tests their senior year, all certifications are from NIMS (National Institute of Metalworking Services) and are industry recognized. This program is designed for students to graduate from high school with a HS Diploma, Industry Recognized Certifications and an OSHA 10 certification, to ensure employment opportunities. Currently partnered with A1 driving school, this program is the only Philadelphia CTE program offering driving instructions.

Benjamin Franklin High School is a comprehensive four-year public high school offering Career & Technical Education (CTE) courses, and the only Naval JROTC program in the district. Students graduate in four years with a plan to enter one of four pathways upon graduation. The four pathways are:

1. Attend a four-year college or university
2. Attend an accredited two-year technical program or trade school
3. Pass the ASVAB exam and join the military
4. Enter the workforce upon graduation

Benjamin Franklin High School's CTE programs consist of Welding, CADD, Building Trades, CNC Machining, and Culinary. These are 3 year programs in which students will tour while in 9th grade and attend their program of choice as a Sophomore, Junior, and Senior. During their senior year the students take a state certification test, and graduate through one of the 4 pathways. The NJROTC mission is to instill in students in United States secondary educational institutions the values of citizenship, service to the United States, personal responsibility and a sense of accomplishment. NJROTC can be joined as a homeroom and/or a course.

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### Central Carolina Technical College

**Postsecondary School of the Month**

Central Carolina Technical College is a multidisciplinary, public institution of higher education primarily serving the region of Clarendon, Lee, Kershaw, and Sumter counties in South Carolina by providing innovative programs that are designed to enhance the economic vitality and quality of life for all residents. The College confers associate degrees, diplomas, and certificates in the areas of business, public service, industrial and engineering technology, the health sciences, and the arts and sciences through multiple learning environments including traditional and distance education instructional methods. In addition to excellence in teaching and learning, the College provides credit and continuing education programs and student support services to prepare students to enter the workforce, earn college credit before high school graduation, transfer to senior colleges and universities, and achieve their professional and personal goals.

CCTC's mission is to improve lives through excellence in teaching, learning, and economic enhancement through workforce development.

The Machining & CNC Technology program offers two certificates. Basic Machining & CNC Fundamentals Certificate is designed to train entry-level machinists in basic operations on machine tools such as lathes, mills, and surface grinding as well as blueprint reading, precision measurement, and industrial safety skills. The BCNC also prepares the student for CNC setup skills, 3D Modeling, and CAM. The Advanced CNC Programming Certificate(ACNC) will further the students level of education by introducing them to Fixture Design, 3d Milling, 3+2 Axis Machining, 6-Axis CMM operation and creating digital inspection reports, 5-Axis Simultaneous Finish Operations, and Basic Turning and Mill/Turn Operations. Our mission in Machining & CNC is to provide students with quality instruction and the necessary skills for productive employment in their field of study to meet the needs of industry.

## Grant Opportunity

exelon℠

Exelon Corporate Contributions Program:

**Geographic area:** Company communities in DE, IL, MD, NJ, PA, and DC

**Description:** Exelon's Corporate Contributions Program offers grants to nonprofit organizations in the communities Exelon serves. Those areas include Delaware, Maryland, New Jersey, Pennsylvania, and Washington DC. Grants may be awarded for Building Exelon's Future Workforce, including programs that encourage students to stay in school, promote math and science, improve workforce skills, and encourage personal development through scholarships, mentoring, and internships.

There is no application deadline. Visit HERE

## Upcoming Events

SkillsUSA

Registration is opening for SkillsUSA State Competitions! To submit your state competition registration, Click Here to find your state director and request information on your state competition.

THE PHILLIPS MACHINIST

The Phillips Machinist Contest is underway and you can follow the excitement by downloading the app here!

HTEC Haas Technical Educators Conference

Registration is now open for the National HTEC Conference at Dunwoody College of Technology from July22-25,2024! Register HERE!

## Phillips Technology Updates

HAAS TOOLING
HAAS TESTED.
HAAS PROVEN.

### Educators' Guide to Order Tooling:

Did you know new products are added weekly to the Haas Tooling Website and that ordering Haas Tooling from the Haas website is easy? Our goal is to make sure our educators receive the correct discount and parts. To do so, follow these easy steps:

1. Go to www.haascnc.com and create an account if you have not already done so.

2. Make sure you register with your school email ending in ".edu" to get the 25% off educators' discount!

3. Once you are signed in, click on the Haas Tooling section.

4. Start Shopping! Add the items you want to your cart and when you are done, go to your cart and click "share cart." In the recipient email line, send to either: pcservice@phillipscorp.com or pcsales@phillipscorp.com

5. Once received, you will be contacted to make sure the discounting and parts are correct and then your order will be placed!

Great News! HFO Phillips can now honor additional discounts featured on the Haas Website! **However, these discounts cannot be applied on top of the 25% discount educators already receive.** Contact your local HFO Phillips sales representative for more information.

### Haas Spotlight:

### Haas HC10 Cobot

The Haas Cobot is now available for $35,000! You must purchase one of the following machines to be able to purchase: VF-1, VF-2SS, UMC-500m ST-10, ST-20Y & DM-2.

Learn More Here!

**Purchase of a Cobot Incudes:**

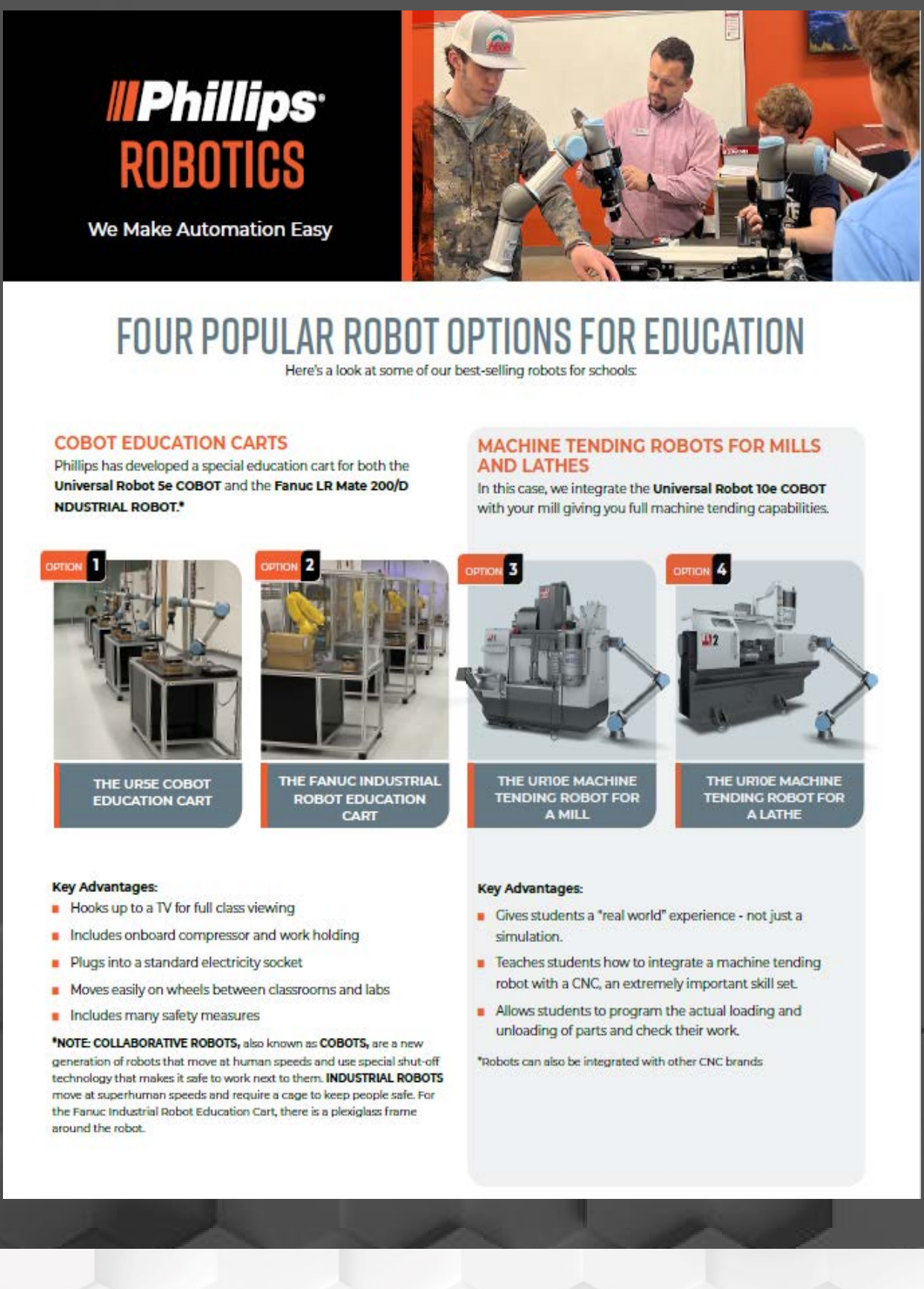
- One-year warranty
- HC10 Cobot
- 1 Meter Light Curtain
- Compatible Cables

### Haas DC-1 Drill Center

HAAS
Haas F1 Team
OFFICIAL MACHINE TOOL
INTRODUCING THE ALL-NEW
DC-1
Our NEW HIGH-SPEED DRILL CENTER, with a TURRET-STYLE tool changer and rear chip discharge, is here.
DC1

Available for an introductory price of $39,995, The DC-1 is a traditional-style drill/tap machine with a 10,000-rpm BT30 spindle and high-speed turret-style tool changer, to minimize cut-to-cut times and shorten cycle times!

Learn More Here!



Phillips ROBOTICS

We Make Automation Easy

FOUR POPULAR ROBOT OPTIONS FOR EDUCATION

Here's a look at some of our best-selling robots for schools:

COBOT EDUCATION CARTS

Phillips has developed a special education cart for both the **Universal Robot 5e COBOT** and the **Fanuc LR Mate 200/D NDUSTRIAL ROBOT.***

OPTION 1 THE UR5E COBOT EDUCATION CART

OPTION 2 THE FANUC INDUSTRIAL ROBOT EDUCATION CART

Key Advantages:

- Hooks up to a TV for full class viewing
- Includes onboard compressor and work holding
- Plugs into a standard electricity socket
- Moves easily on wheels between classrooms and labs
- Includes many safety measures

***NOTE: COLLABORATIVE ROBOTS,** also known as **COBOTS,** are a new generation of robots that move at human speeds and use special shut-off technology that makes it safe to work next to them. **INDUSTRIAL ROBOTS** move at superhuman speeds and require a cage to keep people safe. For the Fanuc Industrial Robot Education Cart, there is a plexiglass frame around the robot.

MACHINE TENDING ROBOTS FOR MILLS AND LATHES

In this case, we integrate the **Universal Robot 10e COBOT** with your mill giving you full machine tending capabilities.

OPTION 3 THE UR10E MACHINE TENDING ROBOT FOR A MILL

OPTION 4 THE UR10E MACHINE TENDING ROBOT FOR A LATHE

Key Advantages:

- Gives students a "real world" experience - not just a simulation.
- Teaches students how to integrate a machine tending robot with a CNC, an extremely important skill set.
- Allows students to program the actual loading and unloading of parts and check their work.

*Robots can also be integrated with other CNC brands

Want **Ready-To-Go proposals** of our top-pick robot packages for Education?

Click Here

Markforged University

Did you know Markforged offers a comprehensive additive training program for modern manufacturing? Click below to visit Markforged University and learn more today.

Visit Markforged

Phillips proud partners with Markforged

Think Additive Think Phillips

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