



APPENDIX III

County Vocational-Technical School Partnership Grants: Expanding CTE Programs and Partnerships to Meet Student and Employer Demand

P. L. 2014, C. 73 (A3337/S2228) established the County Vocational-Technical School Partnership Grant Program to spur the creation of new career programs hosted by colleges, local high schools, and other partners in existing facilities. The law was funded with a \$3 million appropriation in fiscal years 2015, 2016 and 2018, and \$1 million in 2017.

The multi-year incentive grants awarded in the first four cohorts have enabled 12 county vocational-technical school districts to launch 23 new and expanded programs that are being phased in to full enrollment over two to four years. When fully enrolled at the end of the grant period, these 23 programs will serve approximately **1600 additional students on an ongoing basis** in new career and technical education programs, while enabling many more students to benefit from new credential and work-based learning options added as a result of new partnerships.

Seven additional partnerships were granted in January 2018, further expanding the availability of career and technical education programs and enhancing the connections between county vocational-technical schools, employers, colleges, and local school districts.

The new programs and enhancements funded by the partnership grants will remain in place long after the incentive funding is expended, resulting in long-term expansion of career and technical education opportunities within existing school, college and employer facilities throughout the state.

Year One Results:

Seven New Jersey county vocational-technical school districts launched new and expanded career and technical education programs in high-demand industries in September 2015:

Bergen County Technical Schools opened Applied Technology High School, a full-time, four-year high school focusing on advanced manufacturing and engineering technology, located on the Paramus campus of Bergen County College. Partners include NJIT, Stryker Orthopedics, Triangle Manufacturing, Sandvik Coromant, the Commerce & Industry Association of New Jersey and the Bergen Workforce Investment Board. Now in its third year, the program enrolls 90 students in grades 9-11. Thirty more students will be added in September 2018 and the new school will be further expanded with a new Health Professions program.

Camden County Technical School District created a Law and Public Safety Academy grade 12 option in partnership with Camden County College and the Camden County Police Department. Seniors take their classes at the Camden County Emergency Training Center and CCC, benefiting from an enhanced program that provides significant exposure to real-world law enforcement.

Hudson County Schools of Technology created a culinary arts partnership with Harrison High School and Hudson County Community College to enable more students to prepare for careers in the county's booming hospitality industry. Forty students were initially enrolled, with 20 new students added to the program each year, enabling Harrison students to earn college credits and workplace experience in restaurants and other venues.

Hunterdon County Vocational School District created a full-time computer science and software engineering program for students from throughout the county at Delaware Valley High School. Partners include Raritan Valley Community College, Kean University, Rutgers University and Rowan University, and the Hunterdon Health Care System. Now in its third year, the program has 67 students in grades 9-11 enrolled, and a final cohort will be added next year.

Mercer County Technical Schools opened a four-year, full-time Science, Technology, Engineering and Math (STEM) Academy at Mercer County Community College where students earn up to 34 college credits. Business partners include national and international manufacturers with facilities in the Trenton area, including KNF Neuberger, Palfinger, Nordson EFD, Lawrence Mold and Tool Corporation, and Gaum, Inc. Now in its third year, 75 students in grades 9-11 are enrolled, and a final cohort will be added next year.

Morris County Vocational School District launched a shared-time engineering design and advanced manufacturing program for juniors and seniors in partnership with the County College of Morris and NJIT. Business partners include the New Jersey Manufacturing Extension Program, Inc., National Manufacturing Co., Inc., Siemens, the ManufactureNJ Talent Network and the New Jersey Business & Industry Association (NJBIA). The program also has a partnership with NASA in which the NJ students fabricate equipment used in the International Space Station. Forty juniors and seniors are enrolled, and they are earning up to a full year of college credits as part of their unique experience.

Salem County Vocational Technical Schools expanded its law and public safety curriculum to create a four-year Law Enforcement/Firefighter/EMT Academy in partnership with Salem County Community College, the Salem County Sheriff's Office, the Salem County Prosecutor's Office, the Salem County Fire Academy and the Salem County Office of Emergency Management. New and existing students are benefiting from the opportunity to earn newly added EMT and firefighter certifications that will prepare them for employment when they turn 18.

Year Two Results

A second round of grants funded in the FY 2016 Budget spurred the launch of five new programs in September 2016:

Somerset County Vocational & Technical High School (SCVTHS) launched a program in mechatronics, engineering and advanced manufacturing (MEAM), in partnership with Raritan Valley Community College (RVCC) and local businesses. The 30 students enrolled in the first two classes are learning how to apply mathematical and scientific principles to the design, development and operational evaluation of the technical and physical systems used in 21st century manufacturing. Additional cohorts of students will be added over the next two years.

Monmouth County Vocational School District and the **Asbury Park School District** partnered with Brookdale Community College and Kean University to create a STEM Engineering Academy for students at Asbury Park High School. There are about 60 students in grades 9-11 in the new program, and 20 new freshmen will join the STEM program each year.

The Academy for Environmental Science is a new four-year, full-time high school program offered through a partnership between the **Morris County Vocational School District (MCVSD)** and **Jefferson Township High School (JTHS)**, where the program is located. Fifteen students from throughout Morris County are preparing for careers in environmental research, policy, compliance, design and law this year, and an additional class will be added each year. Program partners include the Lake Hopatcong Foundation, the Rockaway River Watershed Cabinet, Jefferson Township, Kean University's Center for

Sustainability Science and a local law firm specializing in environmental issues.

Hunterdon County Vocational School District (HCVSD) partnered with **North Hunterdon High School (NHHS)** to launch a four-year **Biomedical Sciences Academy (BSA)** at the high school. There are 61 freshmen and sophomores enrolled, with additional cohorts added each year. Students exposed to almost 100 different careers in the medical field during their four years in high school. They are also able to earn college credits through the academy's agreements with Raritan Valley Community College and Rutgers School of Health Related Professions.

Atlantic County Institute of Technology (ACIT) is preparing high school students for careers in aviation through the **Academy of Aviation Studies**, located on the Mays Landing campus of Atlantic Cape Community College (ACCC). Partners include the Federal Aviation Administration (FAA) William J. Hughes Technical Center, Atlantic City International Airport, and the Stockton University Aviation Research and Technology Park (ARTP). Now in its second year, the program serves 27 students and will add an additional cohort in each of the next two years.

Year Three Results

The third round of grants funded in the FY 2017 Budget spurred the launch of four additional new programs in September 2017:

Hunterdon County Vocational School District opened the Environmental Sustainability and Engineering Academy for full- and shared-time students from throughout the county at Voorhees High School. Students will be able to earn college credits through partnerships with Raritan Valley Community College, Rowan College at Burlington County, Rutgers University, and Centenary University. Industry partners, including the Hunterdon County Parks System, will provide internship opportunities and structured learning experiences.

Middlesex County Vocational and Technical School District is offering a new technical theater major for students in the district's School of the Arts on the East Brunswick Campus, thanks to partnerships with McCarter Theatre in Princeton, Rutgers' Mason Gross School of the Arts, NJIT and the International Alliance of Theatrical Stage Employees Local 21.

Morris County Vocational School District opened an Academy for Biotechnology at Mountain Lakes High School that is open to students from throughout the county. The STEM program prepares students for postsecondary studies in fields related to the biotechnology industry, with a focus on research and laboratory skills developed through a hands-on, project-based learning model.

Passaic County Technical Institute started a new drone technology program at Passaic High School. The Aerospace Engineer for Remote Operations (AERO) project will enable 20 students per year the opportunity to earn stackable credentials in remotely piloted aircraft and Unmanned Aerial System (UAS), along with dual enrollment and Advanced Placement credits, and articulation with college or university aerospace engineering programs.

Year Four Results

A fourth round of grants funded in the FY 2018 Budget will support the launch of seven new career programs beginning in September 2018:

Bergen County Technical Schools will offer a new program, Health Professions, in partnership with Bergen Community College. The Health Professions Program will offer hands-on, college-level coursework in healthcare. Access to Bergen Community College's state-of-the-art lab facilities will allow students to apply health science content in real-world patient simulations. Students will be given the opportunity to earn college credit and gain clinical experiences through a curriculum that emphasizes science and the human and organizational side of healthcare. The program will underscore the importance of teamwork as essential to patient well-being, provide students a strong foundation in science, and address the health workforce needs of New Jersey and the surrounding region. Graduates will be prepared to enter degree programs in areas including but not limited to health science, nursing, paramedic science, dental hygiene, sonography, and respiratory care. The program will enroll 30 students per year, for a total enrollment of 120 when fully implemented.

Somerset County Vocational & Technical Schools is offering a new Restaurant and Entrepreneurial Management (REM) program in partnership with Raritan Valley Community College (RVCC). The program will offer a four-year career pathway emphasizing social, entrepreneurial, technical and academic skills, while preparing youth for employment, starting their own business and advancing their education in restaurant, culinary and catering management. Students will obtain fundamentals in restaurant management by learning industry best practices and progress to overseeing the TradeWins restaurant at SCVTS. Students in the REM program will prepare for immediate employment, post-secondary training, or continue their education in college in the hospitality related fields such as Food and Beverage Management or Business Management at RVCC. Students may exercise their entrepreneurial knowledge by starting their own restaurant or catering service. Students will have opportunities for internships and job shadowing, further enhancing their technical skills. The REM program plans to add 20 students each year for a total of 80 additional students when the program is fully enrolled.

Camden County Technical School District is partnering with Camden County College (CCC) to develop a Digital Media Communications career program at the Pennsauken Campus. The grant will allow CCTS to make renovations to the career area, incorporate needed technology, implement dual-credit courses at CCTS, and expand the number of participating students in the Senior Option program at CCC. The program will serve 20 new students the first year, and accommodate 80 students when fully enrolled.

Morris County Vocational School District is developing a new program for Cybersecurity and Information Protection (CSIP) in partnership with County College of Morris. This is a shared time program for juniors and seniors. Students will attend CCM's award-winning Cybersecurity Center for two hours and 40 minutes each morning and take classes in cybersecurity and information technology. Over the course of the two-year program, students will earn a minimum of 39 CCM college credits, as well as CompTia A+ and Cisco CCENT certifications. There will be opportunities for students to participate in Cyber Patriot and Ethical Hacking competitions. The program will be able to accommodate 20 additional students per year for a total of 40 students when fully enrolled.

Hunterdon County Vocational School District is starting a two-year, shared-time, county wide Heavy Equipment Operators Program in partnership with Voorhees High School District and Hunterdon County Educational Service Commission. The program will also have partnerships with post-secondary institutions to offer dual/articulated college credits into post-secondary degree programs, businesses, and a labor organization to allow students to participate in an apprenticeship option in Operating Engineers.

This program will be the first of its kind in NJ for high school students. The program will provide students with hands-on training opportunities through the use of heavy equipment simulators such as from Simlog and a working site. Students will learn how to operate various pieces of construction equipment including

APPENDIX III

backhoes, dozers, excavators & CDL training. Hands-on training will be supplemented with classroom instruction utilizing curriculum such as from National Center for Construction Education & Research's and several industry-recognized credentials including OSHA10. The program will enroll a minimum of 20 students each year, for a total of 40 additional students when fully enrolled.

The Hudson County Schools of Technology partnered with the Hudson County Community College to create a new Exercise Science Program that will accommodate 20 to 25 additional students each year for a total of between 80-100 additional students when the program is fully enrolled. Both organizations have committed space in existing facilities, experienced and highly qualified staff and access to many possible structured learning work-based learning opportunities throughout Hudson County. The program will allow for dual enrollment. HCCC has committed to recruiting other comprehensive high schools and replicating the program as well.

Passaic County Technology Institute partnered with Passaic High School to assist in the creation of a new Computer Science STEM Career Program of Study. It will be open to 40 students per year from non-traditional populations among socioeconomically disadvantaged, Hispanic/Latino, African American, and females, attending Passaic High School (PHS). The program focus of Computer Science, will enhance PHS's current PLTW Gateway middle school offering by developing a scope and sequence that will now continue their Computer Science career and technical education into their high school options. The program's success will be based on PCTI's successful CTE model that creates partnerships between affiliate networks that include our comprehensive high school partner, industry associates, workforce partners, and Passaic County Community College and their Bridges to Baccalaureate university partners. Students' will earn dual enrollment credits and a series of stackable industry credentials; Advanced Placement courses and cooperative learning experiences while attending high school.