

CATALYST

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WORKFORCE DEVELOPMENT & ECONOMIC GROWTH THROUGH EDUCATION

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South Carolina Manufacturing Certification

ESSENTIAL SKILLS FOR HIGH-DEMAND JOBS
IN ADVANCED MANUFACTURING



The 16 technical colleges serving South Carolina have joined forces to offer a new, innovative advanced manufacturing certification designed to prepare unemployed or underemployed workers for high-demand jobs in advanced manufacturing.

South Carolina Manufacturing Certification (SCMC) training provides the student with 200 hours of classroom, hands-on and simulation training that leads to an industry-recognized national credential. With scholarship money available for selected applicants, this program is an excellent opportunity for any manufacturing employee or unemployed person seeking to enhance their skill set. (continued on page 2)

PIEDMONT
Technical College

Your goals. Our mission.



WHAT ARE THE COMPONENTS OF SCMC TRAINING?

SCMC is made up of four basic training components: Manufacturing Skills Standards Council (MSSC) Certified Production Technician, Lean Six Sigma Yellow Belt, OSHA General Industry, and hands-on lab training.

MSSC CERTIFIED PRODUCTION TECHNICIAN

MSSC is an industry-led training, assessment and certification organization that focuses on the core technical competencies needed by the nation's front-line production and material handling workers. The MSSC Certified Production Technician credential focuses on growing the participant's technical skills. Upon successful completion of four MSSC production modules: Safety, Quality Practices & Measurement, Manufacturing Processes & Production, and Maintenance Awareness, participants are awarded a national credential. MSSC allows participants to demonstrate that they have mastered the skills increasingly needed in the high-growth, technology-intensive jobs of today.

LEAN SIX SIGMA YELLOW BELT

Lean Six Sigma Yellow Belt training provides intense training in the basics of Lean Six Sigma Methodology. This certification prepares the student to support improvement projects as part of a team, or conduct small projects on a part time basis. A holistic approach to problem solving, Six Sigma is a step-by-step process that allows companies to understand which business processes are not performing as needed, identify the root cause of problems, analyze and improve the contributing factors, and sustain those improvements. Because Six Sigma can improve processes and reduce costs, companies large and small can benefit from these tools.

OSHA GENERAL INDUSTRY

OSHA General Industry Outreach training is a comprehensive safety program designed to provide

complete information regarding OSHA compliance issues for those working in industry. This training covers various health and safety topics as they apply in the manufacturing environment. These topics include, but are not limited to: walking and working surfaces, exit routes, fire protection, fire extinguishers, electrical, hazard communication, protective equipment, confined spaces, blood borne pathogens, materials handling, accident investigation, HAZWOPER, industrial hygiene, and ergonomics.

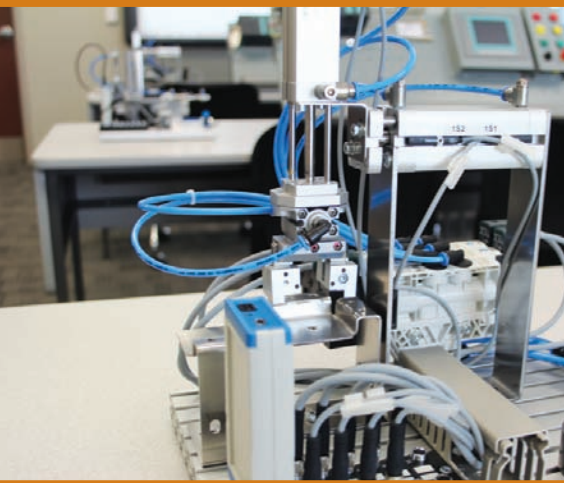
HANDS-ON LAB TRAINING

The 200 hours of SCMC training will include hands-on learning utilizing top notch training and simulation equipment. Students will be given the opportunity to apply skills that they have learned in the classroom to real-world situations and projects, leaving them prepared to apply these skills immediately in the workplace. Hands on lab training will include quality assurance, process and production, maintenance and Lean.

HOW CAN SCMC BENEFIT EMPLOYERS?

Aside from earning an industry-recognized credential, SCMC also assists students in mastering the soft skills and technical skills that are essential to be successful in today's high-tech manufacturing careers. Some of these include:

- Understanding what it takes to work effectively in a manufacturing environment
- Fully comprehending the importance of continuous improvement in the manufacturing process
- Grasping the essential skills needed to gather, interpret, and use data consistently and accurately to make decisions and take action
- Improving fundamental communication skills (writing, reading, speaking, listening) to meet the needs of the workplace
- Increasing safety awareness and honing the ability to recognize and address safety hazards in the workplace



- Sharpening basic math abilities
- Learning to measure properly using a wide variety of measuring instruments
- Enhancing use of hand and power tools
- Learning to read blueprints effectively without error and within tolerances

SCMC also includes soft skills training that focuses on the personal characteristics and basic employability skills of the participants. "We've taken things that we know are important to the employer like timeliness, dependability, work ethic, self-motivation and teamwork into consideration while designing a soft skills program that will be very valuable," said Mike Reid, Dean of Operations for Continuing Education at Piedmont Tech.

SCMC will help provide a pipeline of workers by embedding MSSC training into the curriculum. Employers can expect decreased recruitment costs as SCMC graduates will come with an industry-recognized credential. Remedial training costs are eliminated when companies are provided well-trained workers.

For more information about the SCMC program, contact Mike Reid at (864) 941-8481.

MSSC Certified Production Technician

Key Work Activities

for Standards/Training/Assessments

SAFETY

- 1 Work in a safe and productive manufacturing workplace
 - 2 Perform safety and environmental inspections
 - 3 Perform emergency drills and participate in emergency teams
 - 4 Identify unsafe conditions and take corrective action
 - 5 Provide safety orientation for all employees
 - 6 Train personnel to use equipment safely
 - 7 Suggest processes and procedures that support safety of work environment
 - 8 Fulfill safety and health requirements for maintenance installation and repair
 - 9 Monitor safe equipment and operator performance
 - 10 Utilize effective, safety-enhancing workplace practices
- 3 Set up equipment for the production process
 - 4 Set team production goals
 - 5 Make job assignments
 - 6 Coordinate work flow with team members and other work groups
 - 7 Communicate production and material requirements and product specifications
 - 8 Perform and monitor the process to make the product
 - 9 Document product and process compliance with customer requirements
 - 10 Prepare final product for shipping or distribution

QUALITY PRACTICES & MEASUREMENT

- 1 Participate in periodic internal quality audit activities
- 2 Check calibration of gages and other data collection equipment
- 3 Suggest continuous improvements
- 4 Inspect materials and product/process at all stages to ensure they meet specifications
- 5 Document the results of quality tests
- 6 Communicate quality problems
- 7 Take corrective actions to restore or maintain quality
- 8 Record process outcomes and trends
- 9 Identify fundamentals of blueprint reading
- 10 Use common measurement systems and precision measurement tools

MANUFACTURING PROCESSES & PRODUCTION

- 1 Identify customer needs
- 2 Determine resources available for the production process

MAINTENANCE AWARENESS

- 1 Perform maintenance and routine repair
- 2 Monitor indicators to ensure correct operations
- 3 Perform all housekeeping to maintain production schedule
- 4 Recognize potential maintenance issues with basic production systems, including knowledge of when to inform maintenance personnel about problems with:
 - a.Electrical Systems
 - b.Pneumatic Systems
 - c.Hydraulic Systems
 - d.Machine Automation Systems
 - e.Lubrication Processes
 - f.Bearings and Couplings
 - g.Belts and chain drives
- 5 Monitor environmental aspects at each stage of production
- 6 Implement continuous improvement in environmental assurance practices
- 7 Use advanced materials to reduce waste
- 8 Reprocess materials by recycling and reuse throughout product life cycle to optimize waste reduction

PTC's Abbeville Campus Opens for Spring Classes

The new facility in Abbeville opened to the public December 16.

"The faculty and staff at the Abbeville campus are very excited to have this new facility," said Jennifer Wilbanks, associate vice president for academic affairs and off-campus. "I think this will be something the citizens of Abbeville will be proud of."

The new campus is a 9,570 square foot facility on 10 acres that will allow for any expansion that may be needed in the future. The campus will offer six associate degrees and eight certificate programs along with a wide array of general education courses. The facility will have a computer lab/library, student common area, a conference room, four PEN rooms, two computer rooms and several traditional classrooms.

Currently, around 200 students attend the Abbeville campus; however, there are over 800 Abbeville residents who attend PTC in some capacity. Wilbanks says she hopes the new facility will allow more Abbeville students to attend class closer to home.

"I think, for the students who are in the surrounding counties, some of their greatest challenges are time and travel," Wilbanks said. "Putting these state-of-the-art campuses in the communities where they live tells them they are important to us and we're here to serve them. Without these county campuses, many of our students would not have the resources to pursue a degree."

A dedication ceremony will be held in April to allow residents of Abbeville to tour the facility.



News in Brief



PIEDMONT TECH, ZF TRANSMISSIONS PARTNERSHIP WINS AWARD

The South Carolina Technical College System recently won an International Economic Development Council (IEDC) Excellence in Economic Development Award for its work with ZF Transmissions and Piedmont Technical College's Center for Advanced Manufacturing (CAM) in Laurens County.

The honor was presented during the IEDC's annual awards ceremony in Philadelphia where South Carolina was recognized for its innovative work to meet the training needs of ZF Transmissions, one of the world's top 10 automotive suppliers. IEDC's Excellence in Economic Development Awards recognize the world's best economic development programs and partnerships, marketing materials and the year's most influential leaders.

CONTINUING EDUCATION PROGRAM RECOGNIZED BY SCAHCE

Piedmont Technical College's Deborah Hoffman was recognized by the South Carolina Association for Higher Continued Education for the launch of the new Nursing Assistant and Emergency Medical Technician Certificate programs. This award recognizes the South Carolina institution that provides the most extraordinary continuing education program. These new certificates are unique in that they provide a way for students who are interested in CNA and/or EMT

programs to complete these programs for college credit, graduating with a certificate in that field.

PTC RECEIVES DUKE ENERGY FOUNDATION AWARDS FOR PROGRAMS



Three Piedmont Technical College projects have been awarded funding through the Duke Energy Foundation and the Clemson Center for Workforce Development (CUCWD). The projects receiving the funding are an Advanced Manufacturing ZF Transmission project; the Marketing of STEM Programs; and the Newberry Campus Mechatronics project. Piedmont Tech was one of two colleges to receive funding for three projects totaling \$45,000. The college was also recognized with additional funding for the Newberry Campus Mechatronics project because the proposal scored at the top of the range for the advisory board's review, receiving an almost perfect score.

MECHATRONICS TECHNOLOGY DEGREE OFFERED IN NEWBERRY

Piedmont Technical College is expanding its degree offerings in Newberry with the addition of the Mechatronics Technology associate degree. The new degree program will begin in the fall of 2014 as part of the Phase II construction at the new Newberry County Campus. The degree program will tie into the Mechatronics program currently offered at the Newberry Career Center. Students who begin at the Career Center will be able to seamlessly enter the program at the Newberry County Campus to pursue the full associate degree.



Putting the Right People **in the Right Places**

SCREENING AND BENCHMARKING FOR SUCCESS

Most managers have struggled at some point with finding the right people to do the job. They've likely moved people around, switched tasks and priorities, and have even made a plea for additional people resources.

They've cross-trained employees, contracted help, and yet are still struggling with the effectiveness. Some employees are burnt out from being expected to do more than their skill sets will allow while others are bored and underutilized. It is no secret that employees perform best when they are in jobs that align with both their interests and skills. How does one go about assessing employee skill sets and aligning those findings with jobs that need to be filled?

At Piedmont Tech, our Continuing Education division can help you find industrial and skills testing tools that will help you benchmark your current employees and screen potential employees before they even come through your door. Regardless of what skill set you are looking for,

Piedmont Tech's extensive collection of testing and assessment tools can help you put the right people in the right places.

Pre-employment testing is often used in industry to screen job applicants in an effort to select the candidates that will perform best at a particular job. These tests focus on assessing a variety of different abilities, including cognitive ability, basic knowledge, physical and motor ability, personality, and employability skills.

THE WORKKEYS JOB PROFILE AND WORKKEYS TESTING

ACT WorkKeys is a job skills assessment system that helps employers in selecting, hiring, training, developing, and retaining a high-performance workforce. Piedmont Tech's trained WorkKeys Job Profilers are equipped with the skills necessary to assess jobs on site, evaluating and determining skills standards for a job as related to the WorkKeys assessment criteria. For example, a company may choose to have a production job profiled. If it is determined that the particular job would require someone to be proficient in basic math, the job

profile would reflect that. In turn, our Job Profilers can assist company representatives in creating WorkKeys test score recommendations for a specific position. This system gives the employer a way to measure the likelihood that any individual will be successful in a certain position.

It is no secret that employees perform best when they are in jobs that align with both their interests and skills.

Areas of the WorkKeys assessment include applied mathematics, applied technology, business writing, listening, locating information, observation, readiness, reading for information, teamwork, and writing. Of these topics, the most commonly requested by industries are applied mathematics, reading for information, and locating information. These three scores represent a picture of the potential employee's basic skill set.

WorkKeys scores can be used to benchmark the skill sets of current employees, and to screen potential employees before hiring for a position.

MECHANICAL REASONING TESTING

Mechanical Reasoning Testing is often used to assist in the selection of technical and trade personnel. These tests measure the test taker's understanding of basic or advanced principles of mechanics. With the basic test spanning just twenty-five minutes, skills measured include spatial ability, cause and effect relationships, wheels, gears, clamps, levers, sliding rods, shafts, pulleys, weights, conveyor belts, pivots, and springs.

HANDS-ON MECHANICAL TESTING

Hands-On Mechanical Testing measures the skills necessary to perform an actual mechanical repair or maintenance job. During this test, a standard timing model machine is "broken" multiple times to replicate several realistic mechanical issues. The test taker is instructed to diagnose the problem, determine a resolution, and perform the repair. Performance is measured and a score is given based on success. Excellence in mechanical skills pinpoints those individuals that would be successful in maintenance-related positions.

WONDERLIC PERSONNEL ASSESSMENT

The Wonderlic Personnel Assessment is a popular pre-employment test. This unique tool is best known as the only test given to NFL players before they are drafted. The Wonderlic Personnel Assessment examines a person's trainability. These short assessments consist of fifty questions in a twelve minute testing period. Higher scores represent a greater ability to learn new things easily. This is helpful when placing individuals in jobs that involve consistent change.

ADDITIONAL AND CUSTOMIZED ASSESSMENTS

In addition to the most popular assessments, Piedmont Tech offers assembly, blueprint reading, electrical, welding, and other customized written and hands-on assessments. If you are seeking to gauge your employees' skill sets or determine if a potential employee is a good fit for a particular job, industrial and skills testing tools can help.

Contact the Continuing Education office at (864) 941-8400 or visit www.ptc.edu/coned to learn more about assessments and how they can benefit your company in its recruiting and employee placement process.



Gloria Williams



**Quality Systems
Improvement Engineer,
Fujifilm Manufacturing
USA, Inc.**

Q: What corporate training option did your company take advantage of and how has the training received made a difference in your company/organization?

My company took advantage of the Microsoft Excel 2010 Intermediate class, and this training has made more efficient use of our time when analyzing data.

Q: Why did you choose Piedmont Technical College?

We chose Piedmont Technical College as our training provider because we wanted to support our local technical college.

Q: What would you say is the most valuable aspect of this particular training?

The most valuable aspect of the Excel 2010 class was the instructor and her ability to answer all questions about Excel. She was very knowledgeable.

Q: How was your training customized to meet the needs of your company/organization?

Our training was customized for our organization. We were able to ask specific questions about issues we are experiencing internally.

Q: How did Continuing Education staff work with you to make your class convenient for you/your employees?

This class was convenient because it was held on-site. This reduced travel time and reduced our employees' time away from work.

Q: What long-term benefits do you foresee this training having on your business as a whole?

The long-term benefits include more efficiency, better presentations, and data analysis.

Q: What advice would you give those who are seeking similar kinds of training?

I advise anyone else seeking professional development and improved proficiency with Excel to take advantage of the training opportunities provided by Piedmont Technical College.



Your goals. Our mission.

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*For Continuing Education information
call **(864) 941-8400** to speak with
a PTC Business Solutions Provider.*

Abbeville County Campus

143 Highway 72 W
Abbeville, South Carolina
(864) 446-8324

**Center for Advanced
Manufacturing**

109 Innovation Drive
Laurens, South Carolina
(864) 682-3702

Edgefield County Campus

506 Main Street
Edgefield, South Carolina
(803) 637-5388

Lex Walters Campus-Greenwood

620 N. Emerald Road
Greenwood, South Carolina
(864) 941-8324

Laurens County Campus

663 Medical Ridge Road
Clinton, South Carolina
(864) 938-1505

McCormick County Campus

1008 Kelly Street
McCormick, South Carolina
(864) 852-3191

Newberry County Campus

1922 Wilson Road
Newberry, South Carolina
(803) 276-9000

Saluda County Campus

701 Batesburg Hwy.
Saluda, South Carolina
(864) 445-3144

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