PIEDMONT TECHNICAL COLLEGE

FALL 2021 • VOLUME 11 • ISSUE 2



**Piedmont Technical College** PO Box 1467 Greenwood, SC 29648



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#### Institutional Mission

Piedmont Technical College transforms lives and strengthens communities by providing opportunities for intellectual and economic growth.

The College, a member of the South Carolina Technical College System, is a public comprehensive two-year postsecondary institution. Piedmont Technical College contributes to the economic growth and development of the largest and most diverse region of the technical college system, Abbeville, Edgefield, Greenwood, Laurens, McCormick, Newberry and Saluda counties and to the state. The College responds to the academic, training and public service needs of the community through excellence in teaching and educational services. Piedmont Technical College's open admissions policy provides accessibility for individuals with diverse backgrounds the opportunity to acquire the knowledge and skills for employment in engineering technology, industrial technology, agriculture, business, health, and public service. Piedmont Technical College graduates develop competencies in communication, mathematics, problem solving and technology.

The College offers university transfer; associate degrees, diplomas and certificates in technical and occupational areas; college preparatory programs; student development programs providing academic, career and individual support; and custom-designed credit and non-credit programs to provide training for business and industry and to meet the needs of the community. To optimize access to higher education in the rural seven-county service area, Piedmont Technical College offers distance learning courses through multiple modes of delivery.

CareerFocus is published twice a year by Piedmont Technical College, PO Box 1467, Greenwood, SC 29648 in partnership with Academic Marketing Services.

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# FACTS and FINDS

#### **MUSIC TO YOUR EARS?**

Music has positive affect on your mental and positive health according to many studies. It helps improve stress levels and keep you productive.

"One thing is certain – you will never find an office where everyone likes listening to the same type of music." Some may prefer jazz for creativity, while others may like classical or pop for concentration.

Outside of those in health care, law and finance, most employees enjoy a creative environment. In one field music can hinder productivity while it can be beneficial in others.

Source: The Undercover Recruiter, http://theundercoverrecruiter.com/ music-office-help-hindrance/

#### PLENTY OF JOBS FOR COUNSELORS, TEACHERS AND HEALTHCARE PROFESSIONALS

Looking through to the year 2029, the U.S. Bureau of Labor Statistics predicts where college graduates will find the most opportunities. Teachers of all sorts, from elementary through post-secondary, will find lots of openings and a number of health care professions. The 10 occupations with the most openings, along with their median annual earnings, are:

- 1. Lawyers (\$122,960)
- 2. Educational, guidance, school, and vocational counselors (\$57,040)
- 3 Health specialties teachers, postsecondary (\$97,320)
- 4. Nurse practitioners (\$109,820)
- 5. Education administrators, elementary and secondary school (\$96,400)
- 6. Health care Social Workers (\$56,750)
- 7. Postsecondary teachers, all other (\$68,970)
- 8. Instructional coordinators (\$66,290)
- 9. Physical therapists (\$89,440)
- 10. Speech-language pathologists (\$79,120)





#### AND CASHIERS, WAITERS AND CLERKS

Workers without a college degree have opportunities too, of course. Many of these jobs are in retail and food service. The ten non-college degree jobs with the most openings, along with their median annual salaries, are:

- 1. Home health and personal care aides (\$25,280)
- 2. Customer service representative (\$34,710)
- 3. Office clerks, general (\$34,040)
- 4. Stockers and order fillers (\$27,380)
- 5. Secretaries and administrative assistant, except legal, medical and executive (\$37,690)
- 6. Childcare workers (\$24,230)
- 7. First-line supervisors of food preparation and serving workers (\$33,400)
- 8. Security guards (\$29,680)
- 9. Maintenance and repair workers, general (\$39,080)
- 10. Receptionists and information clerks (\$30,050)

Source: https://www.bls.gov

# **TELEWORK: NO TURNING BACK NOW**

When the pandemic hit in 2020, companies were forced to figure out ways to allow employees to work from home. Now, as offices open back up, businesses are trying to figure out the best way to bring them back – if at all! Big tech companies were among the first to shut down, leaving expensive corporate campuses vacant. Each company is approaching its telework policy differently: Twitter and Facebook are letting employees continue to work from home full-time, while Amazon, Google and Apple prefer to have employees come back to the office, even if it's part-time.

Source: washingtonpost.com/ technology/2021/06/04



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# THE SKY'S THE LIMIT FOR CERTIFIED EMTS AND PARAMEDICS TRAINED AT PTC

Students in the Emergency Medical Technician Program (EMT) at Piedmont Technical College (PTC) recently learned about career options available after completing their one-semester EMT Certificate. An information session earlier this year featured several professionals in the health care first-responder field sharing insights about their work. Students learned that their opportunities are not limited to work on the ground. If they so choose, they eventually may even take to the skies.

Rod Stoll, a flight paramedic with Life Flight Air Medical Transport, told the group that the basic EMT

course they are taking will serve as the core to a health care career layered in progressive increments. Around every turn are more choices that go in many directions.

"What you learn now is the foundation for where you are going," he said. "That continues into nursing, medical school, or critical care transport. ... We are the 1% of the 1%. Statistically, about 1% of the population works in health care, and 1% of those people work in critical care."

Perhaps the most exciting thing about

EMT/Paramedic training is that the demand is very strong. "The average age of a paramedic in South Carolina is 49 years old. They will be exiting the workplace," Steve McDade, PTC Paramedic Program Director, told the group. "I am looking for the next leaders of EMS in South Carolina."

McDade noted that there are 269 EMS agencies across the state, and opportunities are abundant right now. "The jobs are there, and they have gotten better. There are flexible hours. You can choose the shifts that fit your life schedule."

Steve Hudson, Paramedic Lead Instructor, said that he felt the basic

Rod Stoll



than paramedic training because the EMT instruction is establishing the core competencies that apply across the board.

EMT training was even more difficult

"You are building your foundation. It becomes easier as you go, but it still is a lot of work. You have to make a commitment to be in paramedic school," he said, adding, "There are paramedic positions open at every agency in our seven-county service area."

Nursing is another field some EMTs and paramedics may gravitate toward. PTC Health Care Dean Tara Gonce noted that, because of their background and

training, paramedics make excellent candidates to enter the nursing field.

A follow-up event allowed recruiters from several EMS

agencies to speak personally with students who will be entering the job market soon.

Derek Oliver, director of Emergency Services for Greenwood County, said the pandemic over the past year has impacted the EMT

shortage, as some professionals made difficult choices to leave

their jobs to stay home with children after schools closed or care for relatives who had fallen ill. Others may have balked at the risk involved with transporting COVID-19 patients.

Oliver recruits through multiple channels, including high school and college campus visits, as well as local job fairs. "I also give potential recruits the opportunity to

ride around on one of our units," he added. Cameron Word with Laurens County

EMS transfixed a handful of students with stories from the field. Word himself is a graduate of the PTC program's first EMT cohort, receiving both the program award and Health Care Division award.

"We have driver positions open right now for our non-emergent transport

truck," he said. "It's a good way to get into the field and then work your way up."

Representatives from the privately owned Thorne Ambulance Service also were on hand to answer questions and outline benefits for those willing to make a minimum two-year commitment.

A number of grants and other funding sources combine to make





EMT or paramedic training financially painless.

"There are a dozen different ways that you can get this training free," said Ann Skinner, workforce development director at the Upper Savannah Council of Governments. Upper Savannah received a halfmillion-dollar, four-year grant to train 100 EMTs and paramedics. Therefore, the prospect of tuition costs should not deter anyone from considering EMT training opportunities.

"We do a little bit of everything in EMS and paramedicine," Hudson said. "You can look in the mirror and know at the end of the day that you have made a difference in someone's life. I wouldn't trade it for anything in the world."

For more information about PTC's EMT and Paramedic training programs, go to www.ptc.edu/emt.



# **COLLEGE TO RENOVATE AND EXPAND** NURSING AND HEALTH CARE FACILITIES

Piedmont Technical College has received a total of \$6.8 million in state funding to renovate and expand its health care education facilities on the Lex Walters Campus-Greenwood. As the leading educator of health care workers in the region, PTC is well-known for educating a large number of nurses, but its Health Care Division also trains hundreds of students in fields across the health care service spectrum, including surgical technology, medical assisting, cardiovascular technology, and respiratory care.

"Over the past two years, Piedmont Technical College has conferred more than 700 degrees and diplomas to graduates in health care-related professions," said PTC President Dr. Hope E. Rivers. "We work closely with health care providers across the region to identify the most pressing workforce gaps and build a pipeline of graduates qualified to fill them. We are very thankful for the continued support we receive from the state General Assembly and county councils."

The project will include renovations to approximately 24,000 square feet of existing space devoted to training health care workers as well as construction of a new two-story 12,100 square foot structure. The college is covering the remaining cost of the project above the \$4.8 million dollars received for renovation.

PTC Health Care Dean Tara Gonce said that improvements are timely, as the existing building was constructed 30 years ago.

"We are very excited about this project," Gonce said. "The expansion will increase our capacity to enroll even more students who are seeking needed heath care certifications."



"We are very excited to hear the news of the expanding healthcare education facilities at Piedmont Technical College. As a partner with Prisma Health in developing the future healthcare workforce, we are proud of Piedmont Technical College for taking this step to expand and proactively address the growing challenges of resourcing healthcare," said Justin Benfield, CEO of Prisma Health-Laurens County Hospital. "This expansion will bring additional highly-qualified talent to our area."

"This is yet another significant advancement for Piedmont Tech in their mission to provide workforce training for the Lakelands area," said Chuck Moates, chairman of Greenwood County Council. "Greenwood County is proud to be a contributing partner in this endeavor."

Pre-construction preparation work is currently underway.

### PROFILE

### Lena Wood Warren

Retired Program Director Remembers Health Care Programs' Earliest Days

Lena Wood Warren wasn't sure what to expect when she stepped into the President's Office at Piedmont Technical College back in 1971 to interview for a position establishing the college's first health care program — medical assisting.

Warren soon learned that then-PTC President Dr. Lex Walters was quite the intuitive straightshooter who often was one or two steps ahead in any conversation.

"I asked him if he ever would consider establishing a nursing program at Piedmont Tech," she recalled. "At the time, there were no medical programs of any kind yet at PTC. No paper. No chairs. No desks. Even though I was applying to start a medical assisting program, my ultimate desire was one day for PTC to have a nursing program."

Dr. Walters clearly had given this topic some thought over the years and had a practical answer at the ready. "He told me that, as soon as Lander decided to establish a 4-year nursing program, he would apply for a 2-year program at PTC." That is exactly what happened, and Warren – who got the job she interviewed for that fateful day – was instrumental in getting the college's Nursing Program running in 1987 with an impressive initial cohort of about 30 students.

Warren, a Saluda native, retired from PTC in 2007 after more than 35 years with the college. In training and mentoring others to work in nursing or other health

care fields, Warren believes that, for the very best, it is a sincere calling.



A longtime relationship with Self Regional Healthcare has been invaluable making health care programs available through the college.

"From the very beginning, we have had the support of the administration at Self," she said. "From the very beginning, they have been our partner."

Warren says she is deeply indebted to the health care faculty and support personnel at PTC. In 1990, they established the Lena Wood Warren Scholarship for practical or associate degree nursing students in her honor. This spring, she returned to PTC to personally endow that scholarship so it will exist in perpetuity.

To learn more about PTC's health care programs, visit www.ptc.edu/health.

# PIEDMONT TECH OFFERS TUITION-FREE CERTIFICATE THROUGH **HISTORIC PARTNERSHIP WITH SC CRIMINAL JUSTICE ACADEMY**

To address training needs and workforce shortages in law enforcement in the state, a progressive partnership announced earlier this year includes Piedmont Technical College (PTC) and 15 other of the state's technical colleges to assist the Academy by offering a new pre-Academy certificate. PTC will start offering the new training in January 2022.

South Carolina **Criminal Justice** Academy

The partnership establishes a new career pathway in law enforcement, the Police Pre-Academy Training Certificate, a 14-week program offered through PTC and the state's other technical colleges. Candidates who apply for the program learn basic introductory law enforcement tactics and procedures to better qualify them for police employment and increased training success at the Academy.

"I think it's going to be great," said John Sloan, Criminal Justice Program director at PTC. "There's no doubt that it should bolster and improve the academic qualifications of law enforcement candidates."

Support from the state's Lottery Tuition Assistance and SC WINS Scholarship programs covers full tuition for students in the new

pathway program. Candidates are expected to secure employment with a SC law enforcement agency within one year of completing the program. Once employed, they are assessed for entry into the Academy. The measure is particularly

timely as communities across the country re-evaluate their police training standards.

To offer perspective, Sloan noted that, while South Carolina requires a minimum of only 8 weeks of police training, many other states require significantly more. For example, New Jersey requires its police officers to



Guest Lecturer David Stumbo, Eighth Judicial Circuit Solicitor, addresses criminal justice students in 2019.

complete 6 months (24 weeks) of training before they are hired.

"If the community colleges can help, why not do it?" he said. "The

partnership couples the 14week Police Pre-Academy Training Certificate with the 8 weeks of intense Police Academy training for a total of 22 weeks of education and training. This is certainly a mutual benefit for all

"I think it's going to be great. There's no

doubt that it should bolster and improve the

academic qualifications of law enforcement

Criminal Justice Instructor Courtney Smith, left, with officers from the South Carolina State Transport Police at impaired driver training.

seen a need for modifications to law enforcement training due to the changing expectations of society. "Improved hiring standards and the new pathway certificate comprise a step in the right direction," he said.

For information about PTC's Criminal Justice Program, visit www.ptc.edu/justice.

-John Sloan





A Criminal Justice student participates in an impaired driver simulation during the summer 2021 term.





candidates."

### PROFILE

# **Steve Hudson**

### 'Sometimes It's Not the Band-Aids and Medication a Person Needs'

As a career first responder, Steve Hudson often feels invisible, noting that people generally don't think of first responders until there's

an emergency. He's OK with that. Just glad to help. But someone has been watching Steve Hudson. And that someone nominated Hudson for recognition with the Daily Point of Light Award, sponsored by the national Points of Light Foundation.

"To this day, I don't know who nominated me," Hudson said. "I was blown away."

Hudson is the Paramedic Lead Instructor at Piedmont Technical College (PTC). In this role at PTC, he strives to promote interest in careers like Emergency Medical Technician (EMT) and Paramedic. As a volunteer firefighter with the Hickory Tavern Fire Department, he also participates in efforts to recruit new firefighters.

"The majority of firefighters in the United States are volunteers," he explained. "Volunteers are

the backbone of the fire service."

No two days are the same when a first responder is on duty. Despite the dispatcher's best efforts, the first responder often has little idea what they are walking into. It can be scary at times. "Even after all these years, it is the same," Hudson said. "I still get that adrenalin."

Because they witness terrifying injuries, traumatic events, and sometimes the darker elements of humanity, all first responders need to take care of their mental health.

"I don't have all the answers and sometimes feel like I am flying by the seat of my pants. But I know it's OK to not be OK," Hudson said. "If you are lucky enough to survive a bad



day, you understand that you will have another one. Find something that you enjoy doing. I like spending time in the woods, camping, fishing, or hunting. Spending time with my family is huge to me."

Hudson and his wife, Tracie, have two daughters — Carlie, 17, and Abbie, 20. Involvement with the Hickory Tavern Fire Department is definitely a family affair. Tracie's father was one of the first fire chiefs in the department, and her mother, with the department since 1978, still drives a fire truck at age 70.

"Sometimes it's not the Band-Aids and medications that a person needs. Sometimes it's just that shoulder to cry on that makes a difference," he said. "It's really amazing at the end of the day to go home and look in the mirror and say, 'I made a difference in somebody's life today.'"

For information about PTC's EMT and Paramedic programs, visit www.ptc.edu/emt.

### PROFILE

### Briana Carruth Determination Grounds Criminal Justice Student

Briana Carruth knows the despair and frustration of one who has experienced devastating trauma. She knows what it's like to need a champion. When she was 16, that champion turned out to be a professional victim's advocate. Five years later, Carruth is not only a trauma survivor but a criminal justice major at Piedmont Technical College whose goal is to be a victim's advocate for others who are vulnerable, stressed, or frightened due to trauma.

"When I found myself in need of a victim's advocate, it was a real eye-

opener into the field," she said. "Victim advocacy is what I want to do when I get my degree."

Carruth is especially interested in working with survivors of domestic violence. "I just know I want to be helping somebody and giving somebody a voice," she said.

As she neared graduation, in February 2021, Carruth received an unexpected and sobering diagnosis — cancer. "My cancer started in my foot, and they had to amputate my leg below the knee," Carruth explained. However, a post-surgical scan showed cancer in her lungs, so she has been receiving chemotherapy for that as well. "Being on chemo pushed my semester back."

Despite the diagnosis and treatment, Carruth refuses to quit. It's just not in her nature. The young woman is a fighter, and some day, when she is cancer-free, she is determined to fight for crime victims. Carruth says she has always had a strong ability to focus, and she remains optimistic while enjoying a great support system of friends and family around her. "I have set so many goals for myself since I was very young," she said. "I try to keep a good attitude and surround myself with positive people. The thing that has gotten me through is the goals I have set for myself. I haven't wanted to give up."

What lies ahead is unknown. Followup scans may shape Carruth's path, but determination will help her blaze trails.

"This year has been rough. I didn't get to take a full load," she said. "But school has kept my mind busy throughout."

# **PIEDMONT TECH** CYBERSECURITY CERTIFICATE **OFFERS ESSENTIAL** SKILLSET

It starts innocently enough. An employee receives an email that appears to be from a company superior attending a professional conference, asking them to click a link and upload an important presentation to the conference website. It feels urgent. The boss is in a bind. The employee clicks on the link, inadvertently installing vicious malware to the company's network.

Piedmont Technical College's (PTC) cybersecurity curriculum is teaching

the future computer technology workforce to combat these types of attacks and more.

"Even though we were talking about cybersecurity issues, even though they'd been taught not to reveal things like Social Security Numbers, a lot

of new students in a class exercise, when asked to provide their last name and the last four digits of their SSN, actually did it," said Coronicca Oliver, program director for computer technology at PTC. "It's called 'social engineering,' and it's such a big thing.

Manipulating our human tendency to trust, cybercriminals use all manner of social engineering tactics to gain access to information systems and wreak havoc. There were an estimated 65,000 ransomware attacks last year in the United States. In addition to the immediate financial cost of such breaches, there are pass-along costs that include loss of productivity, legal action, a damaged reputation, and the costs of new security resources.

PTC began offering the Cybersecurity Certificate in 2017.

"Cybersecurity today is a major concern of any industry," Oliver said. "In the past, there was a lack of

more people were online, and they got hacked. Zoom had to add security features because of that. Sometimes people don't think about it until something happens."

> Historical perspective provides insights to system weaknesses today.

"Many years ago, security was linked with physical access. If you could physically get your hands on a computer or networking device, you would have free reign to do anything," PTC Computer Technology Instructor Henry Ecker

security measures. No one thought

about it. Then Covid happened, and

explained. "If you could restrict access to the hardware, you were protected. Things changed when computers got more networked and data became more portable."

Another factor beyond rapidly increasing data portability was the size of the networks.

"When the internet started, there was a set number of devices," Ecker continued. "You knew everybody on the network because it was very, very small. That is not the case now with billions of devices.

Henry

So they introduced usernames and passwords to better control access."

For social engineering to work, perpetrators gradually establish trust, targeting the most vulnerable users, many of whom are those who did not grow up with the internet.

"On the corporate side, you have the people who are not versed in technology. A lot of people who fall victim are from an era when, if you couldn't get in the room or access the physical equipment, then you were OK. It's an attack on knowledge," he said. "It's very much akin to spying. The perpetrator is gaining trust, establishing a relationship, and when they ask for something, it doesn't raise

alarm bells."

Ecker noted that knowledge and training combat security breaches pretty well.

Oliver says students who receive their Cybersecurity Certificate often can find immediate employment, and many continue their education, sometimes pursuing an associate in computer technology. Examples of entry-level positions include help desk technician, junior network administrator, and IT support technician. PTC also offers an associate in applied science degree with cybersecurity concentration.



The profile of cybersecurity training has expanded significantly in recent years, yet some companies actually choose to be less secure simply to make life easier. Ecker says companies actually do cost analyses to justify less-intrusive policies.

"The more secure something is, the more annoying it is to use," he said. "Sometimes we risk security in favor of increased accessibility and convenience." Nonetheless, cybersecurity professionals are more necessary than ever in order to keep up with new strategies by bad actors and maintain a balanced infrastructure for information security.

For more information about **PTC's Computer Technology** Program, including the Cybersecurity Certificate, please visit www.ptc.edu/computer.

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# CATHETERIZATION SIMULATOR AIDING PIEDMONT TECH CVT STUDENTS

The students have named him "Keanu," which seems somehow appropriate for the brandnew catherization simulator that has been used to train its first cohort this spring semester at Piedmont Technical College (PTC). Contained in the body of a high-tech mannequin, the simulator enables students to conduct procedures as closely as can be approximated to the real clinical setting as possible.

"I like for each class to name the mannequin," Cardiovascular Technology (CVT) Invasive Program Instructor Lena Scott said. "This semester, it was 'Keanu.' We also have another, ordinary lab mannequin, an older lady we call 'Geri.'"

Scott says when "treating Keanu," students see images of the procedure in progress — such as a coronary intravascular ultrasound or the implantation of a stent — on a computer screen.

"Each student has their own profile on the simulator," Scott explained, "and I can track what they are doing. They log in and complete cases each day when they are here."

"The simulator is great. It gives you an idea of what to expect," PTC student Jacob Childress said. "It also gives you the foundation of what to expect for the angiograms. It will show different angulations and what to expect when it is done in the Cath Lab. ... This has been a great help identifying lesions during procedures at the hospital."

As a former clinician with many years of experience in practice, Scott says

the simulator is as authentic as it can be.

"I think it's a great simulation of what to expect when you actually get in the clinical setting," she said. "I think to have the patient in front of you is the biggest factor in that."

Scott says her students love the simulator and would much rather be working on the simulator than sitting in a lecture.

"They are grateful for the opportunity to do interventions before they go out into the clinical setting," she said. "In addition, the simulator communicates radiation levels. That's important because we can't 'see' radiation. It helps us teach about radiation safety."

"The Cath simulator has been a great tool to learn about the projections, the coronaries under fluoroscopy and the process to expect in the Cath Lab," Childress added.

For more information about PTC's Cardiovascular Technology Program, go to www.ptc.edu/cardio.



Students work with 'Keanu' in the catheterization lab at PTC.



PTC students perform a coronary ultrasound on another lab mannequin.

-Lena Scott

# MUST LOVE GADGETS? ELECTRONIC ENGINEERING TECH PROGRAM WELCOMES TINKERERS WHO ARE GOOD WITH COMPUTERS

# A good electronic engineering technician can smell trouble. Literally.

"Electronic Engineering Technology (EET) is one of the few educational areas that has a specific smell. When you wire something wrong, it smells funny," said Jason White, EET instructor at Piedmont Technical College (PTC). "They can see it, face

it, smell it. That is part of what makes a good EET."

Other qualities of a good EET include natural curiosity, critical-thinking and problemsolving ability, strong IT skills, and an interest in

technology. White noted that there is a common belief that one must be extremely strong at math to work in the field, which doesn't hurt. Clearly, math skills are important, but the typical EET need not be a math savant.

"Good EETs are people who like gadgets and are good with computers," White said. "You need to consistently want to take things apart and find out how they work. We need people who want to know what's happening inside the little black box."



With electronic and computer circuits now being used in everything from factory and office equipment to cars and household appliances, EETs can work in a wide variety of businesses and industries. They are skilled in operating, troubleshooting, calibrating and repairing

electronic instruments and systems. Employment in the field is projected to grow by 3% through 2029, and talented EET professionals can earn upwards of \$60,000 annually or more.

After completing the program, EET graduates may be qualified for positions such as engineering technician,

maintenance technician, electrician, electrical tester, product designer and cable technician. Advancement is possible with experience and continuing education.

"The bulk of our graduates will wind up working in the industrial sector, in manufacturing, helping design and maintain mechatronic and electrical/ mechanical systems and things of that nature," White said. "An EET may be editing programmable logic controllers (PLCs) or designing new systems for the manufacturing process."





In a partnership launched in spring 2018, ABB (a global supplier of industrial robots), selected PTC as a U.S. training site for its equipment and provided a series of robots to multiple campuses. The arrangement affords students valuable hands-on experience working with ABB robots in the lab setting.

"We have six ABB industrial robots that are the same as those used at BMW Manufacturing. That sets us apart," White said. "Our students have the ability to work with some very expensive industrial equipment."

One student who appreciates that access is student Joseph Pinkard of Abbeville. He participated in a summer internship at Greenwood CPW, which has offered him a parttime position with an eye toward permanent employment.

"What I have enjoyed the most at PTC is the programming side and robotics," he said. "That has been so much fun!"

With a strong background in information technology going into the program, Pinkard already understood computer programs and how software works. "Nothing works without power," he noted. "That is why I got interested in the EET Program, especially the electronic part." "What I have enjoyed the most at PTC is the programming side and robotics. That has been so much fun!"

-Joseph Pinkard

Pinkard offered high praise for instructors White and Maulik Patel, citing their ability to relate complex concepts in ways that he could understand.

"Jason and Maulik are fantastic. They are really doing a good job," he said. "I had never done anything in electronic engineering before. It was like rocket science to me. I was coming in blind. They have done a great job explaining things. And, of course, at PTC you get the hands-on experiences. It's really helpful."

For those who want to earn a bachelor's degree in electrical engineering or mechanical engineering, PTC has signed articulation agreements with SC State University and University of South Carolina Upstate that facilitate work toward that goal.

"Our students can actually earn their bachelor's degree right here on our campus," White said. "That's pretty big."

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# PIEDMONT TECH SEES SURGE IN DUAL ENROLLMENT STUDENTS

Piedmont Technical College (PTC) this fall has seen a surge in high school students looking to get a head start on their career pathways. In total, PTC has nearly 900 dual-enrolled students in classes across its seven-county service area. Through dual enrollment, students in high school take college courses and learn about careers as well as transfer opportunities to four-year institutions.



Machine Tool Technology Instructor Phillip Calhoun can barely contain his excitement about the dual enrollment students in his class this fall at the PTC Center for Advanced Manufacturing in Laurens. The high schoolers from Clinton and Laurens completed writing computer code for a program within their first week in class.



"I am ecstatic about the potential in this room," Calhoun said. "They are probably the best dual enrollment group I have had in a long while."

As Calhoun poses review questions to the students during the morning classroom portion of their day, the students respond readily with answers. The more they answer correctly, he smiles and says, "Alright, you're all cooking now."

Calhoun's class is what he calls a "blended" class in which dual enrollment students and traditional college students take





Calhoun's class is what he calls a "blended" class in which dual enrollment students and traditional college students take classes together.

classes together. At a dry-erase board, Calhoun goes over formula computations that will guide the program.

"Make sure you do your math correctly," he tells the students. "The math in machine tool is not hard. It's basic, simple math."

The Machine Tool Technology Program at PTC offers degrees and certificates qualifying program graduates for a multitude of jobs in advanced manufacturing. Students learn how to work with blueprints and computer-aided design files, how to align and adjust cutting tools, how to test finished work for quality and precision, and how to develop programs to control machining of metal or plastic parts.

Dual enrollment student Colby Bridges of Laurens High School chose machine tool because his brother works in a job that requires machine tool skills.

"He makes pretty good money," Bridges said, "and I have always liked working on mechanical things."

When asked if he was at all intimidated by the college course or found it particularly difficult, Bridges shook his head. "It's just practice. It's just repetition," he said. "And Mr. Calhoun, he's pretty fun."



The Machine Tool Technology Program at PTC offers degrees and certificates qualifying program graduates for a multitude of jobs in advanced manufacturing.

Bridges' classmate at Laurens High School, Brandon Matthews, agreed.

"I think this should be a good career path for me," he said, "and I enjoy it."

Calhoun continues to be impressed by the abilities of his dual enrollment students. "By the time we get to mid-terms, they will be able to pretty much run their own jobs," he said.

For more information about dual enrollment at PTC, visit www.ptc. edu/dual. For more information about the Machine Tool Technology Program at PTC, visit www.ptc.edu/machinetool.

# WHERE DO YOU WANT TO GO?



For many people, deciding on a career can feel like taking a journey without either a map or a destination. Eventually, with some advice and direction, a little exploration and maybe a dead end or two, you begin to get a sense of where you'd like to go and how to get there. Whether you're just starting out or picking up a new career mid-life, Piedmont Tech offers courses and services to help you find your path and get to your goal.

Good advice and good resources are the best road maps. PTC's Counseling, Career Planning and Employment Services can help you explore your options and get started on a plan of action. Academic advisors, too, can help you choose the right classes for your goal.

PTC's 80+ certificate, diploma and degree programs are some of the best vehicles around for taking you to your career destinations. In a year or less a certificate can get you into a job, in two years an associate degree can move you a little farther along your career path, and transferring to a four-year college will take you even farther.

Map out your options by taking a look at the PTC A-Z listing below. And when you're ready to start planning your career, visit www.ptc.edu to find out how to enroll in classes. Call the Admissions Office at (855) 446-3864 for answers to your questions.



#### UNIVERSITY TRANSFER PROGRAMS

If you're headed toward a bachelor's degree, we can help you get there. Piedmont Tech offers more than 80 courses that transfer to any public university or college in South Carolina, and hundreds of PTC students transfer credits earned at Piedmont Tech to universities throughout the state each year.

#### **Associate in Arts**

The Associate in Arts program prepares students for four-year baccalaureate majors in fields such as business, accounting, management, English, journalism, social work, education, music, psychology, history, pre-law, humanities, fine arts and social sciences.

#### **Associate in Science**

The Associate in Science degree stresses mathematics, as well as natural and physical sciences, and prepares students for four-year baccalaureate majors in those fields, plus engineering, pre-med, veterinary medicine, chiropractic and education.

#### **University Studies Certificate**

This certificate is designed to allow students to transfer to a senior institution after two semesters and a minimum of of thirty (30) transferable credit hours.

#### **Transfer Partnerships & Career Path Transfers**

PTC has established specific transfer agreements with more than 19 colleges and universities, as well as specific career path transfers in areas such as business, criminal justice, engineering technology, education and many more. Talk to your advisor to decide which path is right for you.

For more information, visit www.ptc.edu/transfer.

PIEDMONT





We all know that agriculture is an important part of South Carolina's heritage. But did you know that agriculture-based businesses play a critical and expanding role in the growth of the state's economy? In fact, agribusiness is one of the largest economic clusters in the state and a critically important part of the knowledge based economy.

#### **Diversified Agriculture**

Provides students with advanced technical knowledge in sustainable agriculture, field crop production, pest management, soil and water management, hydraulics and pneumatics, agriculture economics and marketing related to the agricultural industry.

A.A.S., Major in Diversified Agriculture Basic Diversified Agriculture Certificate

#### Horticulture Technology

Students are prepared for supervisory, middle management and technical positions in horticulture, including landscape design, implementation and maintenance.

A.A.S., Major in Horticulture Technology Turfgrass Management Certificate Landscape Management Certificate Landscape Design and Installation Certificate Greenhouse Management Certificate South Carolina Mean Salaries Agricultural Inspector - \$45,490 Agricultural Technician - \$31,950 Nursery Operator - \$25,440



#### If you're a good communicator who enjoys solving problems, a career in business might be right for you. Computers have also become an indispensible part of everyday life. Majoring in Computer Technology at Piedmont Tech will give you the knowledge and skills you'll need to get started in Information

Administrative Office Technology

Technology and computer science.

Actual work experience and instruction in keyboarding, word processing, spreadsheet applications, transcription, office procedures, communication, accounting and more give graduates the ability to work independently and handle the details of office administration.

A.A.S., Major in Administrative Office Technology Office Technician Certificate

#### **Business Administration**

Probably no other occupational area encompasses a more diverse range of activities than the business field.

A.A.S., Major in Business Administration Accounting Certificate Entrepreneurship Certificate **South Carolina Mean Salaries** Tax Preparer - \$43,080 Medical Transcriptionist - \$35,180

**BUSINESS & INFORMATION TECHNOLOGIES** 







#### **BUSINESS & INFORMATION TECHNOLOGIES**

#### **Commercial Art**

If you have an artistic streak and you enjoy solving problems by thinking creatively and interacting with computers, you should consider a major in Commercial Art. A.A.S., Major in General Technology – Commercial Art

• Concentrations in advertising design, digital rendering and photography Advertising Design Certificate

**Digital Rendering and Gaming Development Certificate Photography Certificate** 

#### **Computer Technology**

Students study computer maintenance, local-and wide-area networks and popular programming languages. Graduates are truly prepared to take their place in the Information Age.

A.A.S., Major in Computer Technology **PC Technician Certificate** 

**Cybersecurity Certificate** 

**Certified IT Professional Certificate** 



#### **QUICKSKILLS ADVANCED TRAINING OPTION**

In today's Advanced Manufacturing operations, qualified employees are essential to a successful production operation. The Quickskills training programs listed below allow people to learn in a relatively short time frame the necessary entry level skills to help them start work with more than a basic understanding.

#### Machine Tool CNC Precision Operator

Students will learn and perfect introductory skills in the programming and daily maintenance of CNC machines. Various types of automated equipment, such as Coordinate Measuring Machines are utilized so that students gain practical experience that will help them obtain gainful employment in industry.

#### Manufacturing Production Technician

The curriculum includes mathematical and statistical techniques and applications, industrial safety and operational principles, production process cycle including resource availability, product specifications and state-of-the-art manufacturing practices, including Lean Manufacturing tools and techniques.

#### **Precision Metrology Certificate**

The Precision Metrology certificate is designed to upgrade or refresh skills for people familiar with measuring systems required in Advanced Manufacturing industries. Working with tolerances on the order of millionths of an inch, Quality Control Inspectors require the knowledge to operate highly sophisticated inspection equipment such as optical comparators, profilometers and CMM (Coordinate Measuring Machine) systems.





If you're fascinated by technology and enjoy a hands-on approach to problem solving, Engineering Technology may be the right career path for you.

#### **Electronic Engineering Technology**

The graduate is skilled in the operation, troubleshooting, calibration and repair of electronic instruments and systems found in process control, communications, computers, manufacturing, programmable logic controllers and microprocessors.

#### South Carolina Mean Salaries

**Electrical and Electronics** Drafter - \$62,130 **Electronic Engineering** Technician - \$65,520 Mechanical Engineering Technician - \$58,000

#### A.A.S., Major in Electronic Engineering Technology

#### **Engineering Design Technology**

All phases of manufacturing or construction require the conversion of new ideas and design concepts into the basic line language of graphics. A.A.S., Major in Engineering Design Technology

#### Mechanical Engineering Technology

The Mechanical Engineering Technology curriculum equips the graduate for: performing a key role in the mechanical design process; installing, troubleshooting and repairing mechanical and electro-mechanical equipment; programming CNC machine tools, computers, programmable controllers and robots; and performing general maintenance functions.





#### **ENGINEERING TECHNOLOGY**

#### **Engineering Bachelor's Degree Options**

Agreements have been developed to provide options for transfer into three bachelor's degree programs: The USC Electrical Engineering or Mechanical Engineering programs; SCSU's bachelor of science in Electrical Engineering Technology (BSEET) degree or the bachelor of science in Mechanical Engineering Technology (BSMET) degree programs; and USC Upstate's Engineering Technology Management B.S. program.



#### **INDUSTRIAL TECHNOLOGY**

Students enrolled in any of the Industrial Technology curricula will gain practical experience and technical knowledge. Well-equipped labs, broad-based programs and hands-on opportunities make the difference in their futures.

#### Automotive Technology

Students are trained to perform quality maintenance, diagnosis and repair of complex modern vehicles. A.A.S., Major in Automotive Technology **Automotive Fundamentals Certificate** 

#### **Building Construction Technology**

Students gain practical training in estimating building costs, carpentry, cabinet making, residential wiring, blueprint reading, brick masonry, construction, building codes and safety. A.A.S., Major in Building Construction Technology Carpentry Certificate

#### Gunsmithing

A.A.S., Major in General Technology -Gunsmithing **Advanced Gunsmithing Certificate** Introduction to Gunsmithing Certificate

#### Heating, Ventilation and Air Conditioning Technology

Students in this program are educated in the installation, maintenance and repair of air conditioning, refrigeration and heating systems. A.A.S., Major in Heating, Ventilation & Air Conditioning Technology Heating Fundamentals Certificate **Refrigeration Applications Certificate** 

**HVACR Installers Certificate** 

#### **Machine Tool Technology**

Students in this program get training and practical experience in machining operations used in the manufacturing industry. The graduate is skilled in the use of precision equipment and can make intricate parts A.A.S., Major in Machine Tool Technology D.A.S., Major in Machine Tool **Computerized Numerical Control Certificate** 

Machine Tool Operator Certificate

#### **Mechatronics Technology**

Combining electronic, mechanical, robotics and information system technologies, this program provides the graduate with the skill set needed for today's automated manufacturing facilities. A.A.S., Major in Mechatronics Technology Mechatronics Technology I Certificate

**Electrical Maintenance Technician Certificate** 

#### Welding

Students learn to join metal by use of gas-fueled torches and electric arc processes. A.A.S., Major in General Technology - Welding D.A.S., Major in Welding **Basic Welding Certificate** 

#### Automotive Technician - \$41,480 Carpenter - \$46,780 HVAC Technician - \$45,160 Electronics Technician - \$61,900 **CNC** Machine Tool

South Carolina Mean Salaries

Operator - \$44,010 Welder - \$43,260





### HEALTH CARE

With the complexity and diversity of today's health care system, varieties of health care professionals are needed. To function effectively by providing safe, knowledgeable patient care, the health care professional needs a thorough understanding of basic sciences and individual curriculum theory.

#### **Cardiovascular Technology**

The Cardiovascular Technologist performs diagnostic tests which are used in the diagnosis, treatment, and serial follow-up of patients with cardiovascular disease.

A.A.S., Major in Cardiovascular Technology

#### **Emergency Medical Technician**

The Emergency Medical Technician (EMT) is a vital link in the health care chain. Emergency Medical Technicians (EMT) are employed in areas such as emergency ambulances, private non-emergent transport services, clinics, and other allied health care settings. Emergency Medical Technician Certificate Paramedic Certificate

#### . . . . . . .

Medical Assisting

The Medical Assisting program prepares a multi-skilled graduate to function in clinical and administrative areas of the physician's office and ambulatory care centers. D.A.S., Major in Medical Assisting

#### Nursing

The Nursing program will assist students in developing the intellectual, technical and professional competencies necessary to practice. Upon successful completion of the NCLEX licensure exam by the State Board of Nursing for South Carolina, graduates can seek employment as licensed registered nurses or licensed practical nurses, depending on their program of study.

A.A.S., Major in Nursing D.A.S., Major in Practical Nursing LPN to ADN Nursing Transition Option

#### **Occupational Therapy Assistant**

As only one of three two-year programs of its kind in South Carolina, Piedmont Technical College's Occupational Therapy Assistant program is a great option for students seeking this in-demand training in the Upstate and Midlands. A.A.S., Major in Occupational Therapy Assistant

#### Patient Care Technician

Because health care is changing at an unprecedented pace, new or varied approaches to patient care are emerging. One such approach is the use of multi-skilled individuals known as Patient Care Technicians who are a part of the health care team. **Patient Care Technician Certificate** 

#### **Pharmacy Technician**

Graduates of the pharmacy technician diploma are health care professionals who assist the pharmacist in a hospital or clinical setting to provide quality health care related to medication administration in an institutional setting. D.A.S., Major in Pharmacy Technician

#### **Radiologic Technology**

The Radiologic Technology curriculum is designed to assist students in acquiring the general and technical competencies necessary to enter the radiography field. A.A.S., Major in Radiologic Technology

#### **Respiratory Care**

The respiratory care practitioner is trained to assist the medical staff with the treatment, management and care of patients with cardiopulmonary abnormalities or deficiencies. A.A.S., Major in Respiratory Care

#### Surgical Technology

Surgical technologists are members of the operating team who work closely with surgeons, anesthesiologists, RNs and other personnel to deliver patient care before, during and after surgery. D.A.S., Major in Surgical Technology

#### **Veterinary Technology**

The veterinary technician works under the supervision of a licensed veterinarian. The specialized training received will allow the graduate to seek employment in such areas as clinical medicine, laboratory animal medicine, emergency medicine, pharmaceutical sales, food inspection and government agencies. A.A.S., Major in Veterinary Technology

South Carolina Mean Salaries

Cardiovascular Technologist - \$58,880

Licensed Practical Nurse (LPN) - \$42,190

Pharmacy Technician - \$32,660 Radiologic Technologist - \$54,840 Respiratory Therapist - \$56,740 Registered Nurse (RN) - \$64,840 Veterinary Technologist - \$33,410 

### PUBLIC SERVICE

South Carolina Mean Salaries

Administrator - \$44,780

Preschool Teacher -\$28,380

Funeral Home Managers -\$70,610

Human Services Assistant - \$31,700

Police Officer - \$43,520

Preschool or Daycare

Students interested in a career in Public Service may choose majors in Criminal Justice or Early Care and Education.

#### **Criminal Justice**

This program is designed to prepare professionallyeducated and competent criminal justice practitioners for careers within the criminal justice system. A.A.S., Major in Criminal Justice

Police Pre-Academy Training Certificate

#### Early Care and Education

The Early Care and Education program offers a combination of classroom instruction and supervised, hands-on experience that prepares students for direct entry into the field of Early Care and Education.

A.A.S., Major in Early Care and Education

A.A.S., Major in Early Care and Education, Infant/Toddler Care Concentration

Early Childhood Development Certificate

#### **Funeral Service**

This program provides the educational foundation needed to seek South Carolina licensure both as an embalmer and as a funeral director. A.A.S., Major in Funeral Service Funeral Director's Certificate Embalmer's Certificate

#### **Human Services**

The program prepares students to work in diverse settings such as group homes; correctional, special needs and mental health settings; family, child and youth service agencies; and programs concerned with alcoholism, drug abuse, family violence and aging. A.A.S., Major in Human Services



#### **GENERAL TECHNOLOGY**

The major in General Technology is designed to provide students with an opportunity to upgrade diploma or certificate programs into broader occupational degrees. The program is designed to be substantially individualized to meet the needs of employees who have or seek to have broad technical responsibilities. Total credit hours for this degree must equal 60 or more. Students in the following program areas, with general education courses, may earn an associate in applied science with a general major in general technology: Welding, Gunsmithing, Commercial Art, and Health Care.

#### A.A.S. = Associate in Applied Science

D.A.S. = Diploma in Applied Science Source: May 2019, Occupational Outlook Handbook, https://www.bls.gov/oes/current/oes\_sc.htm#21-0000



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