

# ForsythTech

FALL 2017 *magazine* <sup>FT</sup>



# FUTURE READY

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a Stronger  
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## FromThePresident



*Dr. Gary M. Green*

Progressive manufacturing technology education was one of the essential foundations of Forsyth Technical Community College at its inception in 1960. It remains true today as we are in the era of advanced or digital manufacturing—manufacturing driven by science and technology—which will continue to progress or evolve to meet the standards for the industry.

That is one of the reasons why we are proud to share the new Center for Advanced Manufacturing at Forsyth Tech, which opened this fall. With manufacturing technologies now under one roof, we have a greater capacity to educate students in the variety of programs they will need to move into the highly-skilled workforce needed for the future of manufacturing.

Recently, we had the opportunity to host Gov. Roy Cooper for a tour of the Center for Advanced Manufacturing at Forsyth Tech, and he held a roundtable with staff and administration. He listened to our challenges in providing quality educational programs and increasing enrollment, while competing for state funds to make vital improvements in technology and the curriculum.

His visit provided us the time to showcase the variety of educational opportunities we offer in advanced manufacturing, to share how the Center was established and convey how it will positively impact our community for students and employers. In the past few weeks, I have also met with Speaker of the N.C. House of Representatives, Tim Moore, and President Pro Tem of the N.C. Senate, Phil Berger, to discuss the need for additional state support in our community colleges and our effort at Forsyth Tech to build advanced training in a variety of sectors from advanced manufacturing, to clinical health, to cybersecurity.

We appreciate the fact that the governor and other state leaders recognize that community college education is one of the primary measures to grow the state's economy and a thriving workforce.

Our feature story describes the evolution of the Center for Advanced Manufacturing, and how the ever-changing landscape of technology in every aspect of our lives will necessitate the growing need for greater advancements in education and technology.

We are on the cutting edge of many future innovations, and it is exciting to imagine that students from Forsyth Tech may go on to careers in the latest science, technology or medical fields.

*Gov. Roy Cooper tours the Center for Advanced Manufacturing and observes an automated welding demonstration by students Sam McCart (left) and Christian Kepner (right).*



## In Memoriam

### **Dewitt E. Rhoades; July 10, 1929—May 8, 2017**

Mr. Rhoades was one of Forsyth Tech's most dedicated supporters. Appointed to the Forsyth Tech Board of Trustees by Governor James Holshouser in 1976, he actively served on the board 38 years and became the longest serving Trustee in the school's history. In 2015, in recognition of his long-time service to the College, the Conference Center located in the Oak Grove Center on the Main Campus of Forsyth Tech was dedicated and officially named the Dewitt E. Rhoades Conference Center. Mr. Rhoades was awarded the Order of the Long Leaf Pine from the State of North Carolina for his lifetime service to the state and community. We extend our deepest sympathies to his family.

### **Gordon Pfefferkorn; April 13, 1921—May 27, 2017**

Mr. Pfefferkorn made education a reality for dozens of Forsyth Tech students, and even after his passing, continues to create opportunities for generations to come. He established The L. Gordon, Jr. and June D. Pfefferkorn Scholarship through the Winston-Salem Foundation for students attending or enrolling at Forsyth Tech. Following an initial grant for scholarships for two students, the Pfefferkorns extended their generosity in 2014 by providing nine full two-year scholarships to Forsyth Tech students. Mr. Pfefferkorn was the president of the Pfefferkorn Company, a community-oriented mortgage banking firm. We extend our deepest sympathies to his family.



*Todd Bishop, dean of Engineering Technologies (left) describes some of the additive manufacturing process to Dan Besse, Winston Salem City Council member, Southwest Ward.*

Forsyth Tech is proud to be part of the North Carolina Community College System, with 58 institutions serving more than 800,000 students annually. North Carolina Community Colleges are creating success in our state by:

- > Offering hope for a better future through vocational training and education
- > Providing opportunity by making higher education available to all citizens
- > Generating jobs by creating a skilled workforce for business and industry

Forsyth Tech welcomes diversity and is dedicated to meeting the needs of students with disabilities, as mandated by the Americans with Disabilities Act. For more information, please contact Sarah Hawks, Coordinator, Disabilities Services Office, at 336.734.7155 or shawks@forsythtech.edu.

Forsyth Technical Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award associate degrees, diplomas and certificates. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404.679.4500 for questions about the accreditation of Forsyth Technical Community College.

**We're Listening!**  
If you'd like to comment on anything in this issue of *Forsyth Tech Magazine*, you can email us at [FTMagazine@ForsythTech.edu](mailto:FTMagazine@ForsythTech.edu).



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Learn more about our recent graduates



Here's the latest news about our achievements, awards, events and accomplishments!

## Inaugural Recipient Chosen for Mazie S. Woodruff Scholarship

This September, Vernell Springs was chosen as the first recipient of the Mazie S. Woodruff Scholarship. Forsyth Tech announced the establishment of this scholarship at the Mazie S. Woodruff Center's Black History Month Celebration on February 23.

The new scholarship honors the life and legacy of Mazie Spencer Woodruff, the first African American elected to the Forsyth County Board of Commissioners. Woodruff was a devoted public servant and community activist, and was responsible for gaining support to build the Carver School Road Library, where the Mazie S. Woodruff Center, a satellite campus of Forsyth Tech, is also located. She received awards such as the Winston-Salem Chronicle Woman of the Year in 1998, the Sara Lee Service Award in 1990, and Outstanding County Commissioner by the National Association of Black County Officials in 1996.



The scholarship is awarded to a second-year student at the Mazie S. Woodruff Center enrolled in at least one course who maintains a 3.0 GPA. Like Woodruff herself, the scholarship's recipient must exemplify a commitment to academics as well as to his or her community.



The inaugural recipient, Ms. Springs, is a strong student who is committed to volunteering in the Winston-Salem community through the North Carolina Mission of Mercy Free Dental Clinic and Experiment in Self-Reliance, and has received numerous awards for her service such as the Winston-Salem Symphony Volunteer of the Month in 2016 and the Vivian Burke Project We Care Award in 2015. Ms. Springs currently takes four classes at Forsyth Tech in addition to caring for her disabled husband and serving as an intern at Crisis Control Ministries.

The Mazie S. Woodruff Center began with an initial goal of \$2,500 to establish the scholarship. Since February, \$5,000 has been raised. Currently the recipient is awarded \$500 per school year, but the ultimate goal is to secure enough funds to endow the scholarship to ensure its longevity, which at Forsyth Tech requires raising \$25,000. Forsyth Tech, together with the Mazie S. Woodruff Center, believes that the creation of this scholarship will continue to eliminate barriers and increase literacy for minority students in Forsyth County. "I am glad that we decided to establish this scholarship because there are literacy gaps in Forsyth County and our hope and aim is to help close those gaps," said Director of the Mazie S. Woodruff Center TerCraig Edwards.

Gifts towards the Mazie S. Woodruff Center Scholarship can be received online at [foundation.forsythtech.edu](http://foundation.forsythtech.edu).

## Medical Assisting Program Reaches Ultimate Achievement in Student Pass Rate

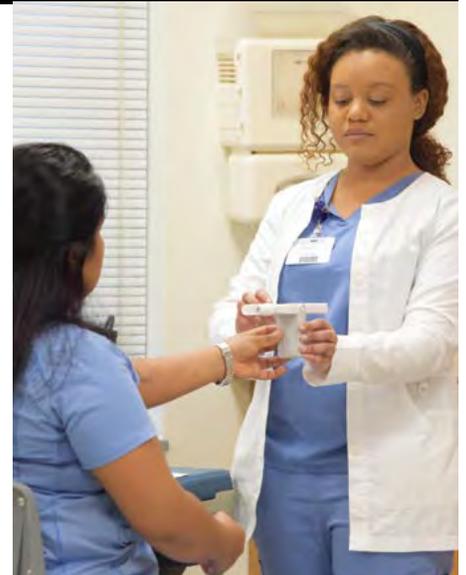
Forsyth Tech's Medical Assisting program is one example of how the college is preparing students to enter the workforce as productive members of the community. This year, all of the program's graduates passed the Certified Medical Assistant examination of the American Association of Medical Assistants (AAMA). In addition to the 100 percent pass rate, program graduates measured at the 93rd percentile, far ahead of the national benchmark of 65 percent.

The nationally competitive Medical Assisting program is continuing to grow and develop, as the student retention rate has increased by three percent in

the last year. Over the past five years, the program has achieved an average job placement rate of 92.45 percent and a graduate satisfaction rate of 100 percent.

Data from the Medical Assisting Education Review Board also shows how Medical Assisting students are graduating from Forsyth Tech with the skills needed to become successful, in-demand employees. Health care employers such as Novant Health, Wake Forest Baptist Health, and private medical offices were surveyed for overall satisfaction in three areas of competence: cognitive, psychomotor, and affective reasoning of Forsyth Tech CMA graduates. For the past five years, employer satisfaction has been at 100 percent.

For students who want to begin a health care career and do not know where to start, the medical assisting program's AAS degree format includes cross-training in medical office administration,



clinical exam prep, and completion of physician orders, combined with clinical laboratory skills. "This multifaceted career path can easily be a gateway to future career advancements and possible stackable credentials," said Medical Assisting Program Coordinator Anna Hilton.

## Competition Garners National Awards for Forsyth Tech Students

Since April, Broadcasting and Production Technology students have been awarded state and national awards from SkillsUSA. SkillsUSA is a national nonprofit partnership of educators, students, and industry representatives committed to serving high school and college students who are preparing for careers in trade, technical, and skilled service occupations. Their mission is to empower its members to become world-class workers, leaders, and responsible American citizens. Each year, the organization holds local contests, state conferences, and a National Leadership Skills Conference—attended by over 16,000 students, educators, and business partners.

At the North Carolina SkillsUSA Leadership and Skills Conference, Forsyth Tech student teams advanced to the national competition after placing first in the Audio/Radio, Broadcast News Production and Television/Video production categories. The conference was held April 26-28 in Greensboro, and had a record 2,656 participants in more than 100 categories.

In June, at the National Leadership Skills Conference in Louisville, Ky., over 6,000 of the best career and technical education students across the nation competed against one another in the SkillsUSA Championships.

Forsyth Tech students Rachel Torres and Annie Fuller received a bronze medal in the Audio/Radio Production category. Chimere



*Front Row (Left to Right): Kimberly Gonzalez, Robert Robinson, Chimere Moody, Rachel Torres, Trevor Tufano; Back Row (Left to Right): Troy Hillian, Annie Fuller, Max Whitehead*

Moody, Kim Gonzalez, Max Whitehead, and Robert Robinson received a silver medal in the Broadcast News Production category. Troy Hillian and Trevor Tufano placed fourth overall in the Television/Video Production category.

Tufano participated at SkillsUSA secondary competitions in high school as well, prior to competing at the post-secondary level with Forsyth Tech. Over the past two years, he has earned not only awards, but lessons he can apply to his career.

"I've learned the importance of cooperation, positivity and confidence," says Tufano. "Working together is not just, 'you perform this task and I'll perform this one,' but instead it's about being able to combine efforts through constructive input, critiquing when necessary and bringing the best of oneself to the competition," he explains.

Forsyth Tech congratulates these students on their fantastic achievements!



## Small Business Launch Challenge Inspires Local Entrepreneurs

Forsyth Tech has good news for recent graduates and area entrepreneurs. Last April, the college joined forces in support of small business with the five other colleges and universities in Winston-Salem—Piedmont International University, Salem College, University of North Carolina School of the Arts, Wake Forest University, and Winston-Salem State University. The coalition was a result of the Entrepreneurial Culture Committee, an initiative organized by the Winston-Salem Alliance. Together, on May 4 at Venture Café, these educational institutions committed their financial support to distinguish how Winston-Salem can become an entrepreneurial haven.



Each institution developed a different program in support of the initiative, and Forsyth Tech's program is the Small Business Launch Challenge. The challenge is designed to operate in two sessions, September through December and January through April. Allan Younger, the director of the Small Business Center at Forsyth Tech, explains that the program "will work with individuals who in four months will hopefully become business owners. Some who launch successfully will have a financial reward."



Applications opened to the whole community in June, and the first session officially kicked off on September 1 with a total of 22 participants. The participants' business ventures range from craft breweries and technology to psychology programs and a mobile salon for seniors. Over the course of the session, participants will attend five Small Business Center educational events and three mentoring sessions per month, to receive educational resources and guidance from other local business owners or professionals. They must provide weekly progress reports, showing the steps they have taken to advance their idea, and on December 18, the remaining participants will make a final presentation about their business plan. Each session, \$50,000 will be awarded—all made possible through the Forsyth Tech Foundation.

Younger believes that this program, "helps the Small Business Center give business entrepreneurs suggestions and resources they need." With the Launch Challenge, "Forsyth Tech has raised money so that we can put it in the hands of the people starting our community's businesses," he explains. He hopes that Forsyth Tech's Launch Challenge Program will help to make Winston-Salem a place where entrepreneurs are able to be successful.

## Dental Hygiene Program Places in List of Top 50 Programs

Forsyth Tech's Dental Hygiene Program recently garnered national attention when it was recognized among TheBestColleges.org's list of Top 50 Dental Hygienist Programs in the United States. The program ranked 38th on the list that included both public, private, four-year, and two-year institutions.

This recognition results from continued achievement in the program. For 11 consecutive years, Forsyth Tech Dental Hygiene program graduates have had a 100 percent pass rate on their Dental Hygienist National Board Examination. Dr. Jannette Whisenhunt, the department chair of Dental Education, credits the dedicated faculty members and the support from Forsyth Tech's administration for the program's long-standing success.

The program admits only 14 students each fall semester, and focuses on providing a learning environment for collaboration, professional and ethical behavior, and lifelong learning. "We have a small number of students, and I believe that allows us to give more attention to each student that other schools are not able to do," Whisenhunt explains.

With the professional outlook for dental hygienists growing much faster than the national average for other professions, and the ranking of the program at Forsyth Tech, now is a great time to consider a career as a hygienist.



## Biotech and Environmental Science Open House Showcases Opportunities



On June 27, Forsyth Tech's Biotechnology and Environmental Science Departments hosted a successful open house to showcase learning opportunities in these exciting and growing industries. Nineteen potential students from a variety of backgrounds visited the college to learn more about how they can make a difference in careers on the cutting edge of science and technological discoveries.

The attendees learned how biotechnology applies to everything we interact with every day, from the foods we eat to how fuel energy affects the environment.

The biotechnology program at Forsyth Tech produces highly-qualified and skilled workers by exposing students

to hands-on learning opportunities through cutting-edge medical research, sophisticated technologies, and networking with local companies. Students are prepared for jobs such as research assistants or technicians, lab assistants or technicians, scientific recruiters, or manufacturing technicians—to name a few. It is also a foundation for those who want to further their education in the bioscience field.

Additionally, the open house showcased the environmental science technology program, which aims to prepare a skilled workforce capable of identifying, assessing, and promoting solutions for a healthy and sustainable environment. Environmental technology is a career field that applies the principles of math, science, technology, engineering, communications, economics, and law to ensure product and worker health and safety. Forsyth Tech has designed this program's curriculum to prepare individuals for employment in environmental testing or consulting and related industries, such as air quality, emergency preparedness and response, environmental laboratory services and natural resource management. The major emphasis is placed on biological and chemical evaluation of man's impact on his environment.

## Board of Trustees Welcomes Dr. James D. Branch and Mr. Ronnie Mendenhall



### Dr. James D. Branch

An ophthalmologist, philanthropist, mentor, husband, father and author, Dr. James D. Branch is now a member of Forsyth Tech's Board of Trustees.

A native of East Orange, N.J., Dr. Branch graduated from Franklin College and earned his medical degree from Howard University College of Medicine. Moving to Winston-Salem in 1977, he has

practiced ophthalmology and has been tirelessly serving the community that he and his family call home.

Dr. Branch has been committed to delivering the best vision care possible to generations of families in the Winston-Salem, Mocksville and Mount Airy communities.

The owner of James D. Branch, M.D., Eyewear Unlimited, and Piedmont Ophthalmic Studies, he is one of the few physicians to remain in private practice.

When he is not practicing, he shares his knowledge and experience by serving on numerous Boards of Directors and Holding Company Boards in the Winston-Salem, Forsyth County area. He also enjoys mentoring students and those interested in medicine, finance or starting their own business.



### Mr. Ronnie Mendenhall

A native of Stokes County, Mr. Ronnie Mendenhall is a graduate of the University of North Carolina Chapel Hill. He earned two master's degrees from North Carolina Agricultural & Technical State University, one in Educational Psychology and Guidance and another in Educational Administration and Leadership.

For 36 years Mr. Mendenhall served in numerous roles in the Stokes County School System including teacher, counselor, coach, assistant principal and principal. He was named Stokes County Principal of the Year in 2003 and was selected to serve on the North Carolina High School Athletic Association Board of Directors.

Following his roles in the school system, Mr. Mendenhall served as Stokes County School Superintendent.

Upon his retirement in 2016, he was elected to the Stokes County Board of Commissioners. He currently serves on a variety of Boards of Directors and now has joined the Forsyth Tech Board of Trustees.

He and his wife, Lindy, live in Germanton and enjoy traveling in their free time.



### Dedicated to Service

With sincere gratitude, Forsyth Technical Community College would like to thank Mr. Edwin L. Welch, Jr., president of I.L. Long Construction, for 14 years of combined service to the Foundation Board of Directors and the Board of Trustees.

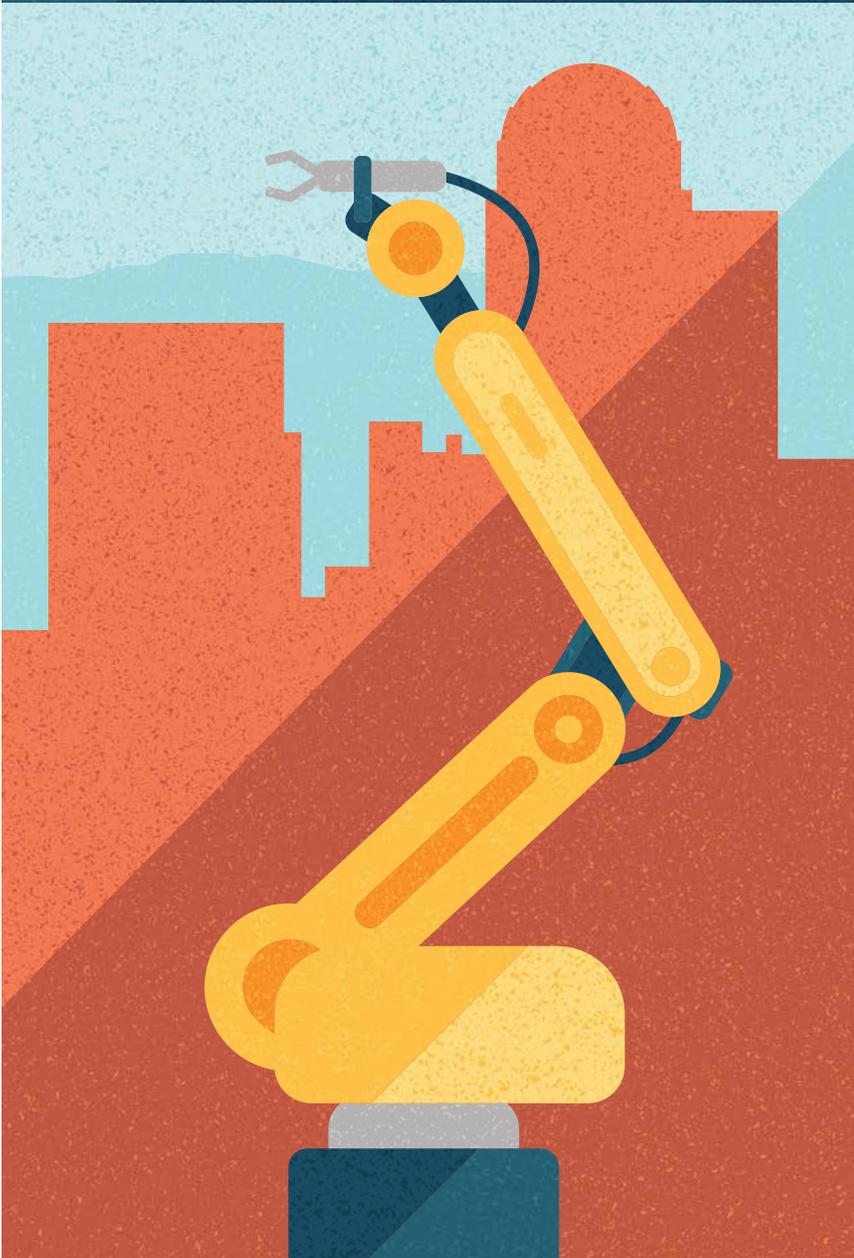
Mr. Welch first joined the Foundation Board in 2003 for a three-year term.

In 2004, he was the chair of the Resource Development Committee. In 2005, Mr. Welch was co-chair of Forsyth Tech's first capital campaign, the Momentum campaign, and helped raise over \$13 million for the college. That year, he also joined the Board of Trustees.

In 2006, he served the Foundation Board for another three-year term. After his Foundation Board term was completed, Mr. Welch became the Board of Trustees representative on the Foundation Board in the 2009-2010 term. He was also instrumental in launching the Early College at Forsyth Tech. Mr. Welch served as vice chair of the Board of Trustees from August 2007–August 2012, and from August 2012–August 2015, he served as chair of the Board of Trustees. Most recently he served as co-chair of the Pathways to Possibilities Capital Campaign which began in 2015.

"Mr. Welch has a remarkable history of selfless and tireless service to many organizations in our community," said Alan Proctor, chair of the Board of Trustees. "Forsyth Tech has also been blessed by his vision and phenomenal leadership. From the Capital Campaigns to the Board of Trustees, Ed Welch has made a lasting positive difference in our campus, staff, faculty and most importantly, our students."

For more than 50 years, Forsyth Tech has been a leader in manufacturing technologies and technical education. Today's manufacturing careers require high-level technical education combined with hands-on experience using the most current technology. The Center for Advanced Manufacturing at Forsyth Tech prepares students for the competitive global workforce through expert instruction, using industry grade equipment, and the latest technology found in today's high-tech precision and manufacturing environments.



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# MANUFACTURING A STRONGER

New Technologies Shape the Future

In this issue, we feature Advanced Manufacturing 4.0, as we have something new to celebrate, the opening of the Center for Advanced Manufacturing at Forsyth Technical Community College.

A vision that was nearly a decade in the making came to fruition this fall for Forsyth Tech faculty, students and local employers when the doors opened to the Center for Advanced Manufacturing at Forsyth Technical Community College.

Following years of progressive training in many of the latest technologies and processes, Forsyth Tech now has a dedicated center which will act as a hub for all manufacturing education.

When you step into the labs in the Center for Advanced Manufacturing, it is like you are stepping into a modern, state-of-the-art, highly advanced manufacturing facility.

The rooms are bright and clean, with software, controls, and machines up to industry standards – what students will see in companies such as Progress Rail, a Caterpillar company. Here, students can learn everything from the foundational skills of critical thinking, engineering processes, and design theories to automated welding and computer numerical control (CNC) machining. Led by engineers and technicians and through a convergence of connectivity, automation, and the Internet of Things (IOT), machines with sensors can now communicate with computer software to manufacture products.

# BRING COMMUNITY



“From the capabilities  
of our machines alone,  
we are far ahead.”

*David Dinkins, program coordinator of  
Mechanical Engineering Technology*

Students work on machines that are calibrated so precisely, they produce and measure up to five decimal places. This level of accuracy is now the standard in manufacturing industry careers jobs. In the labs at Forsyth Tech, students work in a collaborative atmosphere that simulates a team centered work environment, so that they complete their course of study with the ability not only to program the machinery, but with the skills to thrive in a professional setting.

One of the highlights of the facility is the additive manufacturing lab. Students use engineering design software to create parts which can then be brought to life as a



*During a tour for high school students, David Kiger, student in Computer Integrated Machining clarifies the functions of the Computer Numerical Control (CNC) machine.*

production grade 3-D printer builds up successive layers of material. These machines build custom, intricate parts from a variety of materials, in over 300,000 color variations.

Forsyth Tech has been using 3-D printing for design and prototyping for the past 13 years, but through a generous donation from The John Wesley and Anna Hodgin Hanes Foundation and the James G. Hanes Memorial Fund, the college was able to create a new lab with six new 3-D printers.

**Forsyth Tech is the only community college in the region with a “superlab” designation.**

The new printers are state-of-the-art, and their manufacturing company, Statasys, has awarded Forsyth Tech with a Statasys “superlab” designation. Forsyth Tech is the only community college in the region with a “superlab” designation.

“From the capabilities of our machines alone, we are far ahead,” said David Dinkins, program coordinator of Mechanical Engineering Technology. “With these tools to enhance our curriculum, we have begun to offer students a unique opportunity not only to learn new technology, but

also to participate in projects with collaborative partners such as Wake Forest University Medical Services.”

Having one of the most advanced 3-D printing labs in the nation will allow Forsyth Tech to give students an unparalleled, interdisciplinary educational experience for years to come.

## **THE NEED FOR ADVANCED TECHNOLOGY WAS THE ORIGIN OF FORSYTH TECH**

Looking back, one of the reasons Forsyth Technical Community College was founded more than 50 years ago was advancements in technology at R.J. Reynolds Tobacco Company that necessitated a highly-skilled workforce. The college was formed as the Winston-Salem/Forsyth County Industrial Education Center. Today, the changing technology at Reynolds and other manufacturers requires even more advanced skills. President Dr. Gary Green looks at Reynolds American as, “an example of the evolution in our community towards skill-based employment, promotion and advancement.”

This continuing emphasis on technology is what sets Forsyth Tech apart from other community colleges. While many community colleges have dropped “Technical” from their names, Forsyth Technical Community College made a deliberate decision to keep “Tech” in its title. The Foundation’s Executive Director of Development, Dr. Corey Miller, thinks this decision is extremely important, calling it, “a commitment to ensure that we are offering the best kind of technology to support the education and training of our students.”

# LEARNING HOW TO MANAGE AND SECURE DATA

Because many manufacturing processes are now programmed on computers, data has become a fundamental factor. And, as technology becomes more advanced, data management and cybersecurity are becoming more critical issues that need to be addressed and resolved.

Forsyth Tech is spearheading the conversation by asking the question, "How are we going to understand data management to keep technology secure?" To help find that answer, college faculty has recently developed a new curriculum focused on data analytics and data analytics reporting. Students at Forsyth Tech are learning how to read and understand data, research where data is coming from, pinpoint what data is at risk, and plan for the use of Internet of Things (IOT) technology by learning how to look at analytics and the fundamentals of advanced manufacturing.

Our goal is to train the next generation of technologists, cyber warriors, and engineers to fill the gaps that the manufacturing companies now have," said Dr. Deanne Wesley, department chair of the Davis ITEC Cyber Security Center. She admires the relationships that Forsyth Tech is forming with companies. "We're all working together – employers are feeding us what we need and we are producing what they need. The whole community can have jobs that can provide for families," said Wesley.

## ONE OF SIX COMMUNITY COLLEGES IN THE NATION TO BE NAMED A CYBERSECURITY REGIONAL RESOURCE CENTER

Forsyth Tech is a National Center of Academic Excellence in Cyber Defense and is already thinking ahead. "I don't think people realize the importance of data analytics and securing the IOT and manufacturing," said Wesley. "The Center is an initiative with the National Security Agency (NSA) to provide awareness, training, and education regarding cybersecurity issues to industry, educational institutions, and professional organizations. Her prediction is that all our devices, from our refrigerators to our cars, will soon touch the Internet of Things.



In order to continue to produce highly-skilled employees, Forsyth Tech and the Forsyth Tech Foundation understand that students need to be able to work with the most up-to-date, cutting-edge equipment. One of the Foundation's main goals is to be able to provide technology for the college's programs and to ensure that students interact with technology that can be found in any major manufacturing corporation.

And, experiencing the quality of technology and technical skills partnered with an understanding of the soft skills employers require will make Forsyth Tech students indispensable employees.



*Forsyth Tech student welder. Forsyth Tech is one of only two American Welding Society Accredited Test Facilities in N.C., giving students an additional advantage in the workforce.*



## MANUFACTURING INTERSECTS WITH BIOTECH AND NANOTECH

*New Board of Trustees Member, Ronnie Mendenhall, and wife, Lindy Mendenhall, have an opportunity to view the samples produced by the 3 D printer in the additive manufacturing lab.*

To understand advanced manufacturing — manufacturing driven by science and technology — and prepare for upcoming industry trends, one must also become knowledgeable in core sciences — chemistry, physics, and even biology.

Essentially, biotechnology uses living organisms to create something that is useful for man and nanotechnology manipulates matter on a molecular scale. Today, biomanufacturing uses the power of organisms to create pharma-centered products, or even manufacture living tissues. While this may sound like science fiction, things such as laboratory grown organs and cell therapies are happening now and Forsyth Tech students are in the middle of this transformation.

As medicine becomes increasingly personalized, the ability to manufacture tissues has the potential to transform the way we view health care. Today in Winston Salem, additive manufacturing and 3 D printing technologies are being used to manufacture organs by laying down rows of cells.

Michael Ayers, dean of the Math, Science, and Technologies Division says, “It’s manufacturing in that we’re building things, but manufacturing today isn’t like when I was a kid.

At some point in the future, I envision someone who needs a new liver, placing an order, and in a couple of weeks they’ve grown you a new liver,” imagines Ayers.

Similarly, nanotechnology and its application can be used across fields from biology to engineering, often working in an area as small as a part of a cell. Being able to work at a level that is smaller than ever before to create mechanical structures that can be used as centers is proving to be very useful in understanding disease.

If you can imagine, there are switches and devices small enough to work within a cell and signal what is happening inside the tissue,” explains Ayers.

All of these new scientific and technological advancements have unleashed a need for new standards in the laboratory setting.

When we’re thinking about manufacturing in the biological realm, not only does it need to be clean, but sterile,” Ayers explains. “Something as small as a piece of dander or dust could impact the ability of that machine to work,” he says. Because these very small mechanical structures are being designed on a nano level, Forsyth Tech has responded by developing sterile, clean rooms dedicated for biotechnology and nanotechnology.

## THE BENEFITS OF ADVANCED TECHNOLOGY PROGRAMS

Forsyth Tech is empowering our community's citizens through such tech-focused learning as advanced manufacturing, biotechnology, nanotechnology, and cybersecurity. The implications of Forsyth Tech's advanced technology benefits not just the college, but the whole community. Forsyth Tech provides opportunities that empower students to take what they have learned in the classroom, and make their communities stronger. "The work that we do at Forsyth Tech ultimately makes the world a better place because we're delivering this kind of learning," said Ayers.

Additionally, since Forsyth Tech provides innovative educational opportunities for potential employees and supports our economy with a skilled workforce, companies are attracted to the area. As Winston-Salem becomes more of a business destination, when workers and their dollars stay in Forsyth County, the whole community is elevated.

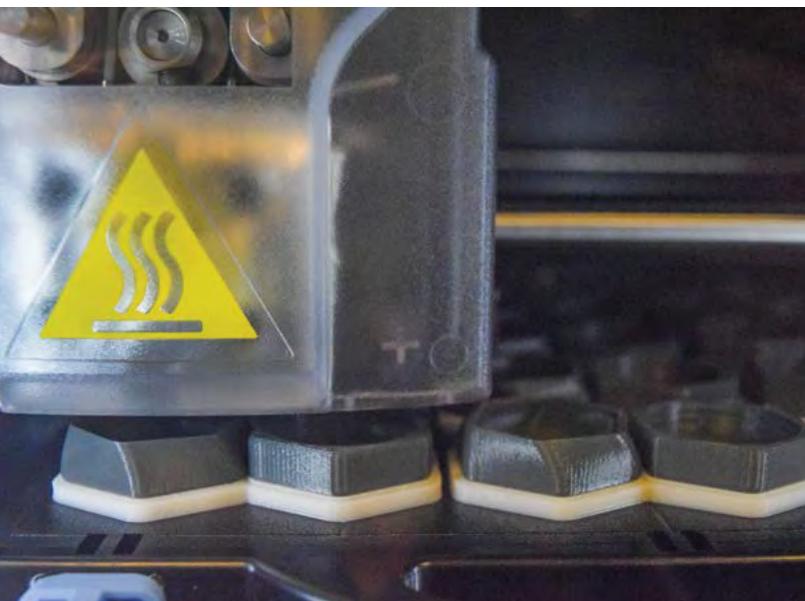
Manufacturing companies, such as Progress Rail, a Caterpillar company, Deere-Hitachi, and Herbalife could have chosen anywhere in the world to open a new plant but they chose Forsyth County to a great extent because of the training programs at Forsyth Tech.

**"Having a readily-available, skilled workforce is critical to drawing companies to the area."**

*Dr. Gary Green, president*

Because of Forsyth Tech's emphasis on supporting technology of the future, graduates are not just going into jobs—they are going into high-paying careers relevant to the technical and data-driven world we are experiencing.

"The future is approaching faster than you realize," says Dr. Green, who already is thinking about how Forsyth Tech can prepare students for technology in development, such as the arrival of autonomous cars.



Dr. Green said that, "having a readily-available, skilled workforce is critical to drawing companies to the area; it's what drives decisions." Therefore, Forsyth Tech must stay current on industry trends because as new technologies emerge, students will need increasing skill levels and proficiency."

*Students from the Mechanical Engineering Technology program work in the Engineering Design Lab.*



With the college's dedication to supporting advanced manufacturing, students are equipped with the skills to take on the rapidly changing labor market, while simultaneously driving economic development. Forsyth Tech is supporting the community by making Winston-Salem the most productive community for companies to thrive.

# On The MOVE



## Rachel Desmarais Receives Prestigious Distinction

Forsyth Tech's Executive Vice President and Chief Operating Officer, Rachel Desmarais, has been chosen as a participant in the prestigious Aspen Presidential Fellowship for Community College Excellence. The highly selective leadership program is aimed at developing a new cadre of outstanding leaders capable of transforming community colleges to achieve higher levels of student success. Dr. Desmarais and the 39 other Aspen Presidential Fellows embarked on a year-long fellowship in July 2017. The Aspen Institute is a Washington, D.C.-based educational and policy studies organization.

## Anna Marie Smith Named Outstanding Leader

Forsyth Tech's Associate Vice President & Chief Human Resources Officer, Anna Marie Smith, has been named as a member of the Outstanding Women Leaders program. The award is given by Mayor Pro Tempore and Council Member Dr. Vivian Burke, the Outstanding Women Leaders Committee, and the City of Winston-Salem. It recognizes the accomplishments of women in the Winston-Salem community for significant contributions made through professional achievement and community service.





# Graduation 2017



The Lawrence Joel Veterans Memorial Coliseum was full of pomp and circumstance on May 9, 2017, as approximately 1,160 Forsyth Tech graduates proudly made their way across the stage to accept the diplomas they worked so hard to earn. Family and friends cheered from their seats, carrying signs, flowers and cards to shower their loved ones with congratulations.

SGA president Irene Bantigue addressed her fellow graduates. "It may be hard to understand why some days are hard to endure, but days like this make it all worth it," Irene said. "Demonstrate your unique passion, and always choose what makes your time worthwhile."

North Carolina Utilities Commissioner, Lyons Gray, delivered this year's commencement address, in which he talked about living a balanced life.

"For me, life can be seen as a game of juggling," Gray said. "There is work, family, health, friends, and (not to be forgotten) spirit. We prioritize each of them differently as we go through life, but the constant goal is to keep all of them in the air."

He also shared with graduates some hard-earned lessons he wished someone would have told him early in his career – including not undermining your worth by comparing yourself to others, not taking for granted things close to your heart, and taking risks.

"By taking chances, we learn to be brave," Gray said. "Don't run through life so fast that you forget where you've been or where you're going."

Sound advice for a group that has established a firm foundation for a bright and promising future ahead.



### Shannon Coalson

Before graduating from Forsyth Tech with a degree in Nanotechnology, Shannon Coalson had an out of this world

experience. She spent a week at Langley Research Center, participating in NASA'S Community College Aerospace Scholars Project. "We worked 16 hour days, building and programming rovers," Shannon says. "It was neat seeing all of the different jobs NASA offers. The experience was wonderful, and I came to the conclusion that I'd rather be behind the scenes – here on earth!" She plans on using her degree in a job that allows her to participate in a Pathways program and go to school to further her education. "I've already talked to the Department of Energy," Coalson says.



### Cassie Faircloth

Salutatorian of Stokes Early College class of 2017, Cassie graduated and earned both an Associate in Arts degree

and her high school diploma. "Going to the early college was the best decision I've ever made," Cassie says. "I was bullied in middle school, and coming here gave me the support and encouragement I needed." While at the Early College, Cassie was also an active volunteer in her community. She tutored for the Buffalo Creek Literacy Reading Program, served as president of her Interact Club (sponsored by Rotary International), and was a member of the Walnut Cove Main Street Committee. She will enter Meredith College in the fall as part of its honors college, with a double major in Criminology and Business Administration, and a minor in English. She's dreaming big! "I want to be a lawyer, and eventually open my own law firm one day," Cassie says.



### Maiya Silver

After a fulfilling career as a dance professional (she earned a BFA in dance from UNCG and attended UNCSA in high school),

Maiya needed a career change. "Dance was becoming increasingly hard on my body," she says. A wife and mother of three children, she decided to change careers at the age of 35. Interested in health care, she knew Forsyth Tech offered an abundance of medical imaging programs. "Dance created a natural interest in the human body for me," Maiya says. She graduated with a degree in Magnetic Resonance Imaging (MRI). Maiya also credits the Forsyth Tech Foundation with helping her finish school. Her husband was laid off from his job right before she began her second year. The nonprofit stepped in to help. "I'm forever grateful for the Foundation," Maiya says. "With the help of those scholarships, I was able to stay in school and obtain my degree."



### Matthew Errett

Legally blind since the age of eight, Matt doesn't let his limitations hold him back. In addition to being an accomplished

saxophone player and training himself to play music by ear, he has a variety of other artistic talents. "I also paint and draw, act, and am in show choir" Matt says. He adds that Forsyth Tech was instrumental in his success. "It was academically rigorous, but provided the small, nurturing environment that I needed." Matt graduated with an Associate of Fine Arts degree, and plans to go to Winston-Salem State University in the fall to pursue a degree in music. He hopes to one day open his own jazz dinner club. "There are things I can't do, but I don't focus on them," he says. "Always focus on what you can do."



### Irene Bantigue

To say Irene is an overachiever is an understatement. She graduated from Forsyth Tech with an Associate of Arts degree, and is heading to Johns Hopkins University — on a full ride scholarship. “Forsyth Tech is an amazing place,” Irene says. “I was able to receive lots of individual support from faculty and staff that I wouldn’t have gotten anywhere else. They’ve become mentors to me, and are influential in helping to foster my future.” Irene served as Forsyth Tech’s SGA president, was a recipient of the college’s Women’s Achievement award, and was also its first Global Scholar of Distinction. The GSD initiative is developing a state and national model of best practices for internationalizing the curriculum and campus programs. She also volunteered with local relief organizations that helped refugees. “My goal is to go into International Affairs or Public Policy,” she says.



### Jamshid Jambulov

Originally from Uzbekistan, Jamshid has been in the U.S. for five years. He graduated from Forsyth Tech’s Interventional Cardiac and Vascular Technology Program to begin his dream of becoming a cardiologist. “I had wonderful mentors at Forsyth Tech,” Jamshid says. “Real life scenarios and clinical cases that were a part of the ICVT program gave me the confidence to accomplish my dreams.” Jamshid volunteered with several organizations while attending the college. He also received a U.S. Volunteer Service award in 2010 from former President Obama. Jamshid received multiple job offers from several hospitals for potential employment before graduating. He accepted a job at Wake Forest Baptist in the hospital’s cardiac catheterization (cath) lab. His next step: complete his bachelor’s degree and apply to med school.



### Katie Braxton

Katie was a part of Forsyth Tech history when she graduated in the spring. She was in the college’s first cohort of Regionally Increasing Baccalaureate Nurses (RIBN) graduates. RIBN is a statewide initiative that partners community colleges and university nursing programs in North Carolina. The blended curriculum allows students to complete both an associate and baccalaureate nursing degree. “I’ve been working at Forsyth Medical Center for nine years as a CNA (certified nursing assistant),” Katie says. “I’ve always wanted to become a nurse, and this program will allow me to do that even faster.” Katie graduated from Forsyth Tech with her Associate Degree in Nursing (ADN), and will be continuing at Winston-Salem State University to complete her Bachelor of Science in Nursing (BSN) next year.



**ForsythTech**

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*From left: Ronnie Mendenball, board member, Forsyth Technical Community College Board of Trustees; Ann Bennett Phillips, vice chair, Forsyth Technical Community College Board of Trustees; Dan Besse, Winston Salem City Council member, Southwest Ward; David Plyler, chair, Forsyth County Board of Commissioners;*

*Nancy Hawley, executive vice president, R.J. Reynolds Tobacco Company; Dr. Gary Green, president Forsyth Technical Community College; and Don Martin, vice chair, Forsyth County Board of Commissioners.*

On Tuesday, Oct. 17, we officially cut the ribbon and opened the doors to the Center for Advanced Manufacturing at Forsyth Tech.

While manufacturing technology education is not a new concept at Forsyth Technical Community College, the cutting-edge technology and technical training have now advanced to offer a progressive manufacturing education aligned with industry trends.

We appreciate the continued support of businesses and the community to help Forsyth Tech continue to offer students the essential education necessary today, to prepare them for the competitive global workforce of the future.