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# SIEMENS-ASPEN COMMUNITY COLLEGE STEM AWARD

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2018

  
THE ASPEN INSTITUTE

**SIEMENS** | Foundation

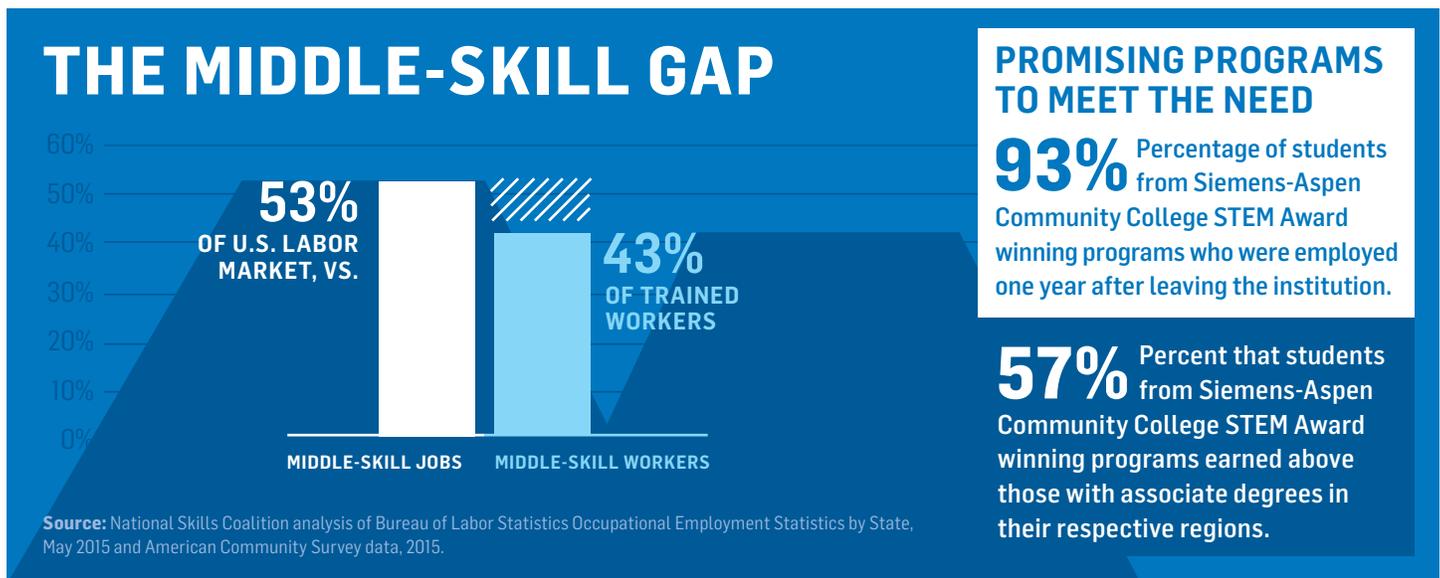
# CLOSING THE SKILLS GAP, CREATING PATHWAYS TO OPPORTUNITY

## SIEMENS-ASPEN COMMUNITY COLLEGE STEM AWARD

Never before has the link been stronger between education, the economic competitiveness of our nation, and social mobility for individuals. While the wage premium for those who hold a postsecondary credential is at an all-time high, there remain significant gaps in what the U.S. higher education system delivers and the skills needed to fill current and future jobs.

There are over five million jobs in science, technology, engineering, and math (STEM) fields that require more than a high school diploma but less than a four-year degree. These jobs pay wages that average more than \$50,000 annually.\* Unfortunately, the nation is not developing enough talent in these fields, limiting opportunity for individuals, growth for industries, and economic strength for communities.

To close this skills gap, high-quality postsecondary programs are needed in health care, energy, manufacturing, technology, and other STEM fields with “middle-skill” or technical careers. And greater opportunity must be extended to students who have traditionally been underrepresented in these fields.



## DEVELOPING TALENT

From the Aspen Institute’s work in the field, we know that community colleges—large and small, urban and rural—that serve a diverse student population can become engines of opportunity and talent by creating trusting and productive partnerships with employers. The Siemens Foundation and the Aspen Institute College Excellence Program have developed our own higher education-industry partnership: The Siemens-Aspen Community College STEM Award. Together, we are working to demonstrate the enormous value of exemplary community college

STEM programs and showcase the first-rate preparation that they deliver for students, their families and their communities by:

1. Identifying, researching, and summarizing for the field information about the practices at **eight exceptional middle-skill STEM programs**, each of which will receive a \$50,000 award.
2. Sharing the success stories of **“Siemens Technical Scholars,”** an exceptional group of diverse students from across the country

who demonstrate the rewarding careers and opportunities that result from completing an excellent STEM program. The Siemens Technical Scholars are chosen by Aspen in partnership with the community colleges that win the Siemens-Aspen Community College STEM Award.

The Siemens-Aspen Community College STEM Award recognizes colleges that develop talent from every community to prepare students for middle-skill STEM jobs, as well as the students whose lives are changed by that opportunity.

\* Rothwell, J. (2013). *The Hidden STEM Economy*. Washington, DC: Brookings Institution.

# THE AWARD-WINNING COLLEGES FOR 2018

A panel of experts in community college and workforce preparation rigorously evaluated data and practices to select the following programs:



HEALTHCARE  
**BROWARD COLLEGE**  
FORT LAUDERDALE, FLORIDA  
NURSING

**96%** Employment in the field one year after leaving the institution

Among many areas of excellence, Broward College's AS in Nursing program is distinguished by beginning its work early in the student journey, helping aspiring students gain the skills they need for admission. This strategy allows the program to build talent from underrepresented racial, ethnic, and low-income student populations. Strong relationships with local hospitals allow nurse recruiters to engage students in work agreements and offer scholarships, resulting in a 93 percent graduation rate.



HEALTHCARE  
**OZARKS TECHNICAL COMMUNITY COLLEGE**  
SPRINGFIELD, MISSOURI  
DENTAL HYGIENE

**100%** Employment in the field one year after leaving the institution

The Ozarks Technical Community College Dental Hygiene program systematically integrates technical and work-place-readiness skills and provides robust student support through intensive advising and a peer mentorship program. All students participate in clinical rotations in the program's final year, and more than 127 employers serve as internship sites for students. Notably, the program achieves strong outcomes for both students and the community, which faces high poverty rates, by providing dental services on campus.



HEALTHCARE  
**HILLSBOROUGH COMMUNITY COLLEGE**  
TAMPA, FLORIDA  
EMS PARAMEDIC

**\$52,864** Average annual earnings one year after leaving the institution

Offering graduates unusually high wages, the Hillsborough Community College Paramedic College Credit Certificate program provides clear career pathways that can articulate to an associate degree. Faculty have decades of experience and strong connections with local employers. The program offers schedules to accommodate working students and a cohort model for more traditional students. Each phase of the paramedic program integrates clinical experiences with fire department rescue units, as well as hospital clinical rotations.

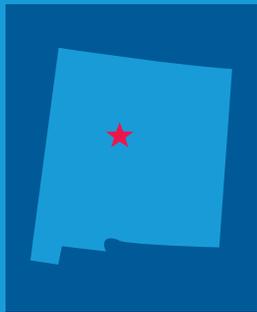


ADVANCED MANUFACTURING  
**SOUTH CENTRAL COLLEGE**  
MANKATO, MINNESOTA  
COMPUTER INTEGRATED MACHINING

**93%** The program's job placement rate over the last five years

South Central College's Computer Integrated Machining program combines classroom and hands-on education, offering students customized training and valuable apprenticeships that allow students to work part-time for an area manufacturer while earning a degree. Students enroll in clearly defined pathways, creating efficient paths to provide skilled workers to meet the immediate needs of area industries. All graduates must complete a semester-long internship, cultivating both the technical skills and professional skills needed for employment.

# THE AWARD-WINNING COLLEGES FOR 2018



ENERGY

## CENTRAL NEW MEXICO COMMUNITY COLLEGE

ALBUQUERQUE, NEW MEXICO

ELECTRICAL TRADES

**\$46,800** Median starting salary for 2016 graduates from these programs

Reflected in strong employment outcomes for graduates, students in Central New Mexico Community College's Electrical Trades program participate in intensive hands-on courses that prepare them for high-demand jobs. Those skills also benefit the larger community. For example, students help wire homes for the Greater Albuquerque Habitat for Humanity. The program embeds certificates that are tightly aligned with occupations in the region, a strategy that has allowed CNMCC to boast a 92 percent employment rate for its graduates.



ENERGY

## MITCHELL TECHNICAL INSTITUTE

MITCHELL, SOUTH DAKOTA

POWER LINE CONSTRUCTION AND MAINTENANCE

**\$52,842** Earnings five years after leaving the institution

A flagship program for Mitchell Technical Institute, Power Line Construction & Maintenance boasts consistently high enrollment, retention, post-graduation earnings, and industry support throughout South Dakota and beyond. The program is rigorously guided by the power-line industry and leaders maintain strong relationships with alumni. Among other strong practices, the program employs a diversity coach who addresses the challenges of students who are non-traditional in the areas of gender, age or ethnicity.



INFORMATION TECHNOLOGY

## MIAMI DADE COLLEGE

MIAMI, FLORIDA

MIAMI ANIMATION AND GAMING INTERNATIONAL COMPLEX (MAGIC)

**\$45,532** Median annual salary for graduates with an AS in animation and game art

MAGIC is an intensive, hands-on program that prepares students for careers in the competitive animation and gaming industry. Established in 2015 to meet rapidly growing workforce demand, program enrollment has expanded to more than 500 students—many of whom are from racial, ethnic and low-income groups underrepresented in the animation and gaming industry. A highly effective talent pipeline for the regional media industry—which includes companies such as Univision and Nickelodeon—MAGIC helps students achieve their dreams.



INFORMATION TECHNOLOGY

## VALENCIA COLLEGE

ORLANDO, FLORIDA

NETWORK ENGINEERING TECHNOLOGY

**100%** Employment rate one year after leaving the program

Valencia College's Network Engineering Technology AS degree program takes a hands-on approach to help students learn about every type of computer networking system using the latest virtual tools and technologies. Courses are mapped to outcomes for the program, as well as certifications, ensuring that students are exceptionally well-prepared with the skills they need to secure jobs in information and network security with companies in industries ranging from healthcare, defense, and tourism.