The U.S. Department of Labor’s Bureau of Labor Statistics’ employment projections through 2016 indicate a continuing dominance in healthcare and related industries, including health information technology, medical and diagnostic laboratories. Second only to healthcare is the construction industry with broad opportunities in the building of bridges, roads, utility systems, power and communication structures, as well as the weatherization of homes. Many segments of the manufacturing industry project substantial growth, such as the aerospace industry with opportunities for assemblers, systems and service technicians. Other growth areas are in drug manufacturing, not only for chemists and medical scientists, but also for packaging and machine operators. Advanced manufacturing anticipates growth as well, particularly for industrial machinery mechanics and mechanical drafters.

Published By:
Delaware County Community College
Office of Institutional Advancement
Kathleen A. Breslin
Vice President
INTRODUCTION

American pride and prosperity have been built upon the strength of its workforce. Yet, over a third of today’s workforce lacks the skills needed to succeed in the labor market. National, state and local challenges include skill shortages, unfilled jobs, diminishing competitiveness, loss of jobs to other nations and income disparities between those with and without education and skills. Current trends indicate that we must act now to preserve our competitive advantage.

The concern for the future of the nation’s emerging workforce is reflected in a national movement focusing on education in science, technology, engineering and mathematics, known as “STEM” fields. Among those in the forefront of the STEM movement are the National Academies, National Science Foundation, U.S. Department of Labor, American Association for the Advancement of Science and numerous other stakeholders. One of their top three recommendations for maintaining the United States’ competitiveness in the 21st century is to increase the pipeline of students prepared to enter college and graduate with a degree in STEM disciplines.
LEADERSHIP  Building the foundation of a 21st century education environment

Delaware County Community College’s $60 million STEM Complex positions the College as a regional leader in STEM education, attracting more students to rewarding fields in high-growth, high-demand occupations. The broad range of academic and career programs offered by the College truly serves as a “gateway to opportunity” for existing and emerging fields.

The two buildings that form the complex, the STEM Center and the Advanced Technology Center, are a magnet for the study of STEM fields. Together, the Centers house 11 science laboratories and 12 specialized laboratories for customized education and training developed in partnership with local industry leaders.

Students majoring in the STEM Center’s natural science and engineering programs earn associate degrees leading to professions in engineering, chemistry, biotechnology, dentistry, medicine, pharmacy, podiatry, optometry, physical therapy and the like. Offerings in the Advanced Technology Center range from traditional skill-based trades to high-tech engineering technology programs, including computer-aided design, robotics and nanofabrication.

The College is a unique resource for the 500,000 households that it serves in Delaware and Chester Counties. A commitment to student success, bolstered by a strong support network, ensures students the opportunity to aspire to a challenging career and the ability to succeed in the 21st century workplace. Well-defined pathways to advanced degrees at four-year colleges and universities provide students additional opportunities to compete on a global scale.
The STEM Center is 20 percent more energy efficient than a standard educational science facility. It is expected to obtain a LEED Silver rating from the U.S. Green Building Council. Among the sustainable features in the building are:

- Recycled materials are used in 10 percent of the building’s construction.
- The 4,600 square-foot green vegetated roof reduces storm water run-off and heat gain into the building. The remaining roof surfaces are white EPDM membrane, which also reduces heat gain.
- Room finishes, adhesives and paints contain low emitting VOCs, which create a healthy building atmosphere.
- All of the facility’s wood products are Forest Stewardship Council (FSC) certified.
- Construction waste has been reduced by 50 percent through the implementation of recycling containers and returning product containers back to the manufacturing plants.
- Ample natural light reducing the need for energy-powered artificial lighting is in 90 percent of occupied spaces.
- High efficiency toilets use 20 percent less potable water than standard fixtures.

The STEM Center is equipped with the latest equipment and fastest wireless technology available. To support the requirements of today’s demanding educational environment, over 200 high-speed desktop and laptop computers and 30 networked laser printers have been installed. Students also have access to an open computer lounge, featuring 22 powerful iMac computers.

Each classroom and laboratory has an interactive learning display station that assists faculty in making lectures and demonstrations more exciting for the student. Coupled with digital audio and high-definition video media systems, the interactive stations display high quality images, presentations and movies. The computer-aided design laboratories house state-of-the-art plotters and high-resolution scanner systems.

At the core, all STEM Center systems are supported by ultra-speed networking equipment and a reliable high-quality networked telephony system.
The STEM Center houses 19 classrooms and 11 science laboratories for the study of human anatomy and physiology, biology, chemistry, earth and space science, physics and astronomy. An architectural suite encompasses two computer aided design laboratories, a resource room and a blueprint reading room. Conference rooms, offices and collaboration rooms for group study and meetings are positioned throughout the building.

The STEM Center serves as the new gateway to the Marple Campus and connects with the Academic Building and Founders Hall. Constructed of metal and glass panels, its façade is striking against the existing masonry buildings. Since the floor-to-floor height of the STEM Center differs significantly from existing buildings, the façade was created without level or story distinction. This was achieved through a tapestry weaving effect of window and metal panels. With a hue similar to the terracotta brick of existing buildings, the metal panels help to maintain a consistent campus identity.

The ground floor acts as a student commons. A fitness center, aerobics studio, open computer lounge and coffee shop surround the public space. Ample seating in the open lounge areas energizes the space and provides an opportunity for interaction among students and faculty. The tiered auditorium is a campus resource that can be shared with the local community.

The new campus courtyard is visible from the first floor and upper suspended offices through the three-story glass curtain wall system on the south side of the building. The atrium allows natural daylight to penetrate the middle of the building, and large windows along the corridors on the upper floors provide a view into the laboratories.

The 105,000 square-foot STEM Center was designed to support modern educational trends, such as small-group collaboration, hands-on learning, use of multimedia tools, smaller class sizes and multidisciplinary approaches, while remaining flexible enough to respond to future pedagogical innovations.
ASSOCIATE DEGREES

Architectural Technology
Automated Manufacturing/Robotics Technology
Automotive Technology
Behavioral Science
Computer-Aided Drafting and Design Technology
Computer Information Systems
Electronics Technology
Engineering
Facility Management Technology
Health Studies
Heating, Ventilation, Air Conditioning, Refrigeration
Industrial Systems Technology
Information Technology
(Application; Programming; Game Development; Technical Support;
Interactive Multimedia; Network Engineering)
Machine Tool Technology
Mechanical Technology
Nanofabrication Manufacturing Technology
Natural Science
Nursing
Paramedic-Advanced Life Support
Respiratory Therapy
Science for Health Professions
Surgical Technology
Technical Studies

CERTIFICATE PROGRAMS

Automotive Technology
Computer Numerical Control
Computer-Aided Drafting and Design
Computer-Aided Machining, Lathe, Mill & EDM
Electrical
Electronic Commerce
Heating, Ventilation, Air Conditioning, Refrigeration
Industrial Systems Technology
Machining Operations
Manufacturing Operations
Perioperative Nursing
Plumbing Apprenticeship
Process Control Technology
Welding

*Advanced Technology Center

Delaware County Community College is an equal employment and educational opportunity institution conforming to all applicable legislation that prohibits discrimination. The College does not discriminate on the basis of race, color, religion, sex, age, national origin, disability, veteran status, sexual orientation or any other characteristic protected by state or federal laws in its educational programs, activities, admissions or employment policies, as required by Title IX of the Educational Amendments of 1972. Section 504 of the Rehabilitation Act of 1973 and other applicable statutes. Inquiries concerning Title IX and/or 504 compliance should be referred to: Betty Brown, associate dean for student success, room 2195, 610-359-5320; and/or Connie McCalla, vice president of human resources, room 3572, 610-359-5084. TTY for the hearing impaired: 610-359-5020.

Delaware County Community College is accredited by the Middle States Association of Colleges and Schools, Commission on Higher Education, 3624 Market St., Philadelphia, PA 19104.
THANK YOU for contributing to the Gateway to Opportunity Campaign for the STEM Complex.

As of April 2010
$10,000 and up

Thomas J. Anderson
Aqua Pennsylvania, Inc
David M. and Susan L. Baner
Burt Hill
Easton Corporation
Jim and Pat Flick
Jim and Debbie Gaffney
The Harrah’s Foundation
Donald P. Jones Foundation
L. William Kay II
W. Roger and Dora Lytle
Bob and Peg McCauley
The McLean Contributionship
Olympic Tool and Machine Corporation
Jerry and Sue Parker
Pennsylvania Machine Works, Inc.
QVC, Inc
SAP America, Inc.
The Ethel Sergeant Clark Smith Memorial Fund
Southco, Inc
The Sunoco Foundation
Sunoco, Inc.
The Sunoco Foundation
Southco, Inc
The Ethel Sergeant Clark Smith Memorial Fund

Under $10,000

Anonymous (5)
Mrs. Beatrice Agar and Dr. John R. Agar, Jr.
Air Products and Chemicals Inc
Desmond Allison
Donna M. Amato
Phyllis Anderson
Michael Andruszkow
Reuben and Phyllis Aronovitz
Adalee Balestrieri
Ronald M. Barnes
Carol Cunningham Base and Joseph M. Base
Tara L. Basile
Jeff Baum
Aarion J. Benau
Doris K. Benfer
Bob Bennett
John J. Berry
Betty Biglin
John A. Bodalski
Geraldine A. Bowes
Joanne E. Bowers
Geraldine A. Bowers
Betty Biglin
John J. Berry
Bob Bennett
Aaron J. Benau
Jeff Baun
Tara L. Basile
Ronald M. Barnes
Carol Cunningham Base and Joseph M. Base
Tara L. Basile
Jeff Baum
Aarion J. Benau
Doris K. Benfer
Bob Bennett
John J. Berry
Betty Biglin
John A. Bodalski
Geraldine A. Bowes
Joanne E. Bowers
Geraldine A. Bowers
Betty Biglin
John J. Berry
Bob Bennett
Aaron J. Benau
Jeff Baun
Tara L. Basile
Ronald M. Barnes
Carol Cunningham Base and Joseph M. Base
Tara L. Basile
Jeff Baum
Aarion J. Benau
Doris K. Benfer
Bob Bennett
John J. Berry
Betty Biglin
John A. Bodalski
Geraldine A. Bowes
Joanne E. Bowers
Geraldine A. Bowers
Betty Biglin
John J. Berry
Bob Bennett
Aaron J. Benau
Jeff Baun
Tara L. Basile
Ronald M. Barnes
Carol Cunningham Base and Joseph M. Base
Tara L. Basile
Jeff Baum
Aarion J. Benau
Doris K. Benfer
Bob Bennett
John J. Berry
Betty Biglin
John A. Bodalski
Geraldine A. Bowes
Joanne E. Bowers
Geraldine A. Bowers
Betty Biglin
John J. Berry
Bob Bennett
Aaron J. Benau
Jeff Baun
Tara L. Basile
Ronald M. Barnes
Carol Cunningham Base and Joseph M. Base