Temple University

Serving the Commonwealth of Pennsylvania

Temple University was founded in 1884 as an institution where Pennsylvanians denied access to existing institutions of higher learning were welcomed and encouraged. Throughout Temple’s history, this mission has been expressed in the early and sustained practice of admitting women, religious minorities, African Americans, students from middle- and working-class backgrounds, and first-generation college students. Temple maintains a parallel commitment to ensuring that its students succeed, not only in their academic work but in serving the Commonwealth of Pennsylvania with distinction throughout their professional careers and private lives.

Nearly 60 percent of Temple’s 265,000 living alumni reside and work in Pennsylvania, and one of every eight college-educated residents in the Philadelphia metropolitan region holds a Temple degree. Temple’s graduates provide invaluable service to the Commonwealth as doctors, lawyers, dentists, pharmacists, business leaders, teachers, artists, performers, judges, health care professionals, social workers, entrepreneurs and elected officials.

Educating Students from Pennsylvania

Temple University had a total enrollment (excluding Temple’s Japan campus) of 37,696 students last year,¹ and 77 percent of these students were permanent residents of the Commonwealth. In a recent survey, 64 percent of Temple students – both those from Pennsylvania and those from outside the state – indicated they wished to live and work in Philadelphia after graduating. Still more intended to remain elsewhere in the state.

Several recent initiatives of note that emphasize Temple’s commitment to the Commonwealth by means of expanding its educational offerings to Pennsylvania residents include:

- **Partnering with Pennsylvania community colleges to increase the number of students earning bachelor’s degrees.** Temple was a pioneer in the creation of articulation agreements that ensure ease of transfer for students coming in from community colleges. Temple’s well-established joint admissions agreements with community colleges throughout Pennsylvania are a major source of well-prepared students. Since 1998, Temple has established dual admission partnerships with the Community College of Philadelphia, Bucks County Community College, Montgomery County Community College, Delaware County Community College, Harrisburg Area Community College, Burlington County College, Lehigh Carbon Community College, Reading Area Community College and Luzerne County Community College.

¹ This is the most recent year for which complete information is available.
The community college partnerships guarantee admission to students who earn an eligible associate’s degree with at least a 2.3 or better GPA. They also receive a $1,000 per year scholarship if they earn a GPA of 3.30-3.59 and $2,000 if their GPA is 3.60 or above. Since the program began, more than 15,000 community college students have signed the dual admissions participation form with the intent of transferring to Temple. As of this last year, more than 3,000 have graduated from their community college and enrolled at Temple and 50 percent of those students have earned annual academic merit scholarships of $1,000 or $2,000 each.

- **Providing scholarships to students from the local community.** Temple’s incoming Fall 2011 undergraduate class includes the first Temple 20/20 Scholars. Selected from applicants who live in the neighborhoods immediately surrounding the Main Campus, this year’s 22 scholarship recipients are the first of 250 students who will receive four-year scholarships of up to $5,000 per year over the next decade. The Temple 20/20 Scholarships borrow their name from the Temple 20/20 framework for campus development, reinforcing Temple’s pledge to ensure that our campus development supports economic development in the North Broad Street corridor. This year’s scholarship recipients are graduates of 16 different Philadelphia public high schools and one parochial high school in the city.

- **Opening a regional branch campus by the School of Medicine (TUSM) in partnership with St. Luke’s Hospital & Health Network in Bethlehem.** The inaugural class of Temple University School of Medicine’s new regional branch campus at St. Luke’s Hospital & Health Network matriculated into the program in August. The group of 31 students will spend their first year at TUSM’s campus in Philadelphia and the next three years at the regional campus in Bethlehem. The goal of the partnership is to provide well-qualified physicians to practice in the Lehigh Valley area. The St. Luke’s program is expected to add 150 or more qualified, well-trained practicing physicians in the Greater Lehigh Valley in 10 years to help alleviate the shortage of physicians in the state.

- **Offering instruction toward a social work degree at locations throughout Pennsylvania.** Nationally, the human services field faces a growing shortage of qualified professionals in the next 10 years, and, according to the Center for Workforce Innovation and Analysis, Pennsylvania will experience an especially acute shortage of personnel to fill positions across the Commonwealth unless current educational trends change. Temple Harrisburg has been offering master of social work (MSW) instruction on campuses of institutions across the state, including Lancaster Bible College in Lancaster County; Schuylkill Community Education Council in Schuylkill County; Juniata College in Huntingdon County; DuBois Business College in Clearfield County; and Mansfield University in Tioga County. During the spring semester, Temple Harrisburg began offering its MSW program at Misericordia University, making it the first and only site in Luzerne County providing MSW coursework.
Conducting research that creates business and addresses issues of special concern to the Commonwealth

Regional and state economies grow stronger as they develop a larger number of highly competitive research institutions that can obtain funding from outside sources. Temple continues to expand its research capacity to enhance the competitiveness of the Commonwealth.

Temple supports research across a wide range of disciplines, with a particular focus on research projects that address issues of concern in the Commonwealth and include partnerships with industry, as the following examples illustrate:

- The Keystone Institute for Translational Medicine, based at Temple in collaboration with Fox Chase Cancer Center and Geisinger Health System, was established in 2008. The institute will work toward speeding up applications of basic science research into direct patient care, particularly in diseases that are disproportionately present among urban and rural Pennsylvanians, including lung disease, diabetes, hypertension, obesity and certain cancers.

- Temple dramatically expanded the School of Pharmacy's Moulder Center for Drug Discovery Research last year, creating the tri-state area’s only fully integrated center for researching and developing new drugs. The expansion enables Temple to partner with local, national and international biotech and pharmaceutical companies. The Moulder Center has added state-of-the-art medicinal chemistry and screening laboratories; purchased a 20,000-compound library that will allow for better drug screening and optimization; and implemented a computer-aided drug design system for virtual drug screening. GVK Biosciences, Asia's leading drug discovery research and development company, is now working with the Moulder Center through a multi-year integrated drug discovery collaboration to design innovative drug candidates in selected therapeutic areas, including cardiovascular, metabolic and central nervous system disorders. One in six jobs and 15 percent of the region’s economic activity can be traced to the pharmaceutical and life sciences industries. The center’s work will be an important employment generator for the state and region as it expands through partnerships like the one with GVK Biosciences.

- The U.S. Department of Education announced in November that a grant proposal submitted by faculty of Temple’s College of Education was among the 23 highest-rated applicants to the department’s 2011 Investing in Innovation grant program. Selected from nearly 600 applicants, Barbara Wasik, professor and PNC Chair in early childhood education, and Annemarie Hindman, an assistant professor specializing in curriculum, instruction and technology use in education, received a four-year, $2.5 million grant from the Department of Education. In partnership with researchers at Johns Hopkins, Professors Wasik and Hindman will expand the use of a new teacher development model, Exceptional Coaching for Early Language and Literacy (ExCELL),
which has been shown to increase children’s language and literacy skills. The study will measure the progress of more than 3,000 students kindergarten and first-grade students in Baltimore City public schools and the school district of Lancaster, Pennsylvania taught by teachers who have undergone ExCELL training.

- A technology being developed by Temple University Chemistry Professor Daniel Strongin to prevent acid drainage from Pennsylvania coal mining operations could also have applications for the Commonwealth’s newest environmental challenge: hydraulic fracturing of Marcellus Shale. Rock left behind in abandoned mines after coal is extracted contains sulfur impurities that decompose and form sulfuric acid when exposed to air, water and microbes. When water fills a mine’s underground tunnels, sulfuric acid can leach off the walls and get into nearby groundwater. Professor Strongin is developing a technology that uses a specific class of lipid molecules that bind to the metal sulfide, forming a hydrophobic layer that keeps water, oxygen and bacteria from causing it to decompose. A panel commissioned by Governor Corbett has recently recommended using water from abandoned mining areas for hydraulic fracturing to extract natural gas from the Marcellus Shale formation to preserve fresh water for other uses. Professor Strongin now believes that mitigating acid drainage using his lipid technology could enable the mine waters to be used with less environmental impact.

- With a new $3.7 million grant from the USDA’s National Institute of Food and Agriculture, Temple’s Center for Obesity Research and Education (CORE) will expand its work in basic and clinical research, epidemiology, and outcome studies involving adult and pediatric patients, and add outreach programs in local communities and school systems. The new five-year grant will fund a project aimed at preventing obesity among low-income preschool children by teaching mothers simple strategies to promote appropriate food choices and portion sizes to their children.

- Domenico Praticò, an associate professor of pharmacology in Temple’s School of Medicine, released his findings that a drug used to treat asthma has been shown to help reduce the formation of a peptide in the brain that is implicated in the development of Alzheimer’s disease. His study’s results were published in the American Journal of Pathology. Professor Praticò tested the asthma drug Zileuton in a transgenic mouse model of Alzheimer’s disease. Zileuton reduced production of the peptide and the subsequent build up of amyloid plaques in the brain by more than 50 percent. The amount of amyloid plaques in the brain is used as a measurement of the severity of Alzheimer's.

- Rongjia Tao, professor and chair of physics at Temple University, has successfully used magnetic fields to thin human blood in the circulation system in an effort to reduce the risk of heart attacks. Because red blood cells contain iron, Professor Tao has been able to reduce a person’s blood viscosity by 20-30 percent by subjecting it to a magnetic field. The magnetic field polarizes the red blood cells causing them to link together in short
chains, streamlining the movement of the blood. Because these chains are larger than the single blood cells, they flow down the center, reducing the friction against the walls of the blood vessels. The combined effects reduce the viscosity of the blood, helping it to flow more freely.

- For the past six years, the Center for Sustainable Communities (CSC) located at the Temple University Ambler Campus and Villanova University’s Urban Stormwater Partnership (VUSP) have worked in partnership to advance the practice of sustainable stormwater management through inter-disciplinary research, demonstration and outreach. Supported grants totaling $1.3 million from the William Penn Foundation, the partnership provides municipalities throughout the state with the tools to implement effective stormwater control measures necessitated by rapid urbanization.

**Serving Pennsylvania’s largest city**

Philadelphia is the largest city in Pennsylvania and the fifth largest city in the United States. Temple University is deeply committed to the City of Philadelphia and neighborhoods surrounding its campuses. The University fosters connections to its North Philadelphia neighbors and community through a range of programs and activities. Students, faculty and staff are engaged in numerous volunteer service initiatives. Temple offers employment training and hiring programs for residents who live in the areas immediately surrounding its main campus. In addition, Temple’s security initiatives extend into its adjoining neighborhoods, providing an added measure of safety for North Philadelphia residents. Temple University Hospital treats nearly a half million patients every year as inpatients, outpatients and emergency department visitors.

The Corporation for National and Community Service named Temple to last year’s President’s Higher Education Community Service Honor Roll, the highest national recognition a college or university can receive for its commitment to service. This is the third consecutive year Temple has received this distinction. The President’s Higher Education Community Service Honor Roll raises the visibility of best practices in campus-community partnerships by recognizing institutions of higher education that support exemplary community service programs.

The Carnegie Foundation for the Advancement of Teaching awarded Temple University the Community Engagement Classification, a national acknowledgement of the degree of mutually beneficial collaboration between Temple and its greater community. The Carnegie Foundation, an independent policy and research center, cited Temple's "excellent alignment among mission, culture, leadership, resources and practices that support dynamic and noteworthy community engagement." Temple is among 115 colleges and universities selected for the classification in 2010.
A few recently developed Temple programs that serve the City of Philadelphia and the Commonwealth include:

- A new program designed by the Temple Performing Arts Center offers free arts programming to students enrolled in selected local elementary and secondary schools. Eyes Wide Open in North Philadelphia, which is supported by a two-year grant from the John S. and James L. Knight Foundation as part of its Knight Arts Challenge, will present a wide range of live performances in dance, chamber music and theater. The John S. and James L. Knight Foundation’s Knight Arts Challenge is a $9 million initiative supporting innovative projects that inspire and enrich Philadelphia’s communities. The Knight Foundation received more than 1,700 applications from the Greater Philadelphia region, and Temple was one of only 32 grant recipients.

- This fall, Temple participated in the launch of the Pennsylvania Math Engineering Science Achievement (MESA) program. The national MESA initiative is designed to increase the number of graduates from a two- or four-year institution and advanced degrees in STEM (Science, Technology Engineering and Mathematics) fields to support the nation’s defense. Over the past 40 years, nearly 70 percent of MESA students—many of them minorities and women—have entered STEM fields. As the lead MESA institution in Pennsylvania, Temple will develop public/private partnerships with industry, other academic institutions and government agencies to implement the goals of MESA. This summer, Temple held three MESA summer academies for middle school and high school students in partnership with the U.S. Navy and with funding from the Office of Naval Research and support from engineers from the Naval Ship Systems Engineering Station, the Urban Youth Racing School, and the Mayor’s Office of Community Services. The students engaged in engineering, technology, health and medicine research at Temple’s College of Engineering, School of Medicine and the Philadelphia Navy Yard.

- Temple’s Center for Social Policy and Community Development (CSPCD) in partnership with the Community College of Philadelphia (CCP) launched a family literacy program called “Making the Dream of College Come True” program. The initiative is supported by a $25,000 grant received in December 2011 from the National Center for Family Literacy (NCFL). The grant is funded in part by MetLife Foundation. The grant will provide literacy classes—a 12-week program for 12 hours each week—for up to 30 youths and adults at CCP’s campus.

- Temple School of Medicine’s Center for Bioethics, Urban Health and Policy has launched “Philadelphia CeaseFire,” part of a nationwide, evidence-based violence intervention program which has been proven to decrease instances of gun violence in urban areas. Originally implemented in Chicago, the program blends statistical information and the knowledge and experience of community members to focus efforts on areas and individuals most at-risk for gun violence. In 2008, the Department of Justice issued a report on CeaseFire's effectiveness and found a reduction of up to 73 percent in the number of shootings and killings in areas of Chicago where CeaseFire was
implemented. Philadelphia CeaseFire seeks to reduce the number of homicides and shootings in North Philadelphia using five core components: community outreach, community mobilization, public education, faith-based involvement, and criminal justice participation.

- Temple University Health System announced this fall its affiliation agreement with Fox Chase Cancer Center that moves both institutions closer to bringing Fox Chase Cancer Center into the Temple system. When finalized, a partnership with Fox Chase Cancer Center will establish Temple's position as a leader in cancer care and translational research at the local, regional and national levels. Under the combined resources of the two institutions, significant expansion of outpatient and surgical-care services will be possible. Given the geographic proximity of Fox Chase to Jeanes Hospital (home to Temple's highly regarded Bone Marrow Transplant Program), one benefit of the agreement is the creation of a contiguous, 4.5-acre site to serve as Temple's "cancer hub" for the development of future innovations in cancer-care and research. The affiliation would also enable Jeanes Hospital to meet the associated health care needs of cancer patients by providing a broad array of services on its premises in areas such as outpatient diagnostic testing, interventional radiology, breast care, general surgery, thoracic surgery, endocrine surgery, urology and diagnostic GI.

- The United Network for Organ Sharing (UNOS) has granted interim approval to our application to reactivate our heart, lung, and heart/lung transplant programs at Temple University Hospital. You will recall that we voluntarily inactivated these programs last summer to allow us to strengthen staff and other resources for these sophisticated and critical procedures. With the recruitment of Dr. Guy as chief of cardiothoracic surgery and Dr. Yoshiya Toyoda as director of the Heart and Lung Transplantation and Mechanical Circulatory Support team, we are now prepared to resume transplant services in these specialties. These are especially vital services as we serve the needs of Temple's patient population. Temple physicians continue to see a large number of congestive heart failure and lung failure patients.

*Generating employment and business development*

Temple University also creates significant economic activity in the Commonwealth of Pennsylvania. According to a 2011 Econsult Corporation study, Temple University and Temple University Health System’s annual direct expenditures—which include operational spending on goods and services, salaries and pension benefits of faculty and staff, and spending by students and visitors—generated $6.2 billion in economic activity for Pennsylvania in Fiscal Year 2010-11, 71,000 jobs across the state and $192 million in tax revenue. In Philadelphia, the economic impact of Temple operations included $3.7 billion in economic activity, 34,000 jobs and $72 million in tax revenue.
Since 2000, Temple has generated $1.7 billion in economic activity for the Commonwealth and more than 14,000 prevailing wage jobs through its construction projects alone.

The age of Temple’s buildings, the growing size of its student body, the needs of its patient base, and changes in teaching methods and research protocols have created the need for continued major capital construction and renewal. Temple completed a comprehensive analysis of its Main Campus facilities needs in 2009 and created its Temple 20/20 framework for development that will guide revitalization for the next 10 to 20 years. The framework is flexible and can be implemented in stages as funding becomes available and is confined to the existing footprint of the current Main Campus. The development framework is directly tied to the priorities of Temple’s academic strategic plan and includes new student housing, a state-of-the-art library, a science education and research facility, and a focus on developing the North Broad Street corridor with retail, recreation and cultural venues.

Construction from Temple 20/20 projects in the next three years is projected to generate $1.66 billion in economic activity for the Commonwealth, including $531 million in salaries and wages supporting more than 14,000 jobs.

Temple has initiated an analysis of its Health Science Campus this year to set the stage for planning education, research and clinical facilities needs over the next several decades. With Commonwealth support, Temple continues a far-reaching capital program that is transforming Temple’s Main and Health Science campuses into exciting, inviting places that will draw the best faculty and students, and will offer exceptional settings for patient care and research.

Temple’s campus development has also spurred much needed private and public development immediately surrounding the Main Campus and Health Science Campus, and south on Broad Street to City Hall. Since 2002, private investors have focused nearly $300 million on real estate development in Temple’s North Philadelphia neighborhood.

Earlier private development included the Avenue North which transformed the Broad Street Corridor with retail space, a theater complex and housing for 1,200 students. A 24-hour Fresh Grocer franchise opened just off campus three years ago, the first supermarket operating in the area in over a decade. Beech Interplex opened Beech International Apartments this year with 100 residential units.

Last year, Mayor Nutter announced plans last year to convert the space at 9th and Norris Streets and Temple University's regional rail station into a retail and residential village. Along with several shops, the development calls for 164 rental apartments, with a portion set aside for affordable housing units, which will be funded with a mix of federal, state and private investment. Temple anticipates that such development activity will continue to grow creating construction jobs and permanent retail and service jobs for local residents.