

COLLABORATIVE ACTIVITIES WITH PUBLIC SCHOOLS

The following summary provides examples of UConn's recent and on-going collaborations with Connecticut's public schools. Development of the summaries is on-going and is being updated as new information becomes available.

Teachers for a New Era Project at UConn (TNE) is a national project funded by the Carnegie Corporation of New York with additional support provided by the Annenberg and Ford foundations to prepare exceptional teachers. The TNE project improves the quality of teachers in K-12 classrooms through three design principles: a) evidence based decision making; b) engagement of arts and sciences disciplines in the preparation of teachers; and c) clinical practice as part of the preparation of teachers and support of beginning teachers. TNE, the Neag School of Education, the College of Liberal Arts and Sciences, and the College of Agriculture and Natural Resources sponsor pre-service and in-service activities in the K-12 schools for beginning teachers. TNE also works with several school systems and the Connecticut State Department of Education to establish a state-wide database of teacher and pupil data for programmatic feedback to teacher preparation programs and educational policy makers.

Other collaborations of Neag School of Education with Connecticut's public schools:

- Neag faculty, staff and students provide services and assistance to schools in all 169 towns in Connecticut.
- *Transforming School Counseling to Improve Minority Achievement:* Neag faculty and graduate students work with administrators, teachers and guidance counselors at Weaver High School and Batchelder Elementary School in Hartford and Manchester High School to help minority students to set and meet goals for higher education.
- *Husky Sport:* Operating through the Anderson Recreation Center in Hartford, Neag organizes formal sport instruction with the help of UConn student-athletes and offers life skills lessons on topics such as conflict resolution and body image. The project examines factors that limit youth physical activity participation in Hartford and offers after-school and summer activities and programming.
- *Project M3: Mentoring Mathematical Minds:* A five-year collaborative research effort with 10 schools in Connecticut and Kentucky focuses on improving student attitudes about math and math achievement.
- *Connecticut's Reading Recovery Center:* Neag faculty partner with more than 40 Connecticut schools each year to improve literacy and reading skills of teachers.
- *Schoolwide Enrichment Model Reading Framework to Increase Achievement, Fluency, and Enjoyment in Reading:* The reading intervention program in several Hartford schools results in 90% of the students achieving sustained reading of 30-45 minutes; these students previously could not read for more than 5 minutes at a time. A pilot program underway in two Manchester elementary schools is focused on increasing sustained reading behavior among students with short attention spans.

Science, Technology, Engineering and Mathematics (STEM) Initiatives

Science, Technology, Engineering and Mathematics (STEM fields) are key areas for educators. UConn addresses needs in these fields in many ways, as are shown in the following examples.

College of Agriculture and Natural Resources and its Cooperative Extension Program:

- *Connecticut State FFA Career Development Events Competition* enables high school agriculture science students to demonstrate their accomplishments.
- *High School Student Internships* for the Bloomfield High School Agriculture and Technology Program enable Bloomfield students to work with UConn postdoctoral fellows and graduate students in laboratories.
- *Collaborations with High School Biology Teachers* at Edwin O. Smith High School has resulted in new experiential learning experiences for students in laboratory modules on molecular genetics, protein modeling, and information transfer linking gene sequences to whole organism (plant) functioning.
- *Beetle Farmer Program* involves schools, families, scouts, organizations and the public in the rearing of beetles for the control of invasive plants.
- *Connecticut Curriculum for Integrated Pest Management (IPM)* for school children and 4-H Youth supports the state science standards for K-12. IPM workshops also are organized for teachers.
- *Classroom Incubator Management* instruction to teachers includes embryology and invitro observation of chicks growing outside of the shell. Approximately 460 students were involved last year.
- *4-H LIFT (Learning, Interaction, Friends, and Talents)* is an after-school program serving students in grades 5-8 in Windham Middle School. About 12% of the total school population participates in the program each year.
- *4-H Center at Auer Farm* provides hands-on science education opportunities for 19,000 students (pre-K-6 grades primarily) in the Hartford City and Bloomfield Schools.
- *Fairfield County 4-H Program* partners with Danbury Schools to improve workforce readiness, business organization, money management, and entrepreneurial skills.
- *Adventures of Lead Busters Club* is a Cooperative Extension System and Family Studies partnership to teach Hartford 1st and 2nd graders the hazards of lead poisoning.

College of Liberal Arts and Sciences:

- *Kids Are Scientists Too (KAST)* is a summer day camp for students entering 5th to 10th grades and involves faculty and staff from the Departments of Chemistry, Physics, Molecular and Cell Biology, and Marine Sciences, and the Connecticut Archaeology Center.
- *Visiting Junior Scientist Program* for preschool-8th graders, *Kids N Chemistry Saturday* program, and *Junior Science and Humanities Symposium* are organized and offered by the Chemistry Department.
- Mathematics Department faculty has a state-supported pilot partnership with the New Britain public schools to improve the teaching of math.

- The first-ever UConn *Physics Olympiad* for high school students took place in 2006, with 17 teams from Connecticut high schools participating in physics challenge activities at the Storrs campus.
- The Physics Department partners with Upward Bound in a pilot summer enrichment program to introduce high school students to hand-on physics laboratory experiences while earning UConn credits for class work. *Students' Sky Calendar* and astronomy presentations also are provided by the Physics Department in the Windham and Hartford public school districts.
- *Marine Scholars* from shoreline area high schools each year are mentored by the Marine Sciences Department and the Maritime Studies Program at the Avery Point Campus. Scholars attend seminars, work on experiments with faculty members, and learn about careers in oceanography and the marine economy.
- *BioBlitz*, a biennial species study and count organized by the Center for Conservation and Biodiversity and the Connecticut State Museum of Natural History, was last held in 2005 at Two Rivers Magnet School in East Hartford, with more than 170 scientists and 30 middle school students participating. The program was held in 2007 in Middletown with the participation of Middletown students.
- *Visiting Scientists Program*, offering hands-on archaeological exploration experiences to all 4th grade classes in the Mansfield public schools, and an *Archaeology camp* for underserved students from the New Haven Cosmic Cultures program, are sponsored by the Connecticut State Museum of Natural History and Connecticut Archaeology Center.

School of Business:

- *Connecticut Information Technology Institute (CITI)* in Stamford provides training in technology to Stamford City Schools through Stamford Board of Education's \$15 million grant from GE. Stamford is one of only three school districts in the country to receive this grant under the STEM Program. CITI has received such high evaluation scores (96/100) that two other school districts are studying the Stamford/UCONN-CITI model to improve their own programs.
- CITI also provides support for the Academy of Information Technology & Engineering (AITE), a state of the art technology high school in Stamford and the only regional magnet high school for technology in the state

School of Engineering:

- *Engineering 2000* is a week-long residential summer camp for promising high school juniors and seniors to explore engineering disciplines via a variety of hands-on experiments.
- *Connecticut Invention Convention* is a state-wide K-12 competition held at Gampel Pavilion on the Storrs campus. For seven consecutive years, it has attracted an annual attendance of 2,000.
- *Da Vinci Workshop*, a five-day residential, all-expenses paid short course, introduces selected New England (primarily Connecticut) middle and high school math/science teachers to engineering and technology concepts and academic units to add to preexisting curricula. Participating teachers earn continuing education credits.

- *Galileo Project*, a multi-faceted educational program funded by the National Science Foundation and developed by the School of Engineering and the Neag School of Education, introduces high school students and K-12 educators to core engineering concepts and problem-solving practices. The Project enriches the educational workforce with skilled technology-oriented teachers, fosters students with more diverse and practical technology skills, and enhances student career options.
- *Pre-Engineering Program (PEP)* is a Saturday enrichment program for 7th, 8th, and 9th grade students with hands-on math and science exploratory activities aimed at increasing interest in careers involving STEM fields. PEP meets on alternate Saturdays from September through May.
- *Multiply Your Options (MYO)* is a one-day workshop for 8th grade girls aimed at exposing them to female role models in STEM fields. Female facilitators with STEM careers and female role models present problem solving activities and tools for pursuing a profession in science, technology, engineering, or math.
- *BRIDGE*, a five-week residential summer program for admitted underrepresented minorities and women, focuses on core math and science curricula that are the foundation of engineering studies.
- *Northeast Regional Science Bowl*, through its one-day annual tournament, brings to Storrs more than 40 high school teams from Connecticut, Rhode Island and New Hampshire. The Bowl includes both a Jeopardy-style quiz competition and a model fuel cell car race. The winning team competes at the National Science Bowl in Washington, DC.
- *Regional Chess Tournament*, first held in 2006, is planned to become an annual event for students enrolled in grades 9-12. Top performers are eligible to receive renewable scholarships to UConn Engineering programs.
- *Engineering Student Societies* include the UConn student chapters of the National Society of Black Engineers (NSBE), Society of Women Engineers (SWE), and Society of Hispanic Professional Engineers (SHPE). These chapters conduct recruiting activities in Bridgeport and Waterbury, including visits to elementary schools to present age-appropriate engineering projects. NSBE members visit East Hartford High School each Saturday to tutor and mentor students.
- *PATHS to the Future: A Community of Learners* is a program to help urban students prepare for, and aspire to, a college education. A five-year grant from the U.S. Department of Education has enabled Engineering and Family Studies faculty to work with students at Batchelder, a K-8 Hartford public school. Dramatic increases in the number of students graduating from high school (90%) and the number proceeding to post-secondary education (50%) have resulted in the assisted cohort groups.

Diversity Initiatives

A variety of diversity initiatives, in addition to those mentioned in preceding paragraphs, contribute to the University's continuing collaborations with public schools to improve the high school graduation rates and college persistence and graduation rates of all of Connecticut's students.

The *Louis Stokes Alliance for Minority Participation (LSAMP) Leadership and Academic Enhancement Program* is part of an alliance of New England institutions that receives funding through the National Science Foundation to strengthen the preparation, representation, and success of historically underrepresented students in the science, technology, engineering, and mathematics (STEM) fields. Participants engage in community service projects helping other historically underrepresented students in middle and high school.

The Health Professions Partnership Initiative (HPPI), formed in 1996, and renamed The Aetna Health Professions Partnership Initiative at the UConn Health Center following a \$2 million gift from the Aetna Foundation, has continued to provide long-term academic enrichment and support activities for underrepresented and disadvantaged students in Hartford-area middle and high schools. HPPI is a cooperative effort of faculty and staff of the University's Schools of Medicine and Dental Medicine, its Storrs-based School of Nursing, School of Pharmacy and Physical Therapy and Pre-Engineering Programs, UConn's Greater Hartford Campus, Central Connecticut State University, and Wesleyan University, working with the Hartford Public Schools to recruit minority and low-income students for the medicine, dentistry, biomedical research, nursing, pharmacy, and allied health professions.

Center for Academic Programs (CAP), in association with Undergraduate Admissions, works with public school students from underrepresented groups:

- *Gear-Up* encourages New Haven 6th graders to complete high school and attend college.
- *Educational Talent Search* prepares New Haven and Windham middle and high school students from low income backgrounds for college.
- *Upward Bound/ConnCAP Program* promotes high school completion and college placement to 9th graders in Hartford, New Haven, Waterbury, and Windham with academic year activities and a summer program.
- *Student Support Services Program* provides pre-freshman summer program assistance to students admitted to UConn.

Health Center:

- *Great Explorations Middle School Program* provides enrichment activities for 6th graders and after school programs for 7th and 8th graders at target schools in the Hartford Public School system.
- *Jumpstart Saturday Academy and Summer Programs*, held at UConn Greater Hartford Campus, provide math, language, arts and sciences instruction for 9th and 10th graders to increase knowledge and understanding in these areas while developing interest in health careers.
- *Juniors Doctors Academy*, designed for students with at least a B average, develops math and language skills, prepares students for the SAT, and encourages them to pursue careers in the health professions.
- *Health Professions Academy* at Bulkeley High School and the *Health Careers Academy* at Weaver High School offer academic enrichment programs sponsored by the Department of Health Career Opportunity Programs and include opportunities for student interactions with Health Center faculty and staff to enhance interest in health professions.

School of Business:

- *Teenage Minority Business Program*, developed by the School of Business, provides high school students the opportunity to visit UConn and interact with faculty, students, and alumni.

School of Pharmacy:

- Pharmacy faculty work with the New Haven Public Schools to increase the number of underrepresented minorities in pharmacy.
- UConn Chapter members of *Student National Pharmaceutical Association (SNPhA)*, representing minority pharmacists, serve as mentors for high school students interested in a career in pharmacy or the health sciences.

School of Law:

- *Connections Mentoring Program* of the School of Law promotes legal education opportunities with high school students from historically underrepresented groups, and its *Street Law Seminar* provides information on legal issues.

Other K-12 Learning Collaborations

University collaborations with Connecticut public schools, in addition to STEM and diversity initiatives, include a wide variety of programs and services.

College of Liberal Arts and Sciences:

- Political Science Department provides *United Nations Programs* for high schools and the *GlobalEd Project* for training middle and high school teachers in information technology, social sciences, and computer-assisted simulations in international affairs.
- History Department works with the Capital Region Education Council (CREC) to improve the teaching of history in secondary schools.
- Writing Center in the Department of English offers a *Writing Tutorial Center* at Hartford Public High School.
- Modern and Classical Languages Department hosts teachers and students from a variety of schools at the *Latin American Theater Conference*. It also provides Early College Experience courses in French, German, Spanish, Italian, and the Classics in high schools.

School of Business:

- *Connecticut Youth Financial Institute* enables Connecticut high school students to visit the School for a program designed to educate students about personal finance. Three information seminars, each taught by a Business faculty member, provide advice on: (1) money and banking; (2) goals, planning, budgeting, and savings; and (3) investing.
- *Jump\$Start Coalition*, an organization comprised of government agencies, financial institutions, and corporations seeking to increase financial literacy among Connecticut's youth, co-sponsors the program with the School.

School of Fine Arts:

- *Music and Drama Productions and Art Exhibits* reach students in K-12 in all 169 towns in Connecticut, either through attendance at campus events or in School faculty outreach activities in the schools.
- *University Symphony Orchestra* enables public school musicians to rehearse and perform with School of Fine Arts faculty.

School of Nursing:

- *Healthy Schools Collaborative* develops best practices for public schools around health topics, especially obesity, for 6 school districts: Groton, Waterford, New London, Ledyard, Montville, and Stonington.
- *Healthy Kids are Happy Kids*, a program at an elementary school in Groton, provides physical activity and nutrition classes for grades 4-5 during lunch and recess.

School of Pharmacy:

- *Science fair judges* and career day presenters are provided by Pharmacy faculty to public schools throughout the state.

School of Social Work:

- *Safe Schools/Healthy Students* is a federally sponsored initiative for a partnership of the School with the Hartford Public Schools to reduce the incidence of alcohol, drug use and violence in the schools and to improve school bonding and school performance. Student interns serve in school-based student family assistance centers and mental health clinics. The School's Institute of Violence Prevention and Reduction also contributes to the initiative.
- *MSW Student Internship Program* annually involves some 74 graduate social work students who each complete internships of 560 hours in school or related settings throughout the state.
- The School also offers certification in school social work.

Health Center:

- *Learn and Service America*, an arm of the Corporation for National and Community Service agency, and the Northwestern Connecticut Area Health Education Center (AHEC) in Middlebury have a federal grant to support the recruitment of high school students into the Connecticut Youth Health Service Corps for volunteer service in the health professions. The UConn School of Medicine collaborates with the Connecticut Department of Public Health, the Connecticut Primary Care Association, and the National Health Services Corps to develop the community-based, service-learning AHEC programs.
- UConn's dental students, members of the American Student Dental Association (ASDA), visit second and third graders in six of Hartford's schools to teach hundreds of children the importance of oral hygiene. They teach children how to brush and floss properly, how important it is to see a dentist twice a year, and the proper diet to avoid tooth decay. The program is ASDA's single largest community service project and is the School of Dental Medicine's contribution to national *Give Kids a Smile Day*.

Center for Continuing Studies:

- *Community School of the Arts*, coordinated by the Center, offers school age youth through early childhood music programs, musical theatre, art, dance and music classes, and camps.
- *Homeland Security Program* provides training for school systems on emergency preparedness and preventing targeted violence in schools.

Early College Experience (ECE) Program:

- The University offers in 120 Connecticut high schools 37 different first-year University courses in the high school setting, enabling high school students to earn high school and college credits concurrently. Early College Experience courses, formerly known as High School Cooperative courses, are equivalent to those offered at the University and are taught by 542 high school teachers certified as adjunct faculty in the University's ECE Program.