



# PREPARING STUDENTS FOR THE REGIONAL, STATE AND GLOBAL WORKFORCE

THE STATE UNIVERSITY of New York

University at Buffalo

SUNY's enduring mission is to provide an education that is accessible, affordable and of high quality. Our colleges and universities serve the citizens of New York and offer a critical pipeline for students who might otherwise not pursue higher education. SUNY makes it possible for New York's best and brightest to be educated and to stay in New York. SUNY also attracts the best minds from outside the state, further enriching our civic and economic environment. Following graduation, more than 80 percent of SUNY students stay in New York state

The workplace is changing rapidly, as advances in science and technology – and their economic promise – make it imperative that we educate students for the demands of an increasingly diverse and global culture and economy. For nearly 60 years, SUNY has been a portal to opportunity for millions of New Yorkers. Our investment in the students of today will pay off in the years to come in enhanced quality of life, economic development and expansion and stronger communities.



Governor Spitzer and First Lady Silda Wall Spitzer honor teacher innovation to fund schools supplies

## GOVERNOR HONORS EMPIRE STATE COLLEGE STUDENT-TEACHER FOR INNOVATION

When Kerri Johnson, a Spanish teacher at Harriet Myers Middle School in Albany, typed in a simple three-paragraph request to get 35 whiteboards and Spanish-language Scholastic magazines for her class on the DonorsChoose Web site, she hardly could have imagined that Governor Eliot Spitzer, First Lady Silda Wall, Mayor Gerald Jennings of Albany, and various other elected and school district officials, would show up at the school to applaud an innovative way to help teachers fund school supplies.

The governor recognized Johnson and two fellow teachers and announced the expansion of DonorsChoose, which benefits students in underserved schools in New York state. That mission dovetails with that of Empire State College's Master of Arts in Teaching (MAT) program, which prepares adult career-changers like Johnson to teach in some of the most challenging schools in the state.

Carol Fries '07 received the Outstanding First-Year Teacher of the Year award from the Rochester Teachers Association, and James Dougherty '07 was recognized by the State Legislature for acquiring a funding award for the Henry Street Settlement in New York City to work on video projects with school children.

## STEP STUDENTS FLOURISH IN SCCC PROGRAMS

This year, Suffolk County Community College celebrated the 20th anniversary of its Science and Technology Entry Program (STEP) and Collegiate Science and Technology Entry Program (CSTEP). Funded by New York state for students from underrepresented groups, both programs have helped steer students into careers in science, technology, engineering and mathematics.

Since 1987, enrichment activities have included Saturday morning classes in science, mathematics and communications; field trips to Brookhaven National Laboratory at the neighboring Stony Brook University; and participation in statewide conferences. STEP now serves 255 students in grades 7-12 from five area school districts and CSTEP serves 75 students.

STEP graduates have gone on to establish impressive careers. Wesley Francillon, who joined STEP as a seventh-grader in 1989, earned his Ph.D. in Materials Science from Stony Brook University in 2006 and is now a practicing engineer. Georgina Garcia went on to graduate from Dartmouth College and the University of Iowa Medical College and practices in the Boston area. And Medina Senghore completed her studies at Howard

University and Harvard Law School and practices international law.

STEP/CSTEP faculty and staff are reaching even deeper into the pipeline by visiting students in grades 4-12 to provide program information and engage them in hands-on learning.

*A Sullivan County CC student spent a few weeks in a Purchase College Laboratory watching tiny flies mate.*

### BUILDING BRIDGES TO COLLEGE

Adrian Ponce, a Sullivan County Community College student, spent a few weeks in a Purchase College laboratory last summer watching tiny flies mate. With three other students and two professors, Ponce was seeing whether a concentration of a chemical found in the *Drosophila paulisorum* fly's body would enhance its mating prowess.

Ponce was part of a summer bridge program designed to give students at two-year institutions scientific and laboratory experiences that could help them make the transition to a four-year degree program in science or math. For Ponce, it was also a first step towards medical school and an experience he said he would "definitely consider doing again next summer."

More than 30 students and nine Purchase College faculty members took part in 2006, said Joe Skrivanek, professor of Chemistry and program head. It began in 1996 with funding from the National Institutes of Health, and has recently been expanded into the Research and Science Visions Program with funding from the National Science Foundation. A similar "bridge" to Purchase for students interested in the social sciences and humanities is being created with a multi-year start-up grant from the PepsiCo Foundation.

### ENGINEERING SUCCESS AT BUFFALO STATE

Buffalo State's mechanical engineering technology (MET) program gives students a broad education that encompasses mechanical design, mechanics, stress analysis, thermosciences and manufacturing—and it prepares them for careers in the rapidly changing field of engineering

Graduates "get jobs—good jobs," said Dave Kukulka, technology professor and coordinator of the mechanical engineering technology program, ranging from applications engineer to field technician to senior product designer.



Buffalo State's Mini Baja competition sparks student's engineering lust.

In the materials processing lab, for instance, students become familiar with lathes and milling machines. In the materials science and testing labs, they understand the properties of materials. "Students have to understand what material to use for different applications," Pawlik said.

In the thermal science lab, students learn the principles of thermodynamics and fluid dynamics and how to apply them. The lab is also the site for this year's Mini Baja engineering competition sponsored by The Society of Automotive Engineers. Students are challenged to plan and manufacture a new product for the consumer industrial market.

Eric Barton '04 was on a team that was challenged to redesign a Fisher-Price toy, the popular Bubble Mower. "We were able to redesign one component," said Barton, "and they used it." Barton, now a senior model maker with the company, said, "We bring the engineers' ideas to life."

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– Barbara Black, clinical associate professor of nursing and program director at Upstate Medical

## NURSES GET OPPORTUNITY TO ADVANCE

Upstate Medical University’s College of Nursing now offers a Registered Nurse First Assistance (RNFA) program that will educate and train nurses to directly assist surgeons during surgical procedures, such as clamping vessels, closing incisions and suturing, and provide pre and post-surgery patient care services.

The program comes at a time when these advanced nursing skills are in demand. “As medical procedures continue to advance technologically and the need for specialized surgery increases, the need for professional, highly trained surgical assistants is also growing,” said program director Barbara Black, clinical associate professor of nursing.

Black said that local nurses and nurse practitioners had sought out an RNFA program in Central New York so they could receive the extra training and still be near family and work. Previously, RNFA training programs have been offered at the University of Rochester and SUNY Buffalo.

“We also know there is considerable interest among nurses from some of the area’s rural hospitals,” Black said. “The advanced skill sets these nurses would bring to rural hospitals would be especially desirable as it would expand access to surgical care for patients in those communities.

## HVCC LAUNCHES “SMALL” TECH GRADUATES IN THE WORKFORCE

Hudson Valley Community College this spring graduated its first-ever class of students specifically trained to work in the emerging field of semiconductors and nanotechnology.

Three students earned associate’s degrees in Electrical Technology: Semiconductor Manufacturing Technology (SMT), one of 18 degree and certificate programs offered through the college’s School of Engineering and Industrial Technologies.

In response to the Capital Region’s growing Tech Valley initiative, the Semiconductor program trains students for employment as work station operators in clean room environments or for transfer to bachelor’s degree programs upon graduation.

“Hudson Valley Community College’s history is rooted in technology education, so it was only natural for us to seize upon this new opportunity to provide cutting-edge instruction in this emerging field,” said Phillip White, dean of the School of Engineering and Industrial Technologies. “We are proud of this program and look forward to providing Advanced Micro Devices and other companies in the region with a qualified workforce to further drive the Tech Valley initiative.”

Two of the first three graduates have already landed full-time positions with GE Global Research in Niskayuna, and the third is continuing his education. The college’s ultimate goal is to train 80 students annually, White said.



Faculty member Fred Strnisa and student Tigran Galstian operate a vacuum system in one of HVCC’s semiconductor manufacturing class. (Photo is used with permission from The Business Review).

## CAREER PREP ON THE MENU AT MORRISVILLE

Mary Jo Middaugh leaned over a large silver bowl and carefully examined its contents before hand-picking a couple pieces of ginger root and tossing them aside.

"I know how she likes it to look," Middaugh said. "She is very particular about the consistency of her product."

A student in Morrisville State College's dietetic technician program, Middaugh was referring to a client from Cooperstown who makes different kinds of chutney at Nelson Farms, a small-scale food processing facility located on Route 20 in the village of Nelson. The facility is run by the Morrisville Auxiliary Corporation (MAC), a not-for-profit organization which supports Morrisville State College.

*"Students gain so much experience working in a commercial kitchen," Karen Metz, a production coordinator at Nelson Farms, said. "When they go out into the work force, they are prepared and are not overwhelmed or surprised by anything."*

Middaugh is one of many Morrisville students putting her knowledge and skills to work at Nelson Farms. She's partnered there with Kirsten Naylor, a fellow dietetic technician student, fulfilling a requirement for their Community Nutrition class.

Students learning the basics of commercial cooking while gaining knowledge about the food-service industry as a whole, including state and federal health regulations, food safety and sanitation and aspects of kitchen management along with other specialties such as product development, marketing, and recipe formulation and testing among other things, according to Marie Smith, professor of nutrition, who teaches the class.

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## DIVERSITY EQUALS OPPORTUNITY AND ACCESS

### EOP celebrates 40 years

October marked the 40th anniversary of SUNY's Educational Opportunity Program (EOP), which uses a combination of access, academic support and supplemental financial assistance to make higher education possible for students with limited financial and educational resources.

SUNY's EOP has been creating opportunity for students since 1967, when Arthur O. Eve, then a first-year assemblyman from Buffalo, helped launch the program and open SUNY's first EOP office to 249 students on the Buffalo State campus.



Today, more than 10,000 students on 45 SUNY campuses are enrolled in EOP. More than 47,000 EOP students have earned bachelor's degrees since the program began.

EOP has enabled a variety of students from around the state to achieve their dreams over the years.

Anthony Kendall, Binghamton University '83, says he was "ill equipped" for the academic rigors of Binghamton but the summer EOP program taught him the study habits needed to succeed in the college classroom.

"I was once told by an EOP counselor that "when others doubt you, that's when you must really believe in yourself," Kendall says. "That statement resonates with me today." Today Mr. Kendall is vice president of client services, Mitchell and Titus, LLP, in Albany.

Dr. Helen Suchanic, SUNY Fredonia '89, dreamed of being a physician since she was a little girl, but she feared she wouldn't achieve her goal because she a woman of Hispanic origin.

"Of course, this did not stop me, especially after learning of the Educational Opportunity Program at Fredonia State," she says. "I realized that all people, no matter what nationality or gender, could achieve whatever goals they dreamed of, if they put their minds to it."

Today she owns a building in Dunkirk, in Erie County, where she practices family and occupational medicine.

The history of SUNY EOP is rich with similar stories of the positive impact of the program on students, their families and the communities in which they live.

SUNY EOP students perform at a very high level—first-year retention rates of 84.5 percent outrank the national public average by 11.5 percent; six-year graduation rates for SUNY EOP students at doctoral granting institutions outpace the national average for that category by more than 7 percent.

# Diversifying SUNY

## The Office of Diversity and Educational Equity

The office, which reports directly to the University Provost, is primarily responsible for devising and implementing a range of programs to promote the diversity of SUNY's academic human resources. While this objective is critically important, to be successful the Office of Diversity and Educational Equity must promote the integration of diversity related instruction and research into ongoing SUNY system-wide initiatives to enhance academic excellence.

SUNY must play a pivotal role in preparing a new generation of public and corporate leaders, as well as a highly skilled, technically proficient workforce, that can work effectively in a culturally diverse environment and in an increasingly globalized economy. Success in our fast paced, internationally competitive world depends on developing the knowledge, cognitive skills and cultural competence to respond to new opportunities and challenges propelled by the forces of globalization. The Office of Diversity and Educational Equity is centrally involved in the Provost's innovative program to recruit a stellar faculty and student body, to provide them with the support to excel, and to strategically invest resources in order to enhance SUNY's level of academic excellence. In this way, SUNY will make a significant contribution to New York State as it adjusts to the dramatic forces of change, while it tries to harness those forces for the benefit of its citizens and residents.

The Office of Diversity and Educational Equity will contribute to this challenge of our time by promoting the diversification of SUNY's human academic resources. This entails recruiting professors, graduate and undergraduate students from diverse backgrounds, including those from groups that have historically been underrepresented in higher education. The synergy between academic excellence and diversity is indispensable in the modern university, and will be achieved at SUNY through a variety of programs. With funding, the Office of Diversity will support curriculum reform that promotes diversity, fund new research directions, as well as a regionally based faculty diversity research initiatives.

The Office will organize best practices workshops for academic officers and deans to explore and develop new recruitment and retention approaches. In addition, campuses with successful diversity programs will receive support to further develop and expand these programs. By creating an intellectually supportive climate, faculty will be much more inclined to retain their appointments in SUNY's colleges and universities. Campuses will be provided with incentives to stimulate interdisciplinary dialogue among scholars engaged in diversity related research; and in the process diverse create intellectual communities. These communities will serve to attract new faculty and graduate students from diverse backgrounds, and define new areas of applied research of benefit to New York State.



## Preparing teachers for NYC Schools

SUNY's Urban Teacher Education Center assists the 17 SUNY campuses that offer teacher preparation programs to place teacher candidates in New York City public schools. Through SUTEC, prospective teachers are prepared to become competent and confident professionals in urban, multicultural environments.

The Brooklyn-based program is a vital force in New York City for SUNY's education and professional studies programs, offering the opportunity for a semester-long student teaching program in the city's multicultural, multiethnic and socio-economically diverse schools. SUTEC also offers student teaching seminars while students are in the city, hosts conferences for SUNY faculty and collaborates with campuses on urban education research.

## NY ALERT KEEPS STUDENTS SAFE

The largest coordinated campus safety and alert effort in the country was launched this fall by New York state and SUNY. NY Alert is a secure, web-based emergency alert system that will dramatically strengthen the ability of individual SUNY campuses to communicate potentially life-saving information in the event of a major emergency.

SUNY information technology and emergency response officials, working with the State Emergency Management Office (SEMO), adapted the state's all-hazards alert and notification system, NY-Alert, for use on its SUNY campuses.

"The safety of our students, faculty and staff is of the utmost importance," Governor Spitzer said. "Integrating NY-Alert with SUNY data collection methods will provide the nation's largest state university system with the most powerful emergency communications tools available."

SUNY NY-Alert can notify registrants by email, text message, telephone and cell phone messaging, Short Message Service and paging, dial-out voice messaging, web pages and fax.

Designed as an "opt-in" system, individuals must indicate how they wish to be contacted in case of an emergency. For example, a student who rarely checks his or her campus e-mail would register a personal e-mail address and /or cell phone number with the system. To find out more about SUNY NYAlert, go to: [www.suny.edu/FAQNYAlert.cfm](http://www.suny.edu/FAQNYAlert.cfm)