

## The Preservation Arts and Technology Curriculum at Brooklyn High School of the Arts

by *Kate Burns Ottavino*

The New Jersey Institute of Technology's Center for Architecture and Building Science Research (NJIT/CABSR) has developed a unique academic curriculum and preservation internship program for a preservation arts high school. Drawing on the inherently interdisciplinary nature of contemporary historic preservation practice, the innovative program introduces high school students to the myriad career opportunities available in preservation arts and crafts while at the same time providing a comprehensive, college preparatory academic education that meets state and local standards.

The curriculum and internship program have their roots in the 1993 World Monuments Fund symposium, "Employment Strategies for the Restoration Arts: Craft Training in the Service of Historic Preservation," which highlighted, among other things, the lack of national standards for the craft skills used in historic preservation, the limited number of training programs in the United States, and the demonstrated need for skilled restoration artisans.<sup>1</sup> Following up on the concept of a preservation high school introduced by New York City Council member Ken Fisher of Brooklyn, the New York City Department of Education (NYC/DOE), working with the NJIT/CABSR, prepared a model preservation-based college preparatory curriculum and an internship program for the New York City public schools in 1995. Two years later, the NYC/DOE launched a pilot program at Queens High School of Arts and Business, the ultimate goal of which was the eventual expansion of the model to a four-year Preservation Arts High School. The World Monuments Fund (WMF), the National Park Service's National Center for Preservation Technology and Training, and the National Endowment for the Humanities provided funding for the initial curriculum and internship development. With the closing of the Sarah J. Hale High School in Brooklyn in 1999, the Department of Education had a home for the new school, now called Brooklyn High School of the Arts, funded by the NYC/DOE and the WMF.

### Program Plan and Methodology

All students enrolled in the Brooklyn High School of the Arts (BHSA) receive a preservation-based academic education that meets the New York City Department of Education's performance standards, New York State learning standards, and the New York State Regents standards for academic content. Preservation Arts is offered as one of four major areas at BHSA, along with

SAMPLE PACING SCHEDULE 9TH GRADE FALL PRESERVATION ARTS CURRICULUM (NYS CORE)				
NEW YORK STATE SCIENCE 12.1.1	HISTORY	ENGLISH	MATH	EARTH SCIENCE 2
				
				
				
				
				
				

FIGURE 1  
Ninth grade Preservation Arts students receive the recommended New York State Regents academic curriculum through interdisciplinary study of the Brooklyn Bridge (Courtesy of the author)

Fine, Visual, and Performing Arts. The goal of the Preservation Arts and Technology program is to prepare high school students for higher education or work as preservation artisans.

Observation of current Career Technical Education teaching methods in New York public vocational schools indicated that vocational training was largely isolated from the traditional academic program. A more fully integrated humanities curriculum was required to make the academic and the applied Preservation Arts curriculum complementary. In an effort to create a curriculum that addressed both academic knowledge and applied preservation skills, the NJIT/CABSR researched the evolution of the building arts in the United States prior to World War II, when building crafts and skills were passed down from father to son in a manner similar to that of the European craft guilds. With the support of the WMF, the NJIT/CABSR visited the Compagnons du Devoir in France to study the European craft system, specifically the “tour” tradition in which artisans travel from city to city, apprenticing in different ateliers to learn their craft. Those aspects of the Compagnon model that could be integrated into a high school academic experience in the United States were adopted, such as internships.<sup>2</sup>

### Preservation-Based Academic Curriculum

The preservation-based academic curriculum focuses on the creation, preservation, and interpretation of historic structures and their components. Working as a team, teachers in core academic subject areas such as history and social studies, English, math, and science, organize their lessons around a common architectural theme. The landmarks that are incorporated in the curriculum are selected based on how well they correspond with the periods and topics covered in the history class. As a result of this overlap, students and teachers find their work integrated, reapplied, and reinforced throughout the curriculum.

For example, the history of transportation and industrial development is taught through the Brooklyn Bridge and its historic context. The study of the bridge and the engineering principles behind it offers lessons in applied mathematics and science, including analyses of the natural forces, such as wind, waves, and erosion, that have informed or continue to inform the bridge's design, construction, and preservation. (Figure 1) Students gain a contextual understanding of the period in which the bridge was built by reading the major literary works of day, specifically the works of Whitman, Douglas, and Wharton. Historic preservation thus functions as the "bridge," figuratively speaking, that links seemingly disparate academic subjects across disciplines and illuminates their relevance to contemporary preservation practice.

### Preservation Arts and Technology Curriculum

Students enrolled as Preservation Arts majors receive supplemental classroom and hands-on instruction. (Figure 2) In addition to the four-year preservation-based academic curriculum, the three-part Preservation Arts curriculum includes 9th- and 10th-grade Preservation Arts elective classes and 11th- and 12th-grade Preservation Arts and Technology classes. Students in the 9th- and 10th-grade Preservation Arts electives study Weeksville (the first free African American community in Brooklyn) and Green-Wood Cemetery to acquire the visual literacy, vocabulary, survey, and study skills necessary for understanding the philosophy and practice of historic preservation. The 11th- and 12th-grade classes concentrate on the materials and technologies used to construct historic buildings, the physical means by which they deteriorate, and how they are preserved.



FIGURE 2  
Students Tiana Scott and Jessica Alonso design and create their own stained glass piece with instruction from the Brooklyn Stained Glass Conservation Center. (Courtesy of the author)



FIGURE 3  
An artisan and student intern collaborate on carving a floral bas-relief in stone. (Courtesy of the author)

Preservation Arts and Technology students receive studio and fieldwork training that emphasizes the skills needed to become valuable historic preservation interns. (Figure 3) Internships with preservation organizations are sponsored by the Department of Education and take place primarily during the summer months. Over the course of the program, internships provide 540 hours of hands-on training in the preservation discipline of the student's choice. Internships offer an introduction to research, survey, and documentation of a structure; urban and architectural design; adaptive reuse; government and community participation; and conservation and replication of deteriorated components such as stone, stained glass, and plaster. Interns maintain a portfolio as part of their graduation assessment requirements.

Throughout the school year, preservation specialists and artisans visit classes and talk about and demonstrate their work as well as offer perspectives on their disciplines and the skills they acquired. Speakers and internship sponsors also act as reviewers for preservation arts assignments. Graduates will obtain a Preservation Arts and Technology diploma that fulfills the requirements for industry-endorsed Career Technical Education (CTE) high school diplomas in

New York State, like CTE course sequences in Nursing, Refrigeration, or Carpentry. The Association for Preservation Technology and its affiliate, the Preservation Trades Network, has endorsed the final assessment examination.

### **Professional Development**

The success of the Preservation Arts curriculum depends in large part on interdisciplinary, professional development opportunities for teachers. Teachers may not have the background in architecture or historic preservation to appreciate, relate to, and integrate that information into a standard Regents curriculum. To facilitate an experiential learning process similar to that provided for students, teachers are encouraged to visit the students at their summer internships and learn about each landmark and its preservation issues through tours led by representatives of the NJIT/CABSR. A one-week professional development program helps teachers prepare as a team for the coming year. Each teacher prepares sample lesson plans, and the group designs an interdisciplinary project based on these shared curriculum ideas.

Teacher development continues throughout the academic year with regular sessions with NJIT/CABSR representatives. Architectural historians may work with history teachers or engineers with math teachers on practical academic content applications. The recommended time for professional development per teacher is five days during the summer and one to two hours weekly throughout the year in individual content area and interdisciplinary group sessions.

### **Current Results**

The Preservation Arts curriculum has developed thus far in the context of a nascent high school environment. As the project has progressed, so has the understanding of the parameters needed for the program model to thrive, such as the identification of lead teachers who will help mentor other teachers, the creation of planning teams, and the provision of time during the school day for teacher preparation. Generally, teachers found the landmarks to be well chosen for academic course content coverage. They also felt that having preservation specialists involved in professional development and the classroom was invaluable.

Middle school recruitment has been essential in identifying potential preservation arts majors. Many students do not know what historic preservation is, but they respond favorably once introduced to it. Students interviewed after their first preservation arts class responded with the following sample commentaries—

*When I came to this school I didn't know what preservation arts meant and now*

*only nine months later, I learned not only the meaning of the word, but also other things like names of things on buildings and history. I am glad I got an opportunity to learn how to preserve and find information.*

*You learn a lot of history and it not only benefits your grade it benefits you later on in life—like in college or applying for a job.*

The preservation practitioners themselves have been stalwart. Every year there are more internship sponsors than students (many students go away for holidays or have summer school). Many internship hosts have been part of the program as speakers and sponsors every year, generously advising on how to improve the program and always encouraging and supporting “their” students. Every year at a fall internship gathering, students and their mentors come together to share their portfolio products and summer experiences. It is truly gratifying to see the obvious familiarity and respect with which they interact and how much the students have matured. Parents at these gatherings are particularly enthusiastic about their children’s development.

The first anticipated graduating class of Preservation Arts majors is now in the 11th grade. Seventy-nine percent of them are performing above the class average. This trend bodes well for reports on their graduation rate and placement in June 2007. Though based in New York City, the Preservation Arts High School curriculum is envisioned as a nationwide program. As a national program, the curriculum content would respond to each locale’s built environment but maintain standards that permit state and nationwide assessment of student performance in both the required academic areas and within the discipline of historic preservation.

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### Notes

1. Patricia R. Bransford, Tara-Shelomith Krause, and Kate Burns Ottavino, *Sustainable Urban Preservation: Developing A Model Program For New York* (New York, NY: World Monuments Fund Report, 1997). This report indicated that most programs created to train preservation artisans failed because they were not central to the mission of the sponsoring organization or they were unable to incorporate the academic education necessary for a complete understanding, appreciation, and acquisition of preservation skills.
2. Ezra Ehrenkrantz, Mark Alan Hewitt, and Kate Burns Ottavino, *French American Student/Faculty Exchange Program in Preservation Crafts Training* (Newark, NJ: Center for Architecture & Building Science Research, New Jersey Institute of Technology, 1998).

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