

# ◆ Highlights ◆

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## ***Higher Education and High-Tech Workforce Are Perfect Together:*** **Commission Awards Grants to Boost High-Tech Workforce**

The Commission on Higher Education awarded nine grants totaling \$14.3 million in July to help New Jersey colleges and universities develop the state's high-tech work-force by building on their strongest programs in key disciplines.

"The state's investment in these outstanding academic programs promises to pay substantial returns for both the institutions and the state," Governor Whitman said when she announced the grants in July.

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***"Furthering higher education programs in key disciplines will help to improve the workforce, create new jobs, and boost our overall economy."***

— **Governor Whitman**

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The High-Tech Workforce Excellence Grants will enhance a wide range of academic programs spanning all sectors of New Jersey's higher education system. The seven winning institutions are: Bergen Community College, The College of New Jersey, New Jersey Institute of Technology, Rutgers University (2), Salem Community College, Stevens Institute of Technology (2), and the University of Medicine and Dentistry of New Jersey. **See *Innovations* on page 2 for complete descriptions of the winning proposals.**

The grants respond to a key recommendation in *New Jersey's Plan for Higher Education: 1999 Update*, which calls on colleges and universities to identify their strongest programs and make them competitive with the best in the region, the nation, or the world. The long-range plan update proposes supplemental state funding to assist institutions where there is strong evidence of institutional planning and leadership in areas that coincide with state goals.

The Governor's \$165 million economic package, New Jersey Jobs for the New Economy, targeted four key academic areas that directly affect the high-tech workforce:

- Computer Science and Information Technology
- Physical, Life, and Health Sciences
- Engineering and Engineering Technology

- Science and Mathematics Teacher Education

"In addition to spurring continued economic growth, these exciting proposals will raise the overall prominence of New Jersey higher education," said Commission Chairman Al Koepp. "By taking strong academic programs to the next level, these grants will help to attract top faculty and students from within New Jersey and out of state."

The nine winning programs were selected from among 45 proposals submitted by colleges and universities in all sectors of the higher education system.

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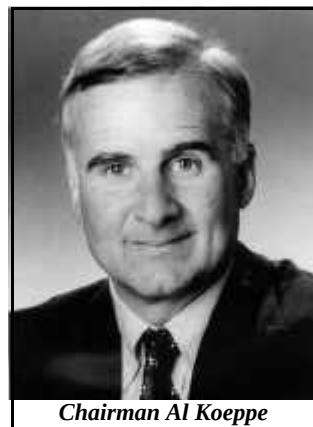
## **Koepp Takes Helm as New Chair**

Al Koepp, a member of the Commission on Higher Education from its inception, was elected by his colleagues in June to a two-year term as chairman.

"In the six years since Governor Whitman established it as the coordinating body for New Jersey higher education, the Commission on Higher Education has had its share of successes, thanks to the cooperation it has enjoyed with the higher education community at large," said Mr. Koepp, who is president and chief operating officer of Public Service Electric and Gas Co.

"As chairman, I expect to build on those successes in planning and policy development and continue our commitment to advocacy for higher education. Our system of public and independent colleges and universities is critical to New Jersey's economic growth and vitality. All involved must work to raise awareness of higher education's important contributions," he said.

The Commission also elected as vice chair William M. Freeman, president of the Public Communications Group of Verizon Communications, Inc. Past chairman Alfred J. Cade, John Kelly, and Amy Handlin were elected to serve on the Commission's Executive Committee.



**Chairman Al Koepp**

# I N N O V A T I O N S

## Nine Projects Win High-Tech Workforce Excellence Grants

In this edition, *Innovations* profiles the nine projects awarded High-Tech Workforce Excellence Grants by the Commission on Higher Education.

### **Bergen Community College**      **\$573,300** ***High Technology Surgical Workforce Project***

The project will enhance and expand the surgical technology certification program to more fully meet New Jersey's growing demand for skilled workers in high-tech operating rooms. The grant will be used to create a simulated high technology operating room, provide evening and weekend clinical experiences for working students, and deliver advanced continuing professional education.

### **The College of New Jersey**      **\$2,498,074** ***Expanding a K-12 Science, Mathematics, Engineering and Technology (SMET) Teacher Preparation Program***

The grant will expand the college's nationally recognized elementary-level science, math, engineering, and technology (SMET) program to include secondary school teachers. It will prepare secondary school teachers who can make these critical subjects appeal to a wide range of students, producing future workers who are comfortable, confident, and competent in applying technological knowledge and skills to the demands of the workplace.

### **NJIT**      **\$2,500,000** ***New Jersey Information-Technology Opportunities for the Workforce, Education, and Research (NJITOWER)***

The project will strengthen the university's information technology programs to address rapid technological developments now driving the economy in New Jersey and elsewhere. Increased opportunities for students to collaborate with industry and participate in research will make NJIT a destination of choice for students preparing for careers in information technology.

### **Rutgers University, New Brunswick**      **\$1,335,250** ***University-Industry Partnership to Enhance Biotechnology Education for a High-Tech Workforce***

The grant will create a facility for education, research, and training in the emerging biotechnology field of high throughput screening, the automated research equipment prevalent in the pharmaceutical and biotechnology industries. The project will add new lab courses utilizing state-of-the-art equipment as well as corporate internships.

### **Rutgers University, New Brunswick**      **\$2,500,000** ***Tissue Engineering: A New Frontier in Materials, Biology, and Medicine***

Building on the university's strong programs in engineering, biotechnology, and biomaterials, the grant will create a unique interdisciplinary undergraduate training program to meet the intense demand for tissue engineers, one of *Time Magazine's* "hottest jobs in the foreseeable future."

### **Salem Community College**      **\$204,163** ***Process Technology: Meeting the Needs of a High-Tech Workforce***

The grant will expand the college's process technology certificate program, which addresses the educational needs of chemical manufacturing technicians. Providing a two-year process technology degree will prepare graduates to meet regional and statewide employment needs in the chemical, petrochemical, and pharmaceutical industries.

### **Stevens Institute of Technology**      **\$1,341,800** ***Implementation of Technogenesis in the Undergraduate Engineering Curriculum***

The project will infuse technogenesis — which engages students and faculty in the conception, design, and commercialization of new technologies — into undergraduate engineering programs. Emphasizing entrepreneurial skills, the project will produce engineers who can innovate and lead in cutting-edge technological fields.

### **Stevens Institute of Technology**      **\$1,078,560** ***K-12 Partnership Enhancement***

The grant will expand the highly successful K-12 Partnership Program to provide intensive professional development to science teachers from Abbott district schools. It will strengthen teaching and learning in science, mathematics, and other core subjects through the meaningful integration of Internet-based curriculum resources.

### **UMDNJ**      **\$2,263,000** ***Graduate Program in Bioinformatics***

The project will create an interdisciplinary bioinformatics curriculum to address industry's need for scientists and researchers who can transform data into a new understanding of biological systems, ultimately generating breakthroughs in drug discovery and patient treatment.

## ***Gearing Up for College:*** **The First Year of the NJ GEAR UP State Project**

Hundreds of middle school and high school students from four New Jersey urban school districts had the time of their lives last year — gearing up for college.

They devoted their Saturdays, weekday afternoons, and summers to taking classes in English, math, and science. They worked with tutors and mentors and they studied for achievement exams.

The first group of students participating in New Jersey's GEAR UP program have already been rewarded with better grades, certificates of achievement, and the opportunity to participate in field trips and celebrations.

But the biggest payoff from their involvement in the grant-funded program will come when they graduate from high school and go on to college. Each participant who completes the program and enrolls in a New Jersey institution will receive a NJ GEAR UP scholarship of up to \$3,000 each year, contingent on continued federal funding.



*Two students in the CHAMP/GEAR UP Program at Rowan University conduct a science experiment.*

The Commission on Higher Education won a \$10 million GEAR UP grant from the U.S. Department of Education last August. Led by the Commission, the New Jersey GEAR UP State Project supports six colleges and universities in serving students from 17 middle and high schools in Camden, Trenton, Newark, and Jersey City.

The NJ GEAR UP path to college is hands-on and effective. In the first year alone, NJ GEAR UP participants took part in a wide variety of learning experiences to increase their academic readiness, inform them about post-secondary education, and motivate them to complete high school and go on to college.

With the help of hundreds of instructors, tutors, mentors, counselors, parents, and program staff, students have the opportunity to:

- Tour colleges and universities
- Live on a college campus for part of the summer
- Talk about peer pressure and other issues they will confront in high school
- Study algebra to improve their math grades
- Improve public speaking and writing skills
- Buy stocks and track their progress
- Build and program robots at a Summer Engineering Institute
- View constellations in the portable StarLab Planetarium from the Liberty Science Center
- Take trips to the Hayden Planetarium, the Camden Aquarium, and the Franklin Institute
- Prove a scientific hypothesis
- Sponsor a Community Census Day
- Write, report, and take photos for a newsletter
- Conduct scientific experiments and studies at the Environmental Center in Camden
- Camp out overnight

The program also helped graduating seniors grapple with college and financial aid applications. By the end of the program's first year, nearly all of the 47 NJ GEAR UP seniors had been accepted to a college or university (40 in New Jersey and 6 out of state).

Student by student, NJ GEAR UP is helping New Jersey young people realize their dreams of a future that includes a college education. As the program kicks off its second year, new 7th and 8th graders will be recruited while high schoolers continue to develop their academic skills and focus on preparing for college.

Learn more about GEAR UP by visiting the Commission's website at [www.state.nj.us/highereducation](http://www.state.nj.us/highereducation).

### **Participating Institutions and Partners**

**Rowan University** — CHAMP/GEAR UP  
**University of Medicine and Dentistry of New Jersey, Rutgers University, and New Jersey Institute of Technology** — Consortium for Pre-College Education in Greater Newark/GEAR UP  
**Mercer County Community College** — Project SMILE/GEAR UP  
**New Jersey City University** — College Bound/GEAR UP  
**NJ Higher Education Student Assistance Authority**  
**Educational Opportunity Fund**  
**NJ Department of Education**

# Governor Names Two New Student Members to Commission

Michelle Kateman and Tedd Konya, the first students to serve full terms as voting members of the Commission on Higher Education, were sworn in on September 22.

## Budget Proposals Under Review

The Commission is recommending greater state investment in New Jersey’s colleges and universities, directly linking the budget request to higher education’s role in addressing the economic and social challenges facing the state.

The Commission’s budget policy statement for FY 2002 is slated for adoption at the October 27 meeting. It is accompanied this year by a supporting document that bolsters the budget request with extensive data and information articulating higher education’s integral role in expanding the economy, developing the workforce, preparing future leaders, and extending opportunities to all New Jerseyans.

The budget policy statement and accompanying supporting document are available on the Commission’s website at [www.state.nj.us/highereducation](http://www.state.nj.us/highereducation).

Ms. Kateman, a student at Ramapo College of New Jersey, expects to earn a Bachelor of Arts degree in political science, as well as her certification in secondary education in 2001. She is active in the Ramapo College Student Government Association, and served as president of the college’s Political Forum and as president of the Alpha Phi Omega Community Service Organization. She also tutors students with learning disabilities. Ms. Kateman received several awards for her commitment to service and is listed in *Who’s Who Among American Colleges and Universities*.

Mr. Konya, a biology major at Fairleigh Dickinson University in Madison, currently serves as president of the university’s Student Government Organization and as a general member of the Resident Student Association. He is captain of the FDU cross-country team and is also active in the Tau Kappa Epsilon Fraternity.

Coincidentally, both of the students hail from East Brunswick.

The students were nominated by their campus student government organizations for appointment to the Commission by Governor Christine Todd Whitman. They will serve one-year terms.

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