

# PROPOSAL *for the* School of Process Technology @ Kashmere

### OVERVIEW

The School of Process Technology Program was developed in response to requests from local chemical and refining industries and provides students with training for high skill, high wage jobs needed in the manufacturing industry. The program will provide:

- Courses taught by college professors utilizing a blend of face-to-face and online instruction
- Meaningful and engaging project-based assignments
- An Associate’s Degree earned by August after the senior year of high school
- Valuable industry certifications embedded into the coursework
- Preparation to move directly into the workforce after graduation or on to pursue additional education at a premier college or university
- Technology-rich college atmosphere

### PERSONALIZATION

Every student at a **HiLZ** school has a staff advisor who monitors their personal, academic, and professional development. Students pursue personal interests through projects and compile and present their best work in personal digital portfolios. Facilities are tailored to individual and small-group learning, including networked wireless laptops, project rooms for hands-on activities and exhibition spaces for individual work.

### PREPARATION

**HiLZ** schools make no distinction between college preparation and career & technical education; the program qualifies all students for college and success in the world of work immediately upon graduation. Enrollment is non-selective, and there is no tracking at I-TECH. The curriculum is rigorous, providing the foundation for entry and success at colleges and universities as well as direct-entry into the workforce.

### PRACTICE

**HiLZ** school students experience some of their best learning outside the school walls. Juniors complete a semester-long academic internship in a local business or agency. Seniors develop substantial projects that enable them to learn while working on problems of interest and concern in the community. Earlier, in 9th and 10th grade as well as middle school, students may “shadow” an adult through a workday, perform community service in a group project, or engage in “power lunches” with outside adults on issues of interest.

### PERFORMANCE

Assessment is performance-based and all students develop projects, solve problems, and present findings to community panels. All students are required to complete an academic internship, a substantial senior project, and a personal digital portfolio.



## CURRICULUM AND PLAN OF STUDY

### Required Academic Classes

Students will complete four years of dedicated classes in Social Studies & Language Arts, Mathematics, English, and Science.

### Dual-Credit Enrollment and/or Advanced Placement

Students will have the opportunity for Advanced Placement and Dual -Credit Enrollment academic classes throughout their high school career.

### Career and Technical Education Courses

- Unit Operations
- Composition I
- Introduction to Engineering
- Fine Arts Elective
- Fine Arts Elective
- College Algebra
- Principles of Manufacturing
- Introduction to Process Technology
- Safety, Health and Environment I
- Process Instrumentation I
- Industrial Economics
- Industrial Processes
- Process Technology I
- Principles of Quality
- Process Technology II
- Process Troubleshooting
- Applied General Chemistry I
- Applied Physics
- Introduction to Sociology
- Fundamentals of Speech

Students completing a four-year program receive certification; completed Dual Enrollment credits should transfer to most public colleges or universities.

### HiLZ FACILITIES

TheHiLZ facilities have a distinctive high-tech “workplace” feel with small-group learning and project areas, laboratories equipped with the latest technology, wireless laptop access, and common areas where artwork and prototypes are displayed.

- **The Commons**—the intellectual hub of the school, a centrally located meeting area for student gatherings, exhibitions, presentations, performances, and community meetings.
- **Seminars**—small rooms, studio spaces, and teachers’ offices, designed to promote team teaching as well as a sense of ownership and place.
- **Studios**—multi-purpose spaces for shared use by groups from adjacent seminar rooms to support individual, small group, and large group activities.
- **Galleries**—exhibition walls and areas for display of student work, often located in or along corridors and circulation routes.
- **Specialty Labs**—labs and project rooms with access to technology and equipment for learning in specialized areas such as biotechnology, mechanical engineering, and graphic design.

### CAREER OPTIONS EMPLOYMENT OUTLOOK

Job Title	Employment Growth	Median Hourly Wage	Annual Salary
Chemical technicians	42%	\$24.17	\$50,274
Geological and petroleum technicians	61%	\$27.04	\$56,243
Water and liquid waste treatment plant and system operators	49%	\$16.06	\$33,405
Chemical plant and system operators	43%	\$29.85	\$62,088

*Employment Outlook from 2008 to 2018 - Houston/Gulf Coast*

### CERTIFICATION CREDENTIALS

A credential attests to the qualifications, competence, or authority of an individual to perform at levels of proficiency established by a third party with the relevant or de facto authority and competence to do so. It is the ultimate demonstration of the Knowledge and Skills outlined in the Programs of Study.

NCCER - Sheet Metal, Level One	NCCER - Electrical, Level One
NCCER - HVAC, Level One	NCCER - Construction Technology
NCCER - Electronic Systems Technician, Level One	NCCER - Weatherization, Level One



#### CHEMICAL PLANT AND SYSTEM OPERATORS

Salary: \$36,340 - \$73,220

Employment Growth: 43%

Postsecondary: Bachelor Degree  
Engineering Technology  
Design Technology  
Industrial Safety  
Management of Technology

#### PROSPECTIVE BUSINESS

#### PARTNERS

Shell Oil, Schumberger, Exxon  
Mobil, Valero, Marathon Oil,  
ConocoPhillips, Chevron

#### EDUCATION COLLABORATORS

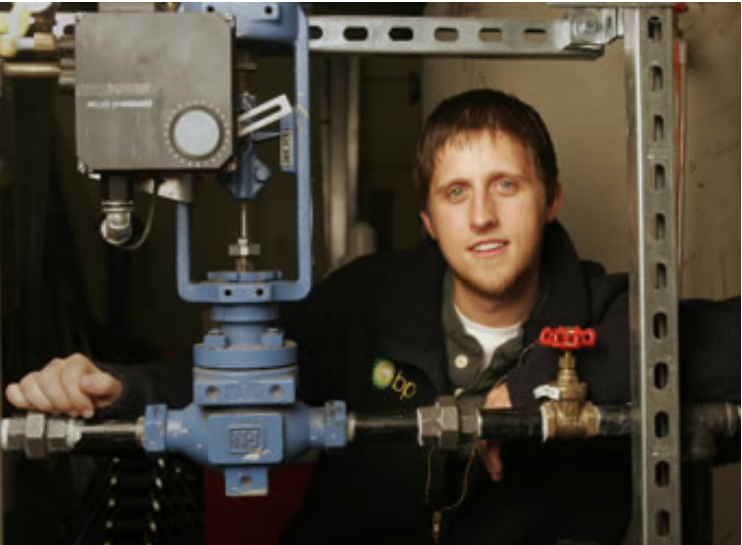
University of Houston (College of Technology)

At-A-Galance

Named for its surrounding community, Kashmere Gardens, the original Kashmere Gardens Junior–Senior High School opened in 1957. That site became Key Middle School in 1968, when the new Kashmere High School opened at 6900 Wileyvale in historic Trinity Gardens. Dr Ira Bryant, former principal of Booker T. Washington, served as principal of the new school. Dr. Bryant was accompanied by two teachers whose names have also become synonymous with Kashmere – Louis J. Bailey and Conrad O. Johnson. Building upon the success of Mr. Conrad Johnson and the Thunder Soul Marching Band, Kashmere is currently a music and fine arts magnet school that offers instruction in choral and instrumental music, music theory, jazz improvisation, dance, visual arts, stage performance, and drama.

The Career & Technical Education (CTE) programs currently offered at Kashmere HS are:

- Health Science cluster
- Business Management & Administration Cluster
- Information Technology Cluster
- STEM Career Cluster
- Career Preparation

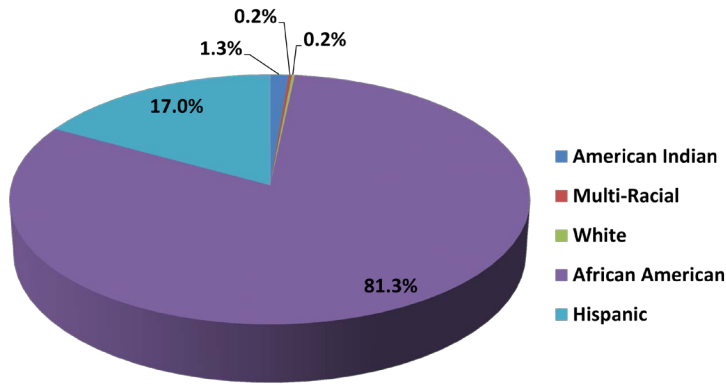


CTE Weighted Funding Generated

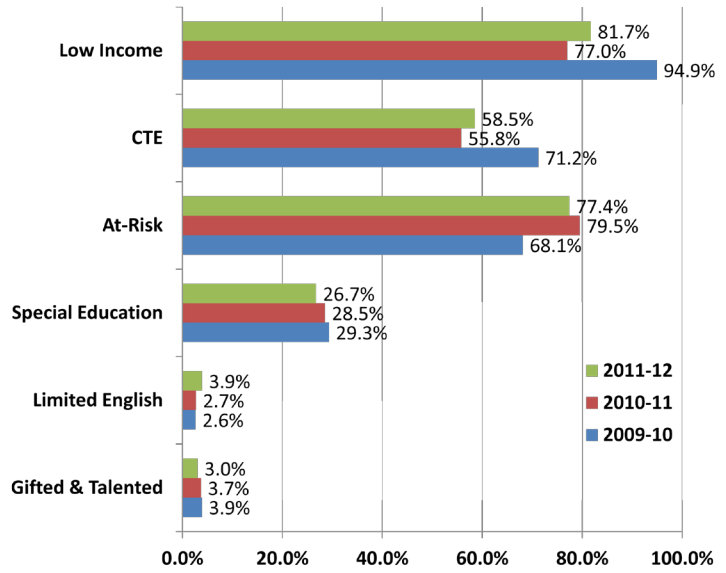
These figures are estimated after the Career Academy programs have been in place four years. It assumes that the campus is only drawing funding for students in the CTE portion of the HiLZ schools.

Hrs per day	Instruc-tional days	# of students	Total	Contact Hrs Generated	FTE	PUA	Amount Generated by CTE
1	175	25	4375	1050	4.1667	\$3,246	\$13,525
1	175	25	4375	1050	4.1667	\$3,246	\$13,525
1	175	25	4375	1050	4.1667	\$3,246	\$13,525
3	175	25	13125	1050	12.5	\$3,246	\$40,575
Total Amount Generated							\$81,150

Campus Demographics



Campus Statistics



Budget

2011-12 Start Up & Year 1 Costs	
Curriculum Development	\$68,750
Professional Development	\$600
Materials & Supplies	\$400
College Staff	\$15,180
Tutoring / College Prep Staff	\$10,109
Computer Equipment	\$131,691
Other Costs - COMPASS testing	\$5,400
Furniture	\$50,000
Physical Renovations	\$20,000
Technology Infrastructure	\$16,480
Remediation software	\$15,200
Textbooks	\$14,250
Marketing/Publicity	\$10,000
Contingency	\$70,000
Total Start Up Costs	\$428,060
2012-13 Year 2 Costs	
Professional Development	\$600
Materials & Supplies	\$400
College Staff	\$47,380
Tutoring / College Prep Staff	\$10,109
Textbooks	\$26,250
GC Pass Grant Funds	-\$13,500
Total Year 2 Costs	\$71,239
2013-14 Year 3 Costs	
Professional Development	\$600
Materials & Supplies	\$400
College Staff	\$86,480
Tutoring / College Prep Staff	\$10,109
Textbooks	\$36,750
GC Pass Grant Funds	-\$13,500
Total Year 3 Costs	\$120,839
2015-15 Year 4 Costs	
Professional Development	\$600
Materials & Supplies	\$400
College Staff	\$88,020
Tutoring / College Prep Staff	\$10,109
Textbooks	\$45,375
GC Pass Grant Funds	-\$13,500
Total Year 4 Costs	\$131,004