



**Fiscal Year 2015
Budget Submission to the
Office of Management
and Budget
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THE EDGE IN KNOWLEDGE

**NEW JERSEY INSTITUTE OF TECHNOLOGY
FY 2015 BUDGET REQUEST**

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SECTION 1.

PRESIDENT'S STATEMENT

**NEW JERSEY INSTITUTE OF TECHNOLOGY
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PRESIDENT'S STATEMENT



As New Jersey's Science and Technology University, NJIT is committed to its abiding purpose of vigorously supporting economic development and job creation through real-world education, applied research, innovation, entrepreneurship, and engagement. It does so for the benefit of New Jersey's business and industry, workforce development, and the quality of life of its citizens. NJIT is in the forefront among leaders in business, government, and education who recognize that our State's future is dependent upon the investments we make now to stimulate economic growth, productivity, and innovation. The result is a dramatic blueprint that has emphasized support for research and development, technology transfer, and job creation. In this spirit, I am very pleased to present NJIT's budget plan for FY 2015.

NJIT's technologically based education and research programs are closely aligned to support the design, computing, engineering, and life sciences clusters identified in the *State Strategic Job Growth Plan*. The *State Plan* clearly recognizes the need for expanding translational research to bring technology and the sciences to bear on cutting-edge solutions through intensive industry collaborations. NJIT's faculty-led research and its business incubation have produced very considerable results. This past year, NJIT's research surpassed \$107 million, and thus far has been issued over 177 patents, most of which have been licensed to 3rd parties. *This level of research expenditure ranks NJIT in the top 10 nationally among universities whose research is principally in engineering. In recent years NJIT has been named a leader in fostering industrial partnerships and developing patentable inventions, placing in the top 20 nationally for industrial contract dollars per federal research dollar and fourth in the country for disclosures per dollar of federally sponsored research, the only NJ University in the top 20 for either designation.* NJIT is also home to the largest technology and life science incubator in the State fostering the commercialization of research with 90 start-up companies, employing over 800 people.

In addition, the past two years have seen a number of highly significant developments that augur well for NJIT and contribute to its progress in propelling the university to the front ranks of nationally prominent research institutes of science and technology; ranked number five among the nation's thirty-four polytechnique universities based on its increasing research expenditures.

Our education continues to be excellent. Last year, I noted that the Middle States Commission on Higher Education had just reaffirmed NJIT's accreditation for the next decade. According to the Commission's report, *"NJIT is making a disproportionate impact on higher education given its means. In particular, NJIT is providing an admirable service to first-in-family students attending college. The students are excellent, well-trained, and graduates are highly successful after leaving the university. NJIT's success in providing a first-class education and college experience to a diverse student body is enviable."* According to the findings of the evaluation report, NJIT met or exceeded all 14 standards outlined in the Commission's "Characteristics of Excellence in Higher Education," thus fulfilling the requirements of the accreditation review authorized and answerable to the federal government. This endorsement provides a powerful foundation for our commitment to ensure NJIT's role as New Jersey's premiere Science and Technology University and, thus, as an institution uniquely equipped to contribute to innovation, job creation, and economic development within the state.

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To continuously improve and exceed all standards, over the past two years we *successfully attracted thirty-six new tenured/tenure track faculty from across the nation with expertise in three emerging thematic education and research areas of "sustainability, information everywhere, and the convergence of engineering, technology and the life sciences."* As per our Strategic Hiring Plan this year we will recruit an additional fourteen distinguished faculty for a 3-year total of fifty new hires recruited around these education and research themes. For the purpose of preparing undergraduate and graduate students for whom the demand exceeds the supply, these new hires will reflect these critically important interdisciplinary growth areas. As with our existing faculty, these individuals will contribute to the economic development of our state through research, innovation, and invention.

For these reasons, I am proud to report that the widely followed website, *BuzzFeed.com* has just ranked New Jersey Institute of Technology as the #1 value among colleges and universities nationally, seven spots ahead of Princeton University and 10 above MIT, as well as many other highly regarded institutions. The BuzzFeed ranking calculates college and university value by comparing annual tuition cost and the average starting salary of graduates.

NJIT earned the top spot among all U.S. colleges and universities because the average starting salary of its graduates nearly doubles the annual tuition/fee charged to out-of-state students. Using NJIT's tuition rate for New Jersey residents increases the university's value proposition, making alumni average starting salaries nearly four times greater than NJIT's annual tuition cost.

This rating is based upon quantifiable data, not perceptions or opinions, so it is particularly important. The numbers clearly demonstrate that NJIT is preparing its graduates for tremendous professional success and that the university and its faculty are doing so at a reasonable cost. While there is a great deal of concern publicly about the cost of higher education, it is important to keep in mind that NJIT offers a tremendous value proposition.

Joining NJIT among BuzzFeed's top-10 values were Georgia Tech (#2), Michigan Tech (#3), University of California at Berkeley (#4), Virginia Tech (#5), Cal Tech (#6), Purdue (#7), Princeton (#8), Texas A&M (#9), and Worcester Polytechnic Institute (#10). Other universities of note that made the BuzzFeed value list include Stanford (#15), Notre Dame (#29), and Harvard (#42). (The complete list can be found at <http://www.buzzfeed.com/littlelittleske/buzzfeeds-best-value-colleges>.)

NJIT has repeatedly demonstrated its expertise in preparing students in the fields of science, technology, engineering, mathematics, architecture and design, among other disciplines. Maintaining affordability while producing graduates who fill a vital state and regional need is the university's primary goal. In a world of intense competition for jobs with other states in our region as well as other countries, economic growth depends on innovation through the STEM disciplines. In New Jersey alone, the demand for employees with these science and technological skills is projected to reach 269,000 by 2018, and recent studies have discovered that each new high-tech job created in the U.S. yields an additional 5 jobs. At NJIT, we are focused on providing students of all socio-economic backgrounds with access to the highest caliber of a science and technological education.

Other notable NJIT rankings include:

- *PayScale.com* rates NJIT 6th (top 1 percent) among 437 public universities and 27th (top 2 percent) among 1,511 public and private institutions in the U.S. for ROI.

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- *AffordableCollegesOnline.org* (ACO) released its "Million Dollar ROI" rankings for 2013, a list of public universities whose graduates out-earn non-degree holders by at least one million dollars during their careers. NJIT has been ranked sixth on the list of institutions that make up the top 1 percent of U.S. colleges as measured by return on investment (ROI).
- *U.S. News* rates NJIT among America's top colleges and universities.
- *Business Insider* ranked NJIT third in its recent listing of the 25 "most underrated colleges in America." The news site plotted the annual ranking by U.S. News and World Report of the best colleges and universities against PayScale's mid-career salary rank to identify outliers—institutions that outperform their U.S. News rating.
- *Forbes* has named NJIT one of America's Top Colleges in 2013. The online guide notes that NJIT, established in 1881 offers 125 undergraduate and graduate degree programs and that the majority of science, technology, engineering and math (STEM) majors are undergraduate with almost 3,000 graduate students.
- According to the [*2014 Princeton Review*](#), NJIT is one of the country's best institutions for undergraduate education.

With effectiveness and efficiency, NJIT has also achieved a number of additional noteworthy milestones in the past year:

- A record fall 2013 total enrollment of 10,130 in our highly competitive undergraduate and graduate programs in STEM areas
- A freshmen enrollment of 1045 students with average math SAT scores of 614, top 25% percentile in the nation, and a combined SAT verbal/math average of 1164.
- Albert Dorman Honors College enrollment of 687 undergraduates that score in the top 10%; nationally.
- The Educational Opportunity Enrollment of 650 undergraduates, whose completion rates for underrepresented students in the STEM disciplines exceeds the national average.
- The performance-based faculty compensation system, introduced three years ago, has been refined and strengthened. Its scope has also been expanded to include non-tenure track university lecturers. Effective with FY 2014, a merit compensation system has also been implemented for the professional staff.

What follows below is an array of initiatives that exemplify NJIT's commitment to supporting State and local economic development in order to retain and attract high-tech business for New Jersey:

- ***NJIT's Enterprise Development Center***, the State's oldest and largest technology business incubator, helps start-up companies commercialize their ideas by providing office and lab space, access to scientific and technological equipment, financial guidance and extensive technical/coaching advisory services, ultimately creating businesses that generate jobs and

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bolster the state's economy. The incubator has launched 85 businesses and has over 90 companies now in residence that have created 800 jobs and employed 335 students. They have attracted more than \$67 million in third-party funding and in 2010 had revenues surpassing \$80 million.

In 2009, NJIT's Enterprise Development Center has received a Soft Landings international incubation designation from the National Business Incubation Association (NBIA). Through its Soft Landings program, the NBIA recognizes incubation programs that are especially capable of helping nondomestic companies enter the incubator's domestic market. The EDC was selected for the program because of its slate of business services for nondomestic firms and its demonstrated success at helping these firms enter the US market. Since then it has attracted several international businesses including Assistive Innovation Corporation, based in The Netherlands, Medtech Surgical from France and Centro de Genética Clínica of Portugal.

Descriptions of three representative EDC companies that align with each of our strategic priority areas (convergent life science, information everywhere and sustainable systems) follow:

- **Endomedix, Inc.** core focus is in hydrogel technology in the growing medical device market. In particular, Endomedix is focused on the tissue sealant, hemostat and biomedical adhesive market. At the core of their technology is a biocompatible, biodegradable, environmentally-responsive hydrogel with a number of biomedical applications. Endomedix Hydrogel Technology is one of the first and only all-natural, non-synthetic, non-blood derived technologies that cover applications in: General Surgery, Vascular Surgery, Neurosurgery, Spine Surgery, Ophthalmologic Surgery, and Wound Care. This medical device will be used to control bleeding in surgical procedures (other than ophthalmic) as an adjunct to hemostasis when control of bleeding by conventional means is ineffective or impractical. Tests have already shown that it can stop surgical bleeding in 15 seconds compared to standard procedures that require 4 minutes to accomplish the same end.
- **iSpeech, Inc.**, provides embedded and cloud solutions for text to speech (TTS) and speech recognition (ASR) for any connected device or application via its proprietary SaaS (software as a service). Text to Speech (TTS) or text to voice Software can be used to make audio versions of any text content. Applications include email and text message readers that allow drivers to operate their vehicle, with eyes on the road while listening to their messages in a synthesized natural language, voice. iSpeech's newest innovation allows the creation of speaker-specific voice emulation so that text can be read in the voice of the original author, or even a celebrity. iSpeech also provides accurate speech recognition software (ASR) that recognizes voices in most languages.
- **WattLots** is a leader in the green building movement with an understanding of the building and planning industry. WattLots, LLC was formed to address opportunities within this tremendous, unexploited market. Their signature product, Power Arbor™, is a uniquely styled parking lot canopy system that is specifically designed to retrofit existing surface parking lots providing substantial quantities of clean, renewable electrical energy where it is needed. The US has 500 B ft² of surface parking that could generate 5 TW of electric power using this technology. The system is built in

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NJ with parts manufactured in the United States. NJIT has committed to use a university parking lot as an instrumented test-bed and demonstration site where WattLots will work jointly with NJIT to make the arbors available for individual and joint business and educational purposes. The test bed will validate new concepts of distributed solar generation with managed local storage that provide additional marketing, Electric Vehicle charging and other revenue generating services including parking lot management, lighting and support for "plug and play" applications for e-tailing as well as other appropriate concepts.

- **NJIT's *Defense Procurement Technical Assistance Center*** provides small, minority and women-owned businesses with assistance in procuring government contracts. Most of the Center's services are offered free of charge. Since its inception in 1986, New Jersey businesses have received more than \$1.6 billion in government prime and subcontract awards as a direct result of the assistance provided by the center. This translates into 48,500 jobs.
- NJIT-created ***New Jersey Health Information Technology Extension Center*** (NJ-HITEC) is providing assistance to the state's over 20,000 primary care physicians to reduce medical costs. The center has used \$23M in federal funding to transform NJ's primary care physicians and is the national leader in the number achieving compliance with new federal requirements for the "meaningful use" of electronic healthcare record systems.
- NJIT is leading the deployment of the ***Highlander Health Data Network***. One of four regional health information exchanges coordinated by NJDHSS, the system provides live patient data exchange across 7 area hospitals and through the relationship with NJHITEC is connecting over 3000 physicians, all area clinical labs and pharmacies to achieve new efficiencies in coordinated patient care. The projected annual savings in Newark alone exceed \$100M.
- **NJIT's *Center for Manufacturing Systems*** helps small and mid-sized companies solve manufacturing and design projects with a range of services that includes computer-assisted design, prototype development and better manufacturing processing techniques. It is a leading provider of Lean Manufacturing training, a discipline that enables our NJ manufacturers to compete globally on both price and quality.
- **NJIT's *Microelectronics Fabrication Center*** provides companies with access to a fully functional, Class-10 micro-electronics and micro-electromechanical systems pilot production center. With assistance from the Center's staff, companies translate design concepts to fully functional device prototypes that can be readily scaled to full production. An emerging focus is the use of clean-room systems to create novel medical devices for applications ranging from genetic analysis chips to "smart" shunts for the treatment of hydrocephalus and glaucoma to implantable, fuel cell power sources that turn sugar in the blood stream into electrical power to run monitoring and assistive devices for an indefinite period of time. A number of NJIT's incubator companies have located in EDC specifically to access the staff and equipment capabilities of the Micro-fabrication Center.
- **NJIT's *Materials Characterization Laboratory*** is a complex of advanced biological, chemical and physical analysis equipment including state of the art electron microscopes, spectrophotometers, x-ray analytics, liquid chromatographs and other essential devices. This configuration is backed with trained operational and analytic staff that provides a service to

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academic researchers as well as to commercial users in need of results to drive their progress.

- **NJIT's *Polymer Processing Institute*** works with its industrial partners to develop high performance materials and products by offering them expertise in polymer processing, and advanced mixing, compounding and blending technologies. PPI's innovations have led to new production technologies that helped to secure Picatinny Arsenal's place against closure in the recent round of Defense Department cutbacks. That same technology base is now being extended to assist the state's pharmaceutical industry in creating novel manufacturing techniques optimized for next generation nano-particle formulations.
- NJIT-created **New Jersey Manufacturing Extension Program (NJMEP)** helps New Jersey's small and medium-sized manufacturers become more productive. Field agents with manufacturing experience are based in every county in the state to help companies improve operations. NJMEP services have resulted in nearly \$200 million in cost savings, new or retained sales and 3,000 jobs created or retained.
- NJIT is the lead institution for the NJ DoLWD **Advanced Manufacturing Talent Network** (ManufactureNJ) that is an industry demand-side driven strategy to respond to current and future employment and education needs within this rapidly changing industry. The network is an important change agent to empower an ever growing number of NJ companies and their workforces to effectively integrate advanced manufacturing technologies into daily operations and to do so across a large number of NJ companies not normally thought of as "manufacturers" such as in biomedical devices, pharmaceuticals, engineering technologies, computer and electronics, chemical, transportation equipment, machinery, electrical equipment, and petroleum, to name a few.
- It was recently announced that NJIT will assume leadership of the **Technology Talent & Entrepreneurship Network** to create an infrastructure and support network that provides training for individuals seeking a career in the following technology sectors: IT/Software, Communications, Life Sciences, Electronics/Advanced Manufacturing, Energy/Environment, and for individuals seeking to start and/or grow a business in New Jersey.
- NJIT led a \$10M proposal submission to the Center for Medicaid & Medicare Services Innovation award competition. Working with the Greater Newark Healthcare Coalition, NJIT created a program to transform urban healthcare delivery from a model based on costly, episodic hospital services to one based in the principals of a **Patient Centered Medical Home model**. Leveraging the assets of NJHITEC and the Highlander Network this project connects the Greater Newark Healthcare Coalition physicians and hospitals in a new model of care coordination and practice transformation that can eliminate over \$100M / year in unnecessary hospitalization expenses.
- NJIT was awarded a \$5 million grant by the US Labor Department **H1-B Technical Skills Training Program** to create a technical skills training program for the City of Newark and Bergen, Essex, Passaic, Morris and Hudson counties. NJIT will receive from the grant the largest amount of money within the Mid-Atlantic region. Through this grant, NJIT's Continuing Professional Education Division (CPE) and its partners will provide education, training and job placement assistance related to high-growth fields in which employers are currently using the H-1B nonimmigrant visa program to hire foreign workers.

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- NJIT has provided **corporate training programs** for more than 72,000 employees at 600 New Jersey companies since 1990. The companies include Verizon Wireless, Dow Jones, Burlington Coat Factory, Boston Scientific, Franklin Credit, and CIBA.
- **Career Development Services** is an outstanding source of technological talent for NJ employers. Nearly 500 organizations visited campus this year to interview over 3,500 students and recent graduates for employment opportunities within their firms. Another 2,600 companies posted over 14,000 technology job listings to its electronic database. During 2013, nearly 450 NJIT students worked in formal internship and co-ops for New Jersey companies. Some 60 percent of the students will be hired by these firms after they graduate from NJIT. Graduates from these programs enter companies at a significantly higher skill level and are thus immediately more productive to their employers.
- Over 2,500 students completed more than 37,000 hours of **service** at 237 non-profits this year. One of the highlighted initiatives was NJIT leading the charge among colleges and universities in New Jersey with its Alternative Spring Break 2013 initiative. With over 600 volunteers registered to participate, NJIT students as well as faculty, staff and alumni helped eradicate some of the devastation from Superstorm Sandy. Coordinating local organization efforts and the participation of students from 22 other colleges in and around New Jersey, NJIT helped (re)build New Jersey Strong.
- **NJIT's Alternative Spring Break** represents a critical collaboration necessary for the successful revitalization of the Jersey Shore, the City of Newark and other cities and suburban towns affected by Hurricane Sandy, as well as opportunities to protect the environment and build new communities that can withstand flooding and other future natural disasters in innovative ways. As *New Jersey's Science and Technology University*, NJIT is uniquely qualified to undertake this effort and provide a public service to the people of New Jersey.
- **NJIT's Educational Opportunity Program** educates and graduates more than a hundred minority engineers each year, creating opportunities for NJ businesses to diversify their workforce. The graduation rate of EOP students for the STEM (science, technology, engineering and mathematics) majors exceeds the national average and ranking NJIT among the top universities graduating minority engineers in the nation.
- NJIT, an **e-learning pioneer**, is launching a customized e-learning training program for New Jersey Transit vendors and is offering a Weekend University Program for adults 24 and older where all courses are conducted through a combination of online and classroom learning.
- NJIT civil engineers brought its expertise to help the state respond to **Superstorm Sandy**. Professor Michel Boufadel and his Center for Natural Resource and Preservation received an NSF Rapid Response Grant in the wake of the storm to study the patterns of damage and make recommendations for more resilient communities. He has since been engaged by FEMA to rethink flood plain delineations and funded by NJDEP to assist in flood mitigation planning. Colleagues in the Civil Engineering Department also received state funding to create the **Flood Mitigation Engineering Resource (FMER) Center** to provide technical assistance to New Jersey's Department of Environmental Protection to reduce the risk to vulnerable coastal and inland populations, and to ensure a sustainable and robust landscape in the state that supports public safety and economic development.

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- NJIT's College of Architecture and Design launched a **Resilient Design Program** drawing on the experience of students and faculty that actively participated in the post-Katrina recovery in New Orleans. Through research, design and actual demonstration projects, the Program will provide State and local leaders, business owners and residents with actionable 21st Century ready-to-build designs and expertise for disaster recovery in areas hard hit by Superstorm Sandy.
- NJIT researchers are contributing to the growth of sustainable energy practices and technologies. The **Center for Building Knowledge** is engaged in two USDoE funded projects, one with a DuPont subsidiary showing sustainable concepts for building retrofit and in another, they are the only architectural group advising the USDOE Greater Philadelphia Innovation Center operating out of the Philadelphia Naval Shipyards to promulgate sustainable building design and foster new business that enable such concepts. Previously, the CBK was the advisor to the NJ Schools Development Authority providing design guidance and training to embed principles of sustainable design into new school construction. Concurrently, our researchers are developing alternative energy technology along three independent lines: improvements to current photovoltaic production technology to improve efficiency and yield; next generation thin film photo-voltaics and building integrated PV including a program with \$2.5M from the China National Building Materials Group; future technology based on carbon nanotubes that could be ready for commercial introduction within ten years. All of these are technologies that can be transferred to New Jersey-based manufacturers.
- NJIT researchers are developing novel pharmaceutical manufacturing technologies in collaboration with the state's leading firms. The National Science Foundation funded **Engineering Research Center for Structure Organic Particulate System (C-SOPS)** brings together a cross-disciplinary team of engineers and scientists from four universities including NJIT & Rutgers, as well as industry leaders to improve the way pharmaceuticals, foods and agriculture products are manufactured. C-SOPS will focus on advancing the scientific foundation for the optimal design of nano-particulate pharmaceutical formulations with advanced functionality while developing the methodologies for their active control and manufacturing. The Polymer Processing Institute, hosted by NJIT, is developing hot-melt extrusion technologies that empower pharmaceutical manufacturers to deliver higher potency medications with greater bioavailability. Improvements through manufacturing technology are critical to the success of this industry as basic drug discovery proves more expensive and elusive than in the past.
- NJIT biomedical researchers have perfected breakthrough technology for **brain shunts** used to relieve the excessive cerebro-spinal fluid pressure resulting from injury, aging and congenital conditions like spina-bifida. The work was seeded by a nano-technology grant from the state of New Jersey in 2003 and was awarded a \$3M NIH grant to take the technology to animal trials in partnership with Boston Children's – Harvard Medical School and a commercial partner. Another group has developed adult stem cell technology that allows regeneration of bone, tendons and skin tissue that is being advanced to animal trials, while another researcher is perfecting a vascularized human liver from stem cells that can serve for drug efficacy screening with more reliability than animal testing. Funding from the Coulter Foundation is assisting the translational research required to bring this technology to the market.

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- NJIT supports transportation research that helps New Jersey with key initiatives critical to a growing economy, such as enhancing freight movement at domestic and international gateways; increasing global competitiveness; optimizing intermodal passenger and freight transportation systems; and modeling tools for transportation planning, design and operations. With grant awards from the Federal Highway Administration, NJIT has developed and deployed sophisticated transportation project planning software called **TELUS** that is being used in Metropolitan Transportation Organizations across the country. In a related project for the Federal Transit Administration, NJIT researchers have completed a comprehensive study of transit-oriented development providing state leaders guidance in the form of best practice throughout the country.
- This year, NJDOT designated NJIT as their **Intelligent Transportation System Resource Center**. ITSRC is to utilize the extensive technological resources and staff expertise of the NJIT Transportation Center to assist NJDOT in developing and implementing a comprehensive ITS management strategy. This strategy will involve systematic deployment of ITS tools at selected target locations throughout the State highway network that are expected to yield the largest benefit in terms of congestion reduction and improvement in traffic safety.
- With funding from the China South Rail ZhuZhou Electric Locomotive Research Institute, NJIT launched a new initiative, the Laboratory for Rail System Network and Information Technologies. Working with the corporate lead responsible for deploying a China-wide system of ultra-high speed bullet trains, the Laboratory's researchers will examine technology platforms that serve every need for passenger amenities to train and rail system controls using modern high-speed wireless networks and advanced sensor technology. The outcomes will apply to modernizing US rail systems and serve the local economy by stimulating company formation aimed at unique products and services derived from "fly-by-wireless" technology.
- The **Medical Device Concept Lab** has created a whole new chemical basis for advanced synthetic materials that is based on corn sugars rather than petroleum. Working in partnership with the Iowa Corn Promotion Board, this technology is being licensed to international firms for scale up to full production. One of these materials is a replacement for the chemical Bisphenol A (BPA) used in some plastic bottles and deemed to be a cancer risk.
- Researchers have developed important new technologies for harnessing nano-systems for practical use. **The Advanced Clustered Energetics program and the Reactive Nano-composites program** created the technology base for a whole new generation of munitions, pyrotechnics and propellants. As these spin out of the laboratory, they will contribute to the formation of a commercial science park on the Picatinny campus in Morris County. Another research team is taking nano-tech to the pharmaceutical industry developing practical methods of incorporating high-potency nano-particulates into commercial drug formulations. Yet another team has solved practical problems associated with making carbon nano-tubes useful as building block elements of more complex structures and have devised miniature fuel cells and paintable solar cells that are in the process of being commercialized.

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- By executive order from the Governor, **NJIT serves as the State's Homeland Security Technology Systems Center**. The Center is leading the implementation of new security measures under federally funded demonstration projects in the State's shopping malls and elementary schools. Pilot projects such as these help the Center develop performance and interoperability standards that will guide cost-effective use of public funds to safeguard our infrastructure and citizens. NJIT is working with US Army ARDEC and the New Jersey Business Force to implement a private sector emergency management crisis center that will connect the state response unit to resources in the private sector. It is also developing the interoperability strategy that enables the diverse set of commercially available software systems for crisis support to exchange real-time data for intelligence and decision support. NJIT's experts are coordinating a statewide effort to validate campus safety and security practices through a peer review process.

NJIT maintains and enhances the **New Jersey Training Systems website** (njtrainingsystems.org), which contains the Workforce Investment Act online training vendor application program and Consumer Report Card (CRC) system for the NJ Department of Labor and Workforce Development; maintains and enhances the **NJ Next Stop website** (njnextstop.org), which tells students, parents and teachers the specific skills students will need to learn to be in demand in New Jersey industries; NJIT maintains and enhances the portal and website of the **New Jersey Employment and Training Commission** (www.njsetc.net); Working with the **New Jersey Department of Health and Senior Services**, NJIT has developed a computer network — an electronic disease reporting and management system — that allows local health departments to send information out state-wide in the event of a health emergency. Researchers at NJIT have also created an electronic filing system for real-estate transactions that speeds up the processing of real-estate documents such as deeds.

Laying the Foundation for NJIT's Future

Building on progress already made and the funding from the State Bond Act, NJIT is accelerating its major changes as per the NJIT Strategic Plan:

- An intensification of NJIT's engagement in economic development within the state and region.
- Acceleration of research and development partnerships that maximize NJIT's technological and scientific contributions, particularly in the life sciences.
- Increasing the level of excellence of undergraduate education for increased retention and graduation.
- Expansion of NJIT's support of K-12 STEM education in New Jersey in order to increase the pipeline of STEM students.
- Expansion of NJIT's support of education and training for working professionals to increase skills for NJ's high-tech companies.
- Enhancement of the diversity of the NJIT community to produce a diverse workforce.

As a major aspect of NJIT's engagement in regional economic development, we are particularly pleased to report that NJIT is making a major contribution to the well-publicized Newark Renaissance. The university's **Campus Gateway Plan** to revitalize its surrounding neighborhood recently moved forward with the completion of the first phase – Warren Street Village.

The village includes fraternity/sorority housing, dedicated housing for NJIT Honors College students, student dining facilities and a convenience store. The Board of Trustees has also

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designated two development teams to work on phase two of the Campus Gateway Project which will include more than 100 residential units, 60,000 square feet of commercial space and a structured parking garage. The project is anticipated to break ground in 2014. The Campus Gateway plan, 18 acres, \$1 billion of redevelopment, will create a vital urban center in the heart of Newark's University Heights section.

In closing, as New Jersey's Science and Technology University, NJIT is fully cognizant of the State's economic condition and our sense of shared responsibility. Thus, our FY15 budget requests are limited to priorities supporting job creation as well as core support/infrastructure requirements, which are summarized below:

- Smart Region Test Bed – Newark and its surrounding region will be configured to be a working test-bed for the Urban Internet of Everything (IoE) concept, designed to develop the next generation of products and services in the areas of transportation, utilities, public safety, public health, construction, and tourism. By doing so, it will attract and grow business and create jobs in a new sector, while revitalizing and creating a next-generation Newark Region. To implement this plan, we are requesting initial funding of \$3.3 Million over a 3 year period.
- Campus Facilities and Institutional Support Services – Due our enrollment growth, expanded facilities, and research growth, NJIT is in need of supplemental support for custodial, public safety, institutional support staff, utilities, and facilities equipment totaling approximately \$2.0 Million.
- Enhancement of Existing Business Continuity Program – to put additional provisions in place that will enhance the university response to emergency situations by better maintaining the safety of the campus community, protecting intellectual property, and the ability to return to normal operations as quickly as possible. NJIT is requesting \$1.2 Million to enhance our disaster recovery efforts.
- State Authorized FTE – NJIT is requesting an increase in the State Authorized FTE to restore us to a previously authorized level in addition to the new positions requested within this budget submission.

Additional details supporting these requests are located in Section 4.

Respectfully submitted,

Joel S. Bloom
President

SECTION 2.

EVALUATION DATA/ENROLLMENT/
ORGANIZATION CHART

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EVALUATION DATA**

PROGRAM DATA	Actual FY2012	Actual FY2013	Original FY 2014	Revised FY 2014	Budget Request FY 2015
Institutional Support					
Enrollment total (headcount)	12,487	12,804	13,153	13,071	13,415
Enrollment total FTE's (a)	8,282	8,546	7,456	8,717	8,946
Undergraduate total (headcount)	6,604	7,111	7,334	7,286	7,477
Undergraduate total FTE's (a)	5,472	5,838	5,682	6,045	6,204
Full-time (headcount)	5,183	5,529	5,623	5,709	5,859
Full-time FTE's (a)	4,938	5,266	5,117	5,458	5,602
Part-time (headcount)	1,421	1,582	1,711	1,577	1,618
Part-time FTE's (a)	534	572	565	587	602
Graduate total (headcount)	2,954	2,833	2,969	2,844	2,919
Graduate total FTE's (a)	1,850	1,787	1,376	1,781	1,827
Full-time (headcount)	1,589	1,546	1,550	1,596	1,638
Full-time FTE's (a)	1,346	1,308	837	1,307	1,341
Part-time (headcount)	1,365	1,287	1,419	1,248	1,281
Part-time FTE's (a)	504	479	539	474	486
Extension and Public Service					
Enrollment (headcount) (a)	2,929	2,860	2,850	2,941	3,019
Enrollment total FTE's (a)	960	921	398	891	915
Undergraduate (headcount)	2,104	2,154	2,300	2,377	2,440
Undergraduate FTE's (a)	644	653	305	705	724
Graduate (headcount)	825	706	550	564	579
Graduate FTE's (a)	316	268	93	186	191
Degree programs offered	125	126	137	126	129
Courses Offered	3,164	3,173	3,600	3,199	3,283
Student credit hours produced	240,980	248,790	217,682	254,526	261,220
Degrees and Certificates					
Granted - Total	2,121	2,176	2,300	2,232	2,290
Ratio: Student/faculty (b)	16/1	16/1	16/1	17/1	17/1
Full-time, First-Time, Degree-Seeking Freshmen who are Regular Admission Students	903	939	961	957	975
Average SAT Score - Math	605	614	614	614	615
Average SAT Score - Verbal	536	549	548	549	550
Average SAT Score - Total	1,141	1,163	1,162	1,164	1,165
Outcomes Data (c)					
Third Semester Retention Rates	81.4	82.2	82.1	85.9	85.9
Seven Year Graduation Rates	57.9	58.2	58.2	57.6	57.6
Student Tuition and Fees					
Total Cost of Attendance (d)	30,374	31,190	31,190	32,418	32,418
Full-Time Undergraduate Tuition State Residents	11,756	12,400	12,400	12,800	12,800
Full-Time Undergraduate Tuition Non - State Residents	23,116	24,800	24,800	25,856	25,856
Full-Time Undergraduate Fees	2,218	2,340	2,340	2,418	2,418
OPERATING DATA					
Institutional Support					
Institutional Expenditures					
Instruction	86,291,000	97,967,000	90,999,000	99,984,000	
Sponsored Programs and Research	55,927,000	59,955,000	58,979,000	61,189,000	
Extension and Public Service	1,615,000	1,507,000	1,703,000	1,538,000	
Academic Support	22,075,000	23,944,000	23,280,000	24,437,000	
Student Services	17,134,000	18,566,000	18,069,000	18,948,000	
Institutional Support	37,664,000	39,137,000	39,719,000	39,943,000	
Physical Plant and Support Services	13,532,000	14,827,000	14,270,000	15,132,000	
PERSONNEL DATA					
Position Data					
State Funded Positions	1,187	1,187	1,187	1,187	

(a) Equated on the basis of 32 equivalent credit hours per undergraduate student and 24 equivalent credit hours per graduate student.

(b) Calculated on the number of teaching positions (including adjunct faculty) and equated full-time (weighted) students.

(c) As calculated by the Student Unit Record Enrollment (SURE) system.

(d) As reported to the Higher Education Student Assistance Authority. Includes tuition, fees, room and board, transportation, and supplies.

**NEW JERSEY INSTITUTE OF TECHNOLOGY
FY 2015 BUDGET REQUEST**

ENROLLMENT NARRATIVE

In order for the economy in New Jersey to flourish and create jobs, a vibrant, highly qualified workforce is necessary to meet the needs of business and industry. Despite a national and regional decline in those intending to major in science and technology fields, NJIT is providing the state with a steadily increasing number of highly skilled graduates in engineering, computer science, information technology, mathematics, chemistry, physics, biology, architecture and management.

Robust undergraduate enrollment trends indicate that initiatives designed to enlarge the applicant pool have been successful in attracting a greater number of highly qualified students seeking to enroll at NJIT. Our rigorous curriculum, in conjunction with internships, co-operative programs and a student culture that places a high value on academic achievement, has had remarkable results.

Nearly 50 percent of all BS and MS 2012 graduates have received job offers by the time they graduate, which is twice the national average for all college graduates, as reported by the National Association of Colleges and Employers (NACE). The employment rate jumps to 80% six months out and nearly 90% within a year following graduation. Recently, the Bloomberg Business week survey of U.S. colleges ranked NJIT in the top 10 percent nationally for return on investment and classified the university as one of four of higher education's "best buys" in New Jersey.

Nearly 500 organizations (businesses, industries, governmental agencies, etc) visited campus this year to interview over 3,500 students and recent graduates for employment opportunities within their firms. Another 2,600 companies posted over 14,000 technology job listings to the electronic database. During 2013, nearly 450 NJIT students worked in formal internship and co-ops for New Jersey companies. Some 60 percent of the students will be hired by these firms after they graduate from NJIT. Graduates from these programs enter companies at a significantly higher skill level and are thus immediately more productive to their employers.

The outcomes speak for themselves.—Our math, technology, science and engineering graduates are what business and industry requires in New Jersey and NJIT is working hard to meet that demand. Our increased enrollment is attributable to new program offerings and our solid reputation for academics. This has resulted in enrollment increases. Our first year class in 2012 is our largest ever. Total enrollment for Fall 2013, including undergraduate and graduate students reached 10,130, which is an all time high for NJIT.

While increasing the number of graduates entering our workforce is paramount to meet business and industry demands, we must not only enroll but also graduate as many students as possible. Increasing the number of students who graduate is therefore as critical to workforce demand as is recruitment. In order to achieve our goal of graduating each and every student we enroll, we must provide the infrastructure and support necessary to do so. If we continue to grow our first year enrollment at the present rate, we will soon reach capacity to deliver quality instruction and essential services, both in facilities and personnel. Indeed, we have already reached capacity for architecture and a number of science and engineering fields. Our laboratories,

**NEW JERSEY INSTITUTE OF TECHNOLOGY
FY 2015 BUDGET REQUEST**

ENROLLMENT NARRATIVE

technology and learning facilities must provide 21st century experiences for our students for them to be competitive, nay superior, to those of other states.

We will, of course, continue our efforts to recruit highly qualified students on all levels, but will especially seek to recruit additional graduate students and set more modest, manageable goals for the recruitment of first year students who will be better prepared for the rigors of the challenging curriculum. We will focus our efforts on growing our undergraduate enrollment through retention and persistence, leading more to graduate. As such, we are engaging in vigorous and intentional efforts to graduate as many continuing students as possible.

Highlights of retention efforts that have been initiated or expanded in the current year:

- Expanded the "Community Connections" learning community initiative, now involving sixteen (16) discipline-focused student groups taking linked courses which are organized to foster collaboration. Peer mentors play an important role, facilitating learning outside the classroom and connecting students with campus resources. The program currently enrolls nearly 400 First-time- Full-time Freshmen (+100 over last year). This program expands on the experiences of our EOP and Honors College students who already benefit from the learning communities approaches of those two programs.
- Revising institutional procedures, practices and policies to make our procedures more student friendly, enhancing student satisfaction.
- Focusing more support to students who need academic support through tutoring centers in departments, supplementing that offered centrally in the Center for Academic and Personal Enrichment.
- Implementation and evaluation of the impact of the new policy allowing students who change majors to drop from GPA calculations coursework taken for a previous major.
- Engaged students by increasing the number of clubs and organizations.
- Continued to expand the number of activities and events on campus.
- Increased the number of Greek organizations and increased the overall Greek population.
- Creating a "Greek Village" for almost 360 students thereby enhancing their experiences and opportunities for "community".
- Opened the Warren Street Village, a new residential complex consisting of a new Honor's residence hall, including food service facilities and a fitness center, and Honors college facilities.
- Enhanced and expanded transfer and International Student Orientation.

Highlights of the recruitment efforts that have been initiated or expanded in the current year:

- Enhanced on-campus Open House events for prospective students and their parents.
- Continued to refine the International Students Ambassadors Program.

**NEW JERSEY INSTITUTE OF TECHNOLOGY
FY 2015 BUDGET REQUEST**

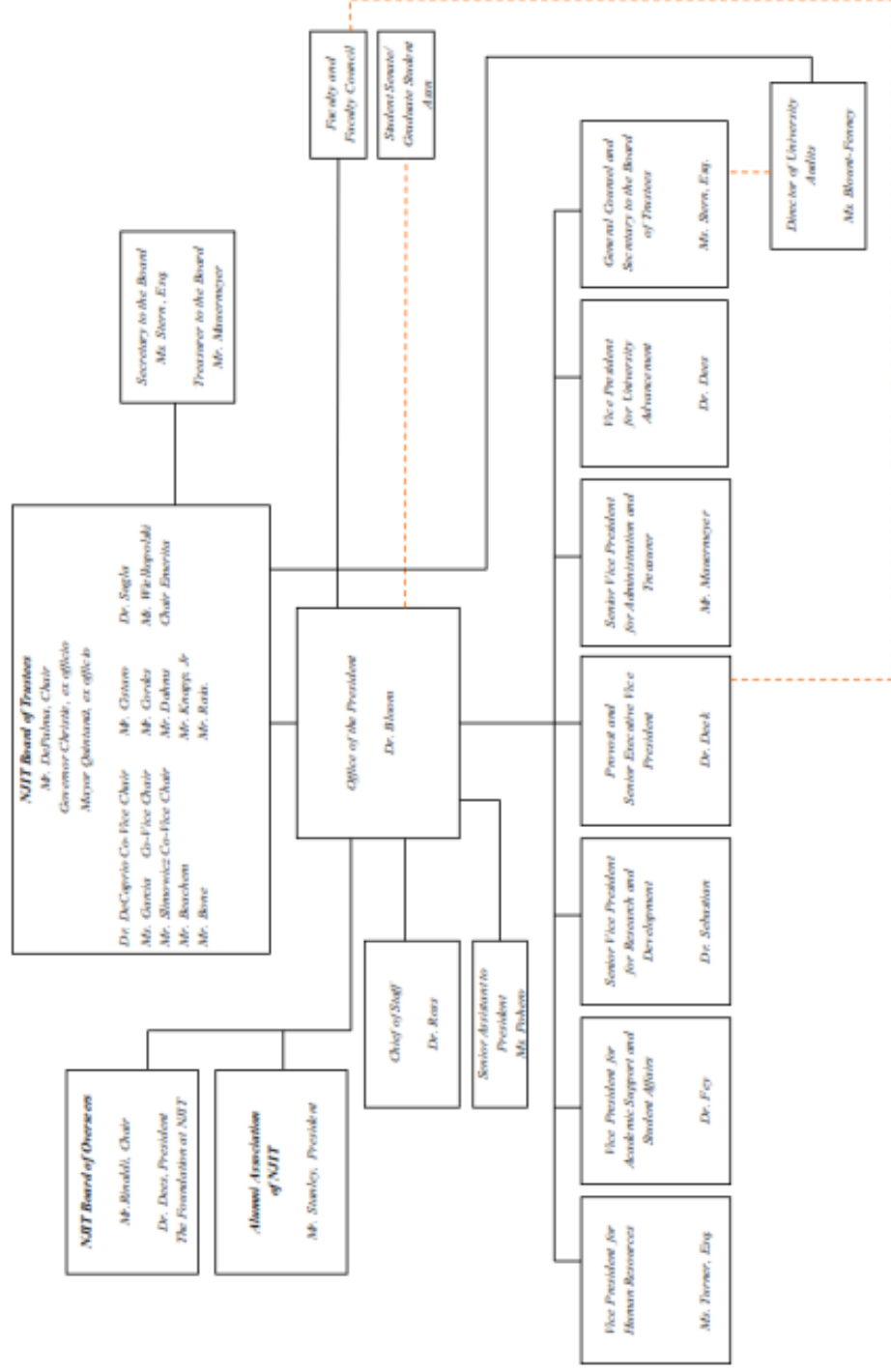
ENROLLMENT NARRATIVE

- Attended recruiting events at over 500 high schools throughout New Jersey and the region.
- Refined our competitive scholarship program to attract highly qualified students.
- Increased enrollment opportunities in the Albert Dorman Honors College.
- Increased enrollment opportunities for transfer students.
- Broadened intercollegiate athletic recruiting for our Division One teams.
- Expanded on-line degree programs and offerings.
- Served over 4,500 students in Pre-College Programs.
- Continuing collaboration with NJ community colleges to increase enrollment.
- Maintained BS/MS programs with four-year institutions.
- Launched a BA in Theater Arts and Technology and continued to populate recently-created majors in Bio-Chemistry, Bio-Physics and Pharmaceutical Bioprocessing.
- Continued to focus efforts on increasing the enrollment of women in our undergraduate and graduate programs.
- Continued partnerships with the National Action Council for Minorities in Engineering, corporate and other science association programs to boost minority enrollments, NSF CUNY MAGNET Alliance, New Jersey Minority action Careers Program, Project 1000 and the GEM Program.

All of these efforts have contributed significantly to NJIT's appreciating national reputation for providing a quality education to those seeking careers in science, technology, engineering and mathematics. NJIT will continue to provide an increasing number of highly qualified graduates to serve New Jersey businesses and industry in the years to come.

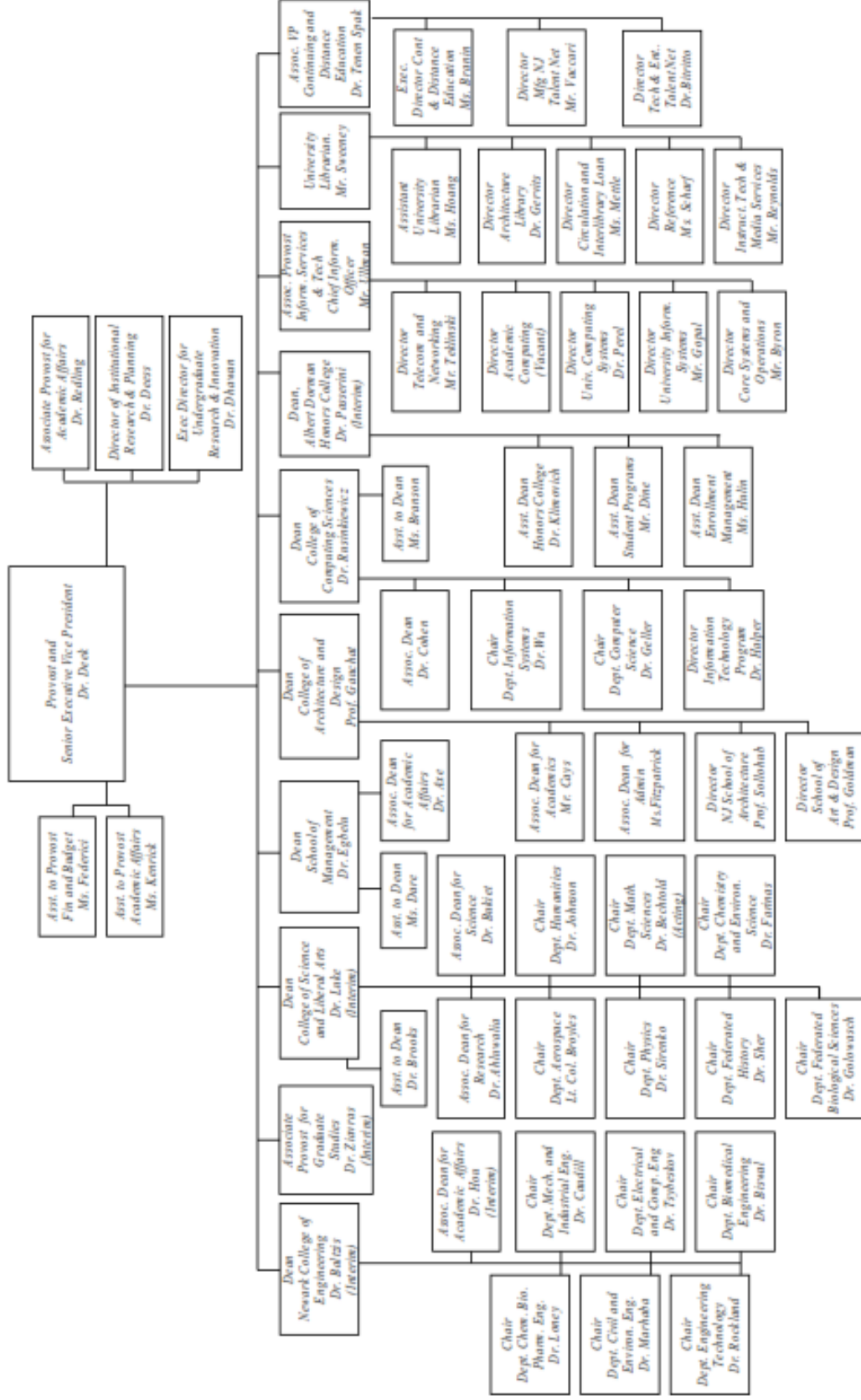
NJIT BOARD OF TRUSTEES, OFFICERS, AND ADMINISTRATION

Fall 2013

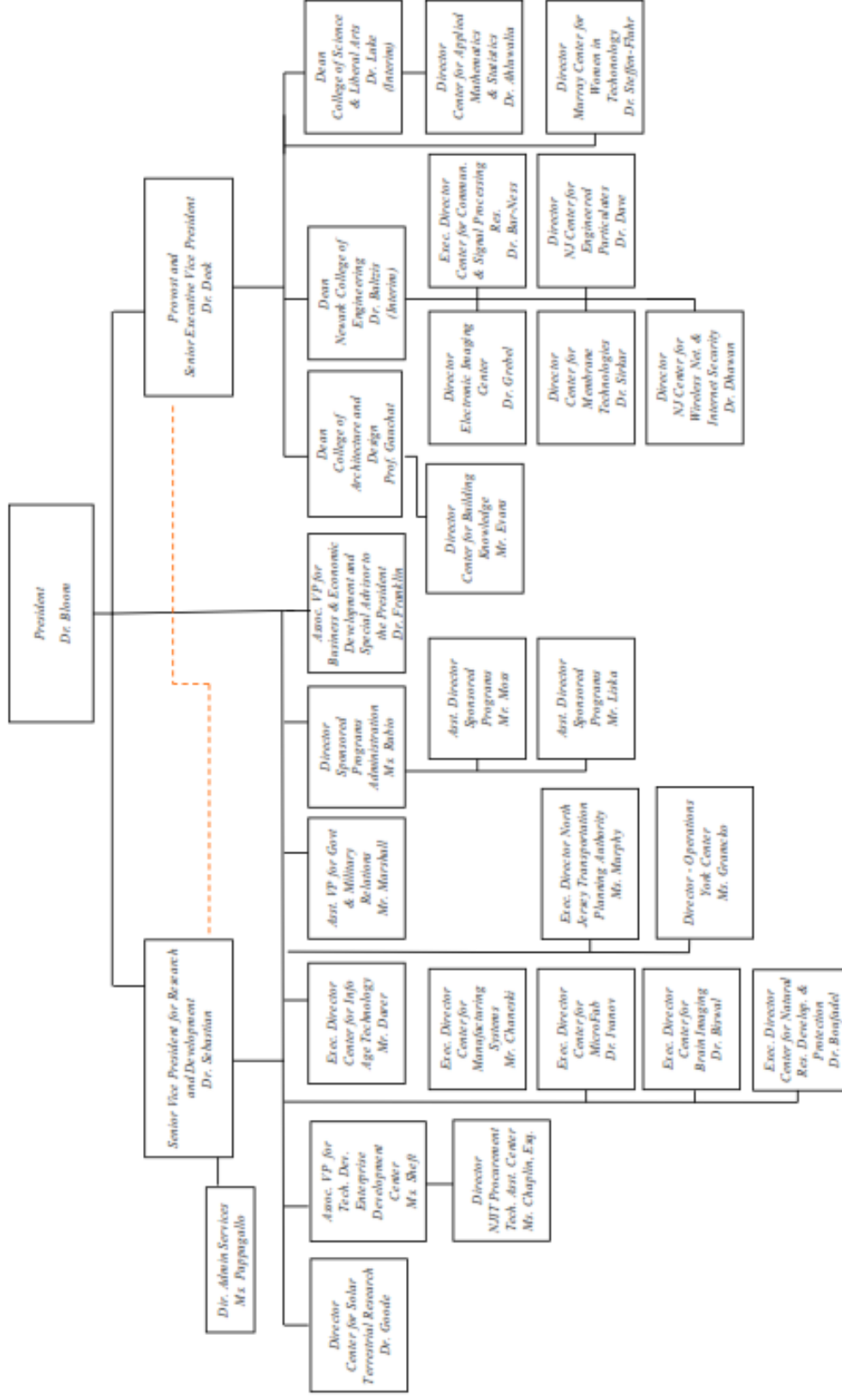


PROVOST

Fall 2013

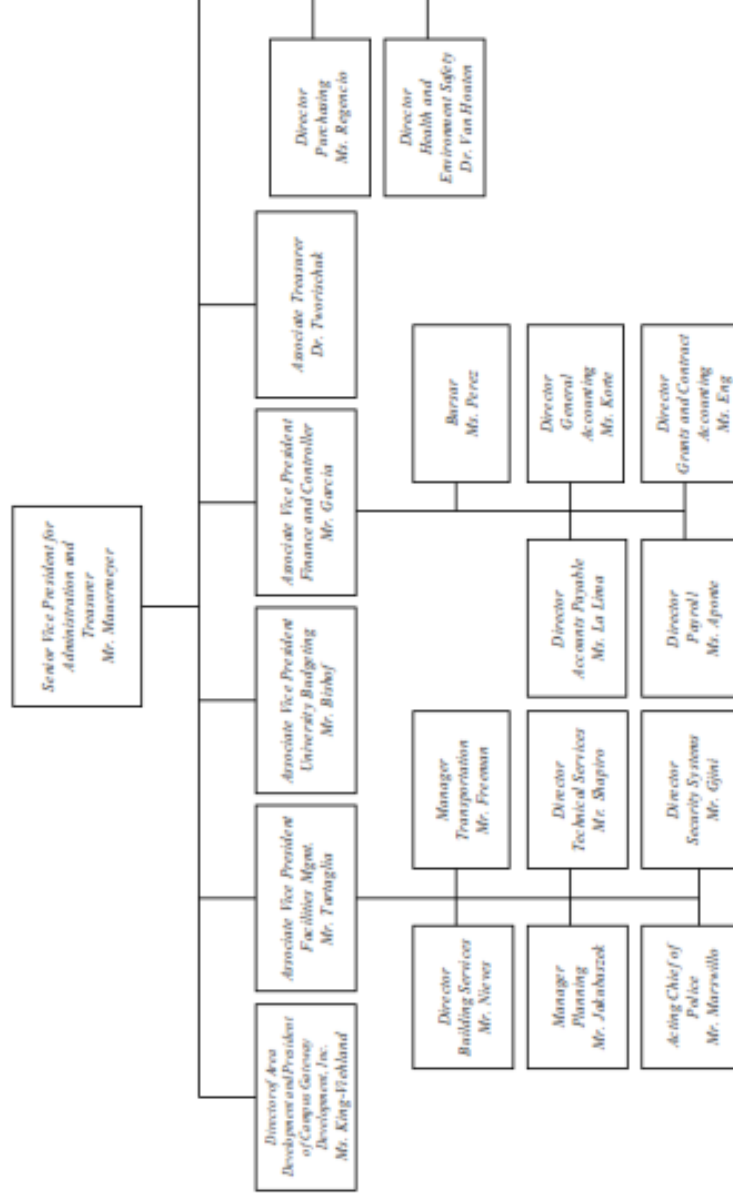


Fall 2013



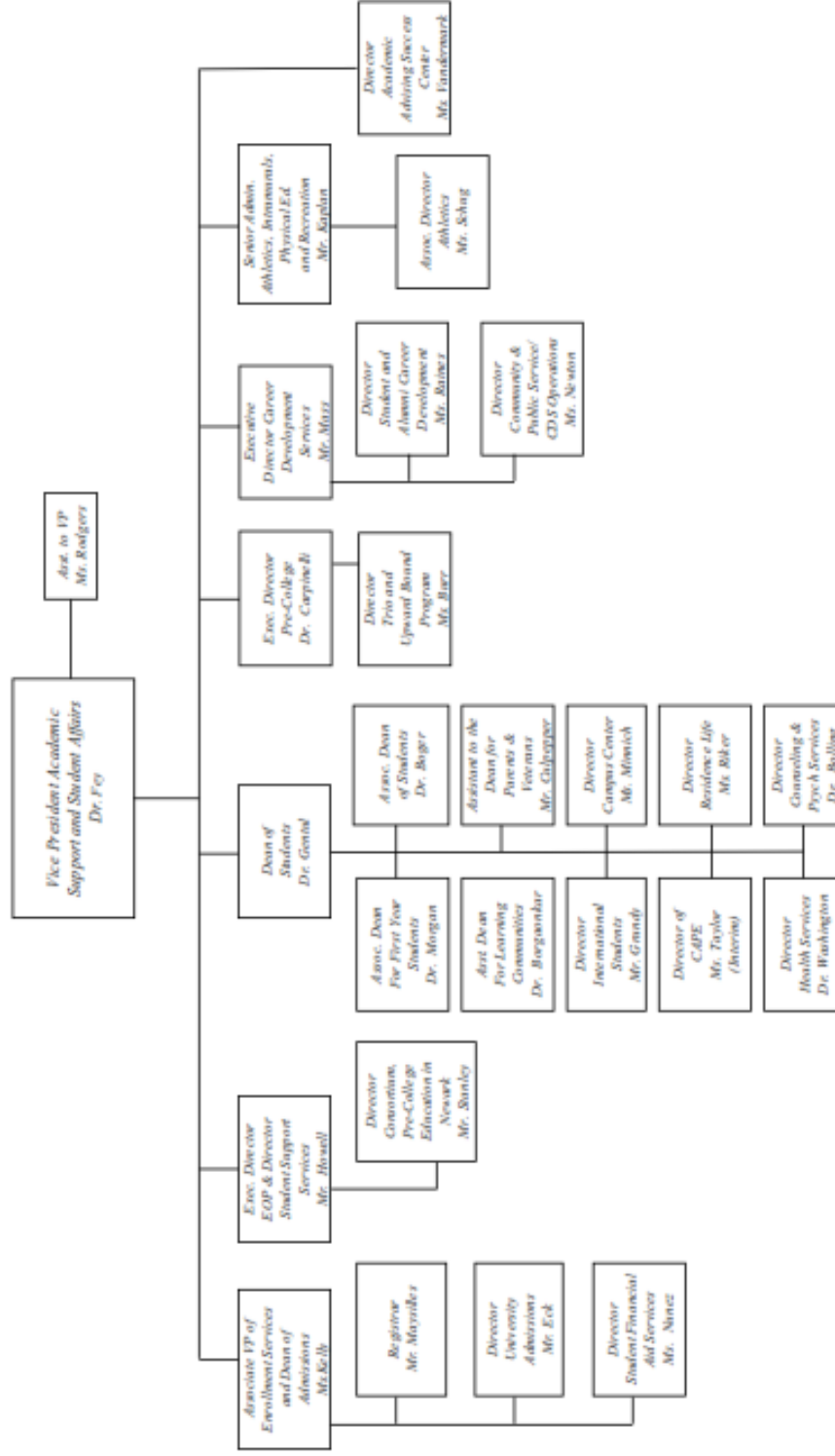
FISCAL ADMINISTRATION

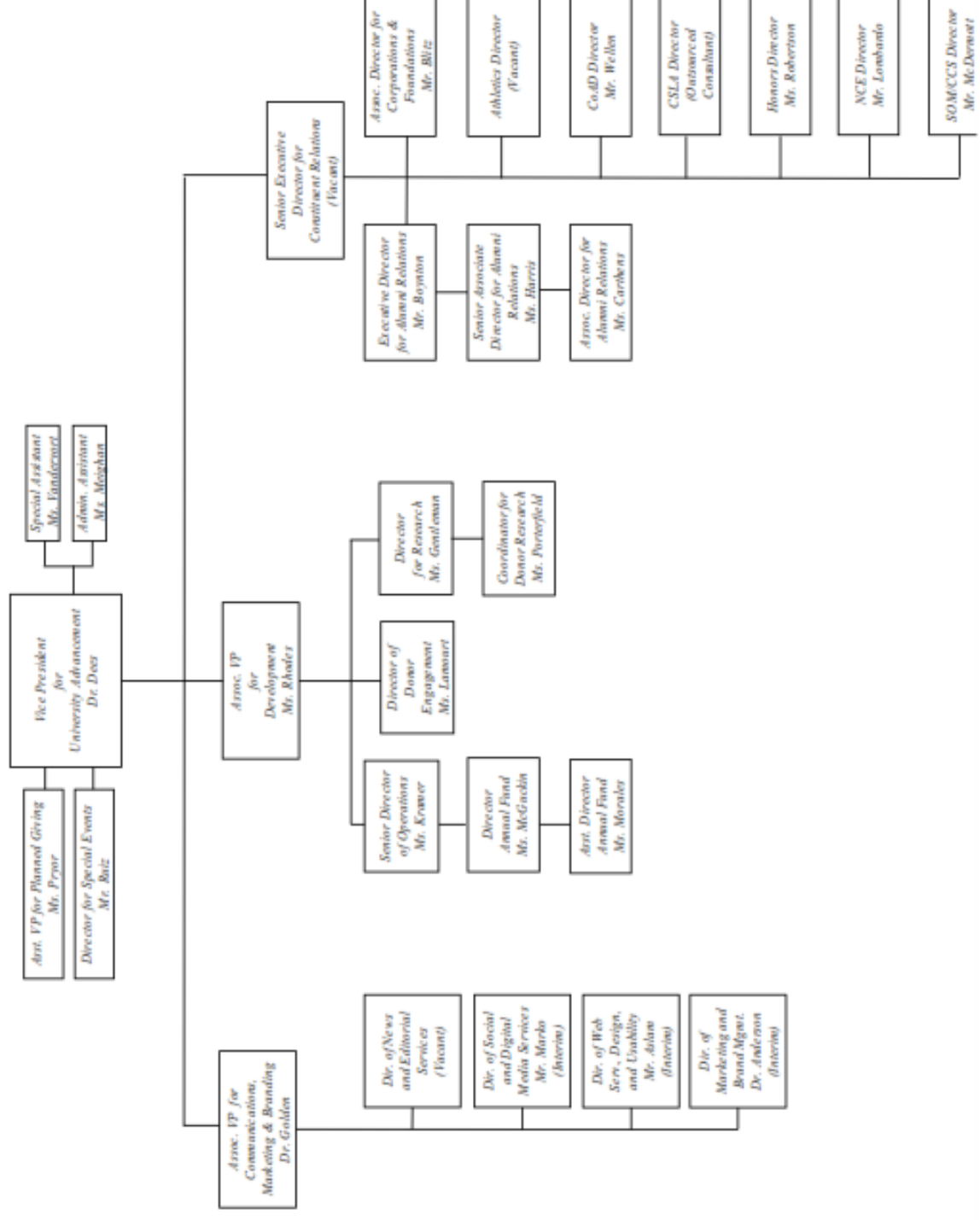
Fall 2013



ACADEMIC SUPPORT AND STUDENT AFFAIRS

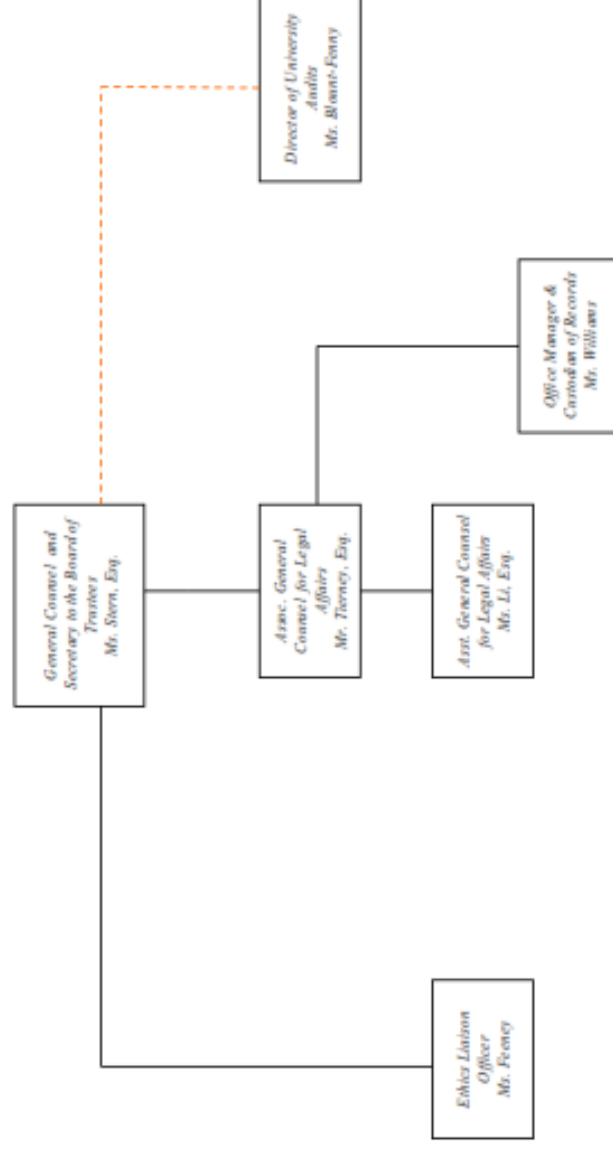
Fall 2013





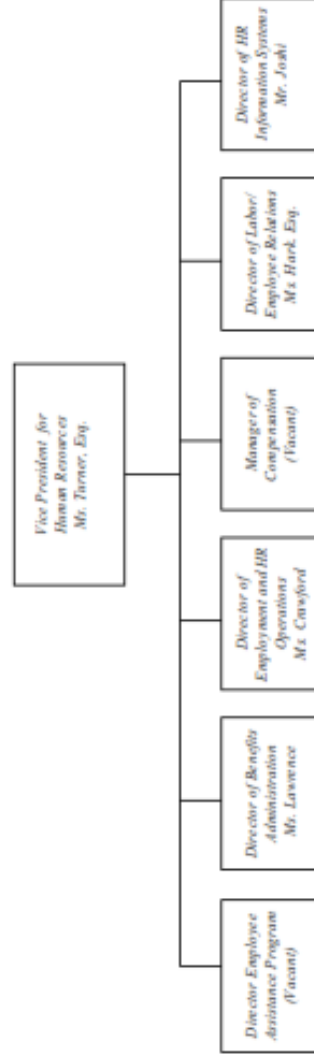
OFFICE OF GENERAL COUNSEL

Fall 2013



HUMAN RESOURCES

Fall 2013



SECTION 3.

BUDGET INFORMATION

**New Jersey Institute of Technology
FY 2015 Budget Request**

Spending Agency: New Jersey Institute of Technology

Appropriations Data

(\$000)

—Year Ending June 30, 2013—					GRANTS - IN - AID Distribution by Fund & Program	FY 2014 Adjust. Approp.	FY 2015 Request	FY 2015 Recom- mended
Original	Reapprop. & Receipts	Transfers & Emerg.	Total Available	Expended				
326,547	16,253	0	342,800	342,800	Institutional Support	355,169	361,710	
					Total Grants - in - Aid			
					LESS:			
	(6,851)	0	(6,851)	(6,851)	Receipts from Tuition Increase	(4,236)		
(130,261)	(8,312)	0	(138,573)	(138,573)	General Services Income	(146,010)	(150,246)	
(15,519)	(755)	0	(16,274)	(16,274)	Auxiliary Funds Income	(16,983)	(16,983)	
(110,745)	(335)	0	(111,080)	(111,080)	Special Funds Income	(117,665)	(117,665)	
(32,326)	0	0	(32,326)	(32,326)	Employee Fringe Benefits	(32,579)	(32,579)	
(288,851)	(16,253)	0	(305,104)	(305,104)	Total Income Deductions	(317,473)	(317,473)	
37,696	(0)	0	37,696	37,696	Total State Appropriations	37,696	44,237	
					Distribution by Fund and Object			
					Special Purpose			
326,547	16,253	0	342,800	342,800	General Institutional Operations	355,169	355,169	
					Smart Region Test Bed		3,300	
					Campus Facilities and Institutional Support Services		2,011	
					Enhanced Business Continuity Plan		1,230	
					State Authorized FTE			
(288,851)	(16,253)	0	(305,104)	(305,104)	LESS:			
					Income Deductions	(317,473)	(317,473)	
					Grand Total State Appropriation	37,696	44,237	
37,696	(0)	0	37,696	37,696	TOTAL ALL FUNDS	37,696	44,237	

State of New Jersey
Department of the Treasury
Office of Management and Budget

New Jersey Institute of Technology
FY 2015 Budget Request

Revenue Statement (BB-103)

The following information should be reconciled to the "Statement of Revenues, Expenses, and Change in Net Assets" from the audited financial statements for fiscal years indicated as "actual."

Institution: NEW JERSEY INSTITUTE OF TECHNOLOGY	FY 2013 Ending June 30, 2013 ACTUAL	FY 2014 Ending June 30, 2014 ESTIMATED	FY 2015 Ending June 30, 2015 ESTIMATED
EDUCATION & GENERAL REVENUE			
General Services:			
Tuition and Fees			
Gross Tuition	116,346	123,810	128,046
Receipts from Tuition Increase (BB-102 & BB-105)	6,851	4,236	
Required fees	20,949	21,294	21,294
Subtotal Tuition and Fees (Gross)	144,146	149,340	149,340
Less student awards	(40,704)	(42,097)	(42,097)
Subtotal Tuition and Fees (Net)	103,442	107,243	107,243
Non - Operating Revenue			
Investments	46	300	300
Miscellaneous nonoperating revenues	1,232	606	606
Subtotal Non - Operating Revenue	1,278	906	906
Subtotal General Services Income; excluding rate increase (BB-102 & BB-105)	138,573	146,010	150,246
Subtotal General Services Income; including rate increase	145,424	150,246	150,246
Other Non - Operating Revenue			
Base State Appropriation	37,696	37,696	37,696
Employee Fringe Benefits (Per OMB)	32,326	32,579	32,579
FY 2015 Critical Needs Request			6,541
Subtotal, Other Non - Operating Revenue	70,022	70,275	76,816
TOTAL EDUCATION & GENERAL REVENUE	215,446	220,521	227,062
NET EDUCATION & GENERAL REVENUE	174,742	178,424	184,965
Auxiliaries			
Resident Life	13,404	14,205	14,205
Bookstore	300	300	300
Other	2,570	2,478	2,478
Total Auxiliaries (BB-102 & BB-105)	16,274	16,983	16,983
Less student awards	(3,782)	(3,919)	(3,919)
Subtotal Auxiliaries (Net)	12,492	13,064	13,064
Special funds			
Grants & Contracts	92,403	98,820	98,820
Other operating revenues	2,396	2,418	2,418
Nonoperating revenues	10,448	10,542	10,542
Other revenues	5,833	5,885	5,885
Subtotal Special funds(BB-102 & BB-105)	111,080	117,665	117,665
TOTAL REVENUE	298,314	309,153	315,694

(1) Actual FY2013 expense for Employee Fringe Benefits per the audited financials is \$43,099.

(2) FY2014 Operating Budget for Employee Fringe Benefits is \$45,933.

NEW JERSEY INSTITUTE OF TECHNOLOGY
Revenue Reconciliation To Annual Financial Statement
(Dollars in thousands)
For the year ended June 30, 2013

Financial Statement Description

	E & G		Special		Additions/	FY13
	Revenue	Auxiliaries	Funds	Subtotal	Deductions	Financial
						Statement
Operating revenues:						
Student tuition and fees	144,146	0	0	144,146	(40,704) ⁽¹⁾	103,442
Federal grants and contracts	0	0	68,649	68,649	0	68,649
State grants and contracts	0	0	19,219	19,219	0	19,219
Other grants and contracts	0	0	4,535	4,535	0	4,535
Auxiliary enterprises	0	16,274	0	16,274	(3,782) ⁽²⁾	12,492
Other operating revenues	0	0	2,396	2,396	0	2,396
Total operating revenues	144,146	16,274	94,799	255,219	(44,486)	210,733
Nonoperating revenues:						
State appropriations	80,795	0	0	80,795	0	80,795
Gifts and bequests	0	0	2,435	2,435	0	2,435
Investment income	46	0	6,509	6,555	0	6,555
Other nonoperating revenues, net	1,232		1,504	2,736	0	2,736
Net nonoperating revenues	82,073	0	10,448	92,521	0	92,521
Other revenues:						
Capital grants and gifts	0	0	1,165	1,165	0	1,165
Additions to permanent endowments	0	0	4,668	4,668	0	4,668
Total other revenues	0	0	5,833	5,833	0	5,833
Total revenues	226,219	16,274	111,080	353,573	(44,486)	309,087

(1) Deductions for student awards: -\$40,704 (tuition & fees).

(2) Deductions for scholarship awards: -\$3,782 (Auxiliary)

New Jersey Institute of Technology
FY 2014 Budget Request
FY 2014 Projected Tuition Revenue
Based Upon FY 2014 Revised FTE Estimates

A. In-State						
5,609 FTE Undergraduate (Est.)	X	\$12,800	(FY 2014 Tuition Rate)	=		\$71,795,200
732 FTE Graduate (Est.)	X	\$17,384	(FY 2014 Tuition Rate)	=		\$12,725,088
B. Out-of-State						
436 FTE Undergraduate (Est.)	X	\$25,856	(FY 2014 Tuition Rate)	=		\$11,273,216
1,018 FTE Graduate (Est.)	X	\$25,404	(FY 2014 Tuition Rate)	=		\$25,861,272

SUBTOTAL \$121,654,776

FTE Undergraduate is equated to 32 student credit hours.
FTE Graduate is equated to 24 student credit hours.

Y	N
Is full - time undergraduate tuition a flat rate? <input checked="" type="checkbox"/> <input type="checkbox"/>	
If yes, the flat rate applies to students taking at least 12 credits, but not more than 19 credits.	
Is full - time graduate tuition a flat rate? <input checked="" type="checkbox"/> <input type="checkbox"/>	
If yes, the flat rate applies to students taking at least 12 credits, but not more than 19 credits.	

C. FTE Executive Management Programs (Est)	11	805,000
D. FTE E-Tuition Rate (Est)	20	410,000
E. FTE Beijing Program (Est)	0	-
F. Continuing Professional Education - Non-Credit		= 450,000
G. Summer / Winter Session Tuition	891	= 6,639,000

SUBTOTAL 129,958,776

ADJUSTMENTS: (1) (1,912,776)

NET TUITION REVENUE ANTICIPATED FOR FY 2014 **128,046,000**

(1) Adjustments represent the difference between the block rate tuition for full-time students charged (based on 12 credits, not 16 credits) versus the per credit hourly rate for part-time students as well as fluctuations between resident and non-resident enrollment, cancellations, and withdrawals.

New Jersey Institute of Technology
FY 2015 Budget Request

FY 2014 Tuition & Fee Schedule

	Charge Per Credit Hour	Annual Rate For Full-Time Student	Charge Per Occurrence (If Applicable)
Tuition			
<u>Resident</u>			
Undergraduate	487	12,800	N/A
Graduate	945	17,384	N/A
<u>Non-Resident</u>			
Undergraduate	1105	25,856	N/A
Graduate	1341	25,404	N/A
Fees Required Of All Students			
Registration	110 ⁽¹⁾	220	N/A
Student Activity - UG	6	110	N/A
Student Activity - G	5	88	N/A
Athletic	14	320	N/A
Technology Infrastructure	30	446	N/A
Academic Facilities	59	1,134	N/A
Student Services	10	140	N/A
Health Services	22 ⁽¹⁾	48	N/A
Other Fees			
		Undergraduate	Graduate
Application		70	65
Commencement		120	120
Deferred Payment (2 Payments)		50	50
Deferred Payment (3 Payments)		100	100
Re-instatement		225	225
Late Registration/Late Payment		100	100
First Year Student Fee		200	N/A
Parking - F/T		195	195
Parking - P/T		100	100
Schedule Change		25	25
Thesis		N/A	75
Dissertation Binding		N/A	100
Maintaining Registration		25	50
Transfer Student Orientation		30	N/A
International Student		125	125
ID Card Replacement		25	25
Health Insurance - if needed:			
In State and Out of State		715	715
International Students		912	912
Distance Learning		85	85
Room And Board - Academic Year			
Typical Student Housing		7,914	7,914
Typical Meal Plan Charge		<u>3,312</u>	<u>3,312</u>
		11,226	11,226

⁽¹⁾ Flat rate per semester

FY 2014 Projected Tuition and Fee Schedule (FEES)

Institution: New Jersey Institute of Technology Use appropriate column for each fee

	Charge per credit hour	Annual rate for full-time student	Undergraduate Charge per occurrence (if applicable)	Graduate Charge per occurrence (if applicable)	Estimated Gen Services Revenue for FY 2014	Estimated Auxiliary Revenue for FY 2014	NJIT Estimated Total Revenue for FY 2014	Estimated Restricted/ Agency Revenue for FY 2014
TUITION:								
Resident								
Undergraduate	487	12,800	N/A	N/A	N/A	N/A	N/A	N/A
Graduate	945	17,384	N/A	N/A	N/A	N/A	N/A	N/A
Non-Resident								
Undergraduate	1,105	25,856	N/A	N/A	N/A	N/A	N/A	N/A
Graduate	1,341	25,404	N/A	N/A	N/A	N/A	N/A	N/A
REQUIRED FEES: (Required for all students)								
Registration	110	220	N/A	N/A	2,181,000	-	2,181,000	-
Student Activity - UG	6	110	N/A	N/A	-	-	-	670,000
Student Activity - GR	5	88	N/A	N/A	-	-	-	159,150
Athletic	14	320	N/A	N/A	2,365,000	-	2,365,000	-
Technology Infrastructure	30	446	N/A	N/A	3,743,000	-	3,743,000	-
Academic Facilities	59	1,134	N/A	N/A	8,860,000	-	8,860,000	-
Student Services	10	140	N/A	N/A	1,135,000	-	1,135,000	-
Health Services	22	48	-	-	400,000	-	400,000	-
OTHER FEES:								
Application/Re-admission/Non-Matriculation	N/A	N/A	70	65	701,000	-	701,000	-
Concomitant	N/A	N/A	120	120	280,000	-	280,000	-
Deferred Payment (2 Payments)	N/A	N/A	50	50	-	-	-	-
Deferred Payment (3 Payments)	N/A	N/A	100	100	-	-	-	-
Total Deferred Payment Revenue	N/A	N/A	225	225	150,000	-	150,000	-
Re-instatement	N/A	N/A	100	100	160,000	-	160,000	-
Late Registration/Late Payment	N/A	N/A	200	200	340,000	-	340,000	-
First Year Student Fee	N/A	N/A	25	25	200,000	-	200,000	-
Schedule Change	N/A	N/A	-	-	50,000	-	50,000	-
Make-Up Exam	N/A	N/A	N/A	-	-	-	-	-
Thesis	N/A	N/A	N/A	75	8,000	-	8,000	-
Dissertation	N/A	N/A	N/A	100	8,000	-	8,000	-
Maintaining Registration	N/A	N/A	25	50	23,000	-	23,000	-
Transfer Student Orientation	N/A	N/A	30	N/A	-	-	-	-
Health Insurance (Resident, Non-Resident)	N/A	N/A	715	715	-	-	-	-
Health Insurance (International Student)	N/A	N/A	912	912	-	-	-	-
International Student	N/A	N/A	125	125	300,000	-	300,000	-
ID Card Replacement	N/A	N/A	25	25	28,000	-	28,000	-
Distance Learning	N/A	N/A	85	85	356,000	-	356,000	-
Parking - FT	-	-	195	195	-	1,105,000	1,105,000	-
Parking - PT	-	-	100	100	-	445,000	445,000	-
Other Programmatic Fees	-	-	-	-	6,000	-	6,000	-
TOTAL FEE REVENUE:					21,294,000	1,550,000	22,694,000	829,150
ROOM AND BOARD:								
Typical Student Housing	N/A	7,914	N/A	N/A				
Typical Meal Plan Charge	N/A	3,312	N/A	N/A		14,205,000		

NOTES:
(a) Per semester charge for part-time students

NEW JERSEY INSTITUTE OF TECHNOLOGY
SALARY PROGRAM FY2014 AND FY2015

ESTIMATED SALARY PROGRAM BY BARGAINING UNIT.

Union Totals	FY14 Head Count	FY14 Base Salary	FY14 Estimated Salary Program (1)	FY14 Anticipated Cash Need	FY15 Base	FY15 Estimated Salary Program	FY15 Anticipated Cash Need
afscme	90.00	4,245,862	84,917	4,330,780	4,330,780	119,096	4,449,876
afu-ucau	8.00	458,022	12,596	470,618	470,618	16,472	487,090
fop	22.00	1,363,554	27,271	1,390,825	1,390,825	27,817	1,418,642
fop - soa	7.00	613,099	12,262	625,361	625,361	12,507	637,868
njdea	3.00	340,648	6,813	347,461	347,461	6,949	354,410
non-aligned	147.00	19,267,977	529,869	19,797,846	19,797,846	692,925	20,490,771
opelu	170.00	8,126,020	203,286	8,329,307	8,329,307	270,879	8,600,186
psa Faculty	287.00	40,473,012	1,113,008	41,586,019	41,586,019	1,455,511	43,041,530
psa Staff & Lecturer	355.00	26,013,179	725,266	26,738,446	26,738,446	948,451	27,686,896
Grand Total	1089.00	100,901,374	2,715,289	103,616,663	103,616,663	3,550,606	107,167,269

SALARY PROGRAM PARAMETERS:

	FY14	FY15
afscme	ATB 1.0000%	Merit 1.0000%
afu-ucau	2.7500%	3.5000%
fop - soa	1.0000%	1.0000%
fop	1.0000%	1.0000%
non-aligned	2.7500%	3.5000%
opelu	1.5000%	1.5000%
njdea	1.0000%	1.0000%
psa Faculty	2.7500%	3.5000%
psa Staff & Lecturer	2.7500%	3.5000%

DISTRIBUTION BY ELEMENT.

Element	FY2014 Estimated Salary Program	FY2015 Estimated Salary Program
Instruction	1,457,882	1,908,318
Research	105,252	137,885
Public Service	14,439	18,906
Academic Support	325,571	427,014
Student Services	233,768	306,836
Institutional Support	444,050	569,376
Operation and Maintenance of Plant	134,326	182,271
Grand Total	2,715,289	3,550,606

SECTION 4

NEW PROGRAM NEEDS

**NEW JERSEY INSTITUTE OF TECHNOLOGY
FY2015 BUDGET PRIORITY REQUESTS**

This section identifies budgetary needs above our current appropriation that are defined as programs needed to move the university forward strategically to ensure that we are providing quality educational, research, service, and economic development programs to address broad economic and societal goals. Below is a summary of our priority requests for FY2015.

Total FY2015 Priority Requests (\$000's)

<u>Priority Request:</u>	<u>Recurring</u>	<u>One-Time</u>	<u>Total</u>	<u>FTE</u>
1) Smart Region Test Bed	\$3,300		\$3,300	17
2) Campus Facilities and Institutional Support Services	\$1,865	\$146	\$2,011	28
3) Enhancement of Business Continuity Plan		\$1,230	\$1,230	0
4) State Authorized FTE				59
Total	\$5,165	\$1,376	\$6,541	104

We have limited our FY15 priority requests to those that are closely aligned with the State Strategic Job Growth Plan in addition to critical personnel and infrastructure needs. NJIT supports the State Strategic Job Growth Plan by expanding research initiatives that bring together cutting-edge technology solutions through collaboration with industry partners that will foster economic growth and revitalize the Newark region.

The next few pages display the Budget Initiative Forms (BIF) that are required by the State, and are subsequently followed by the detail narratives supporting those requests.

**STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
OFFICE OF MANAGEMENT AND BUDGET
FISCAL YEAR 2015
PLANNING DOCUMENT BUDGET INITIATIVE FORM (BIF)**

Initiative: *Smart Region Test Bed*

Type: Growth **Rank:** 1
CIC: Potential Growth (Discretionary)
Dept/ Agency: Department of State
Space Needs: No Effect ☐ **Legislation Required** ☐ **Capital Request**

Purpose:

NJIT's technologically based education and research programs are closely aligned to support the design, computing, engineering, and life sciences clusters identified in the State Strategic Job Growth Plan. The State Plan clearly recognizes the need for expanding translational research to bring technology and the sciences to bear on cutting-edge solutions through intensive industry collaborations. The Smart Region Test Bed fosters this initiative through collaborative working groups, in which Newark will be configured to be a working test-bed designed to develop the next generation of products and services through the use of IoE (Internet of Everything) technologies. Some potential collaborative public and private partners would be: Alcatel Lucent, Cisco, Verizon, IBM, and Panasonic to name a few. Potential areas of product application will be in transportation, utilities, public safety, public health, construction, and tourism. This initiative will attract and grow business, create jobs in a new sector, while revitalizing and creating a next-generation Newark region.

Initiative Impact

The accelerated introduction of IoE technologies offers wide-ranging citizen benefits that will diffuse throughout the region to give New Jersey a distinct competitive advantage in the battle to retain and attract business. Furthermore, over the long term, it will provide a legacy of job growth across any commercial sector that the state may wish to enhance. However, in the shorter term, this initiative will stimulate a next-generation urban test bed infrastructure for Newark and provide a catalyst for job growth in several areas. These include: installers, construction, service technicians, advanced manufacturing, and specialty apps developers.

Out-year Considerations

NJIT is requesting initial funding \$3.3 million over a three year period (project total \$9.9 million).

Additional Information

NJIT's programs in entrepreneurship and its stewardship of the state's oldest and largest technology business incubator provide a spectrum of assets to support the test bed and its public and private sector users. NJIT academic research competencies are part of the attraction that brings companies to EDC and will support innovation in the IoE space. Critical expertise includes sensor technology and sensor-based systems, big data analytics and cloud computing, wireless signal processing, cyber security, location-aware computing systems and more.

FY 15 Funding

	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Total Fiscal Year Funding:	\$0	\$3,300	\$3,300	\$3,300
Change:	\$3,300	\$0	\$0	(\$3,300)
Total FY Budget Request:	\$3,300	\$3,300	\$3,300	\$0

Position:

<u>Position Type</u>	<u>Base FTE</u>	<u>Positions</u> #	<u>\$</u>	<u>Comments</u>
Increase FTE	0	17	\$1,500	
Total	0	17	\$1,500	
Total Positions		17		

**STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
OFFICE OF MANAGEMENT AND BUDGET
FISCAL YEAR 2015
PLANNING DOCUMENT BUDGET INITIATIVE FORM (BIF)**

Initiative: *Campus Facilities and Institutional Support Services*

Type: Growth **Rank:** 2
CIC: Potential Growth (Discretionary)
Dept/ Agency: Department of State
Space Needs: No Effect ☐ **Legislation Required** ☐ **Capital Request**

Purpose:

NJIT has significantly increased enrollment (18% from FY05) and research (36% from FY05) to meet the demands of STEM graduates without added State operating support, which has contributed to an increased strain on the university's resources. In addition campus square footage has grown by approximately 475,000 feet to total over 3 million square feet in FY14 (growth of 18% from FY05). Due to this growth, NJIT is in need of additional custodial, public safety and institutional support staff. Utilities costs have also been increasing. Since 2005, the cost of electric, water, and gas has risen by approximately 48% or 6% per year on average, despite significant energy efficiencies put into place. Increased enrollment has contributed to increased demands on our facilities management department to keep up with maintenance, recycling, and refuse removal throughout campus. Vehicles to transport waste, recycling, and snow removal are costly but important to maintain student satisfaction and campus appearance. Further, additional institutional support staff is required to properly handle the increased volume resulting from the growth in enrollment, research, and facilities.

Initiative Impact

These core/infrastructure requirements are important to maintain student satisfaction and assure appropriate levels of service and good business practices are followed.

Out-year Considerations

NJIT is requesting a recurring increase of \$1,385,000 to support 28 new facilities and institutional support positions, and \$480,000 to support utilities usage/rate increases. Additionally, NJIT requests a one-time increase of \$146,000 to fund new vehicles and equipment to maintain the campus facilities.

Additional Information

FY 15 Funding

	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Total Fiscal Year Funding:	\$0	\$2,011	\$1,865	\$1,865
Change:	\$2,011	(\$146)	\$0	\$0
Total FY Budget Request:	\$2,011	\$1,865	\$1,865	\$1,865

Position:

<u>Position Type</u>	<u>Base FTE</u>	<u>#</u>	<u>\$</u>	<u>Comments</u>
Increase FTE	0	28	\$1,385	
Total	0	28	\$1,385	
Total Positions		28		

**STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
OFFICE OF MANAGEMENT AND BUDGET
FISCAL YEAR 2015
PLANNING DOCUMENT BUDGET INITIATIVE FORM (BIF)**

Initiative: *Enhancement of Existing Business Continuity Plan*

Type: Growth **Rank:** 3
CIC: Potential Growth (Discretionary)
Dept/ Agency: Department of State
Space Needs: No Effect ☐ **Legislation Required** ☐ **Capital Request**

Purpose:

While a business continuity plan was already in place, Superstorm Sandy highlighted areas that could be improved to make us better prepared for any future emergency events. To improve the campus-wide response to emergency situations the updated business continuity plan objectives include the following: maintaining the safety of the campus community, protect the loss of intellectual property, and the ability to return to normal operations as quickly as possible.

Initiative Impact

To ensure the well-being of students, faculty, staff, and the university infrastructure. Without this type of emergency response preparation, instructional time is lost, research efforts are delayed or irreparably damaged, payroll and the ability to pay vendors is halted.

Out-year Considerations

NJIT is requesting a one-time increase of \$1.23 million to enhance the university's business continuity plan.

Additional Information

FY 15 Funding

	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Total Fiscal Year Funding:	\$0	\$1,230	\$0	\$0
Change:	\$1,230	(\$1,230)	\$0	\$0
Total FY Budget Request:	\$1,230	\$0	\$0	\$0

Position:

<u>Position Type</u>	<u>Base FTE</u>	<u>Positions</u>	<u>\$</u>	<u>Comments</u>
		#		
<u>Total</u>		0	\$0	
<u>Total Positions</u>		0		

**STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
OFFICE OF MANAGEMENT AND BUDGET
FISCAL YEAR 2015
PLANNING DOCUMENT BUDGET INITIATIVE FORM (BIF)**

Initiative: *State Authorized FTE*

Type: Growth **Rank:** 4
CIC:
Dept/ Agency: Department of State
Space Needs: No Effect ☐ **Legislation Required** ☐ **Capital Request**

Purpose:

NJIT continues to display significant growth in enrollment, research, facilities, and operations. In FY09, after a detailed review of NJIT authorized positions by NJ OMB, the State increased NJIT's State authorized FTE count to 1,246 (95% of 1,313). During subsequent State budget processes the authorized FTE count was reduced to 1,187.

Initiative Impact

As the university continues to grow we need to add additional faculty and staff, so we are approaching our State authorized FTE maximum of 1,187.

Out-year Considerations

We are requesting that the State increase our FTE's to 1,291 to restore us to previously authorized FTE count (1,246=1,187+59). In addition, to support the new positions (45) that are included within the FY15 budget priority requests (1,291 = 1,246+45).

Additional Information

FY 15 Funding

	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Total Fiscal Year Funding:	\$336,888	\$336,888	\$336,888	\$336,888
Change:	\$0	\$0	\$0	\$0
Total FY Budget Request:	\$336,888	\$336,888	\$336,888	\$336,888

Position:

<u>Position Type</u>	<u>Base FTE</u>	<u>#</u>	<u>\$</u>	<u>Comments</u>
Increase FTE	1,187	59	\$0	
<u>Total</u>	1,187	59	\$0	
<u>Total Positions</u>		1,246		

STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
OFFICE OF MANAGEMENT AND BUDGET
FISCAL YEAR 2015
PLANNING DOCUMENT BUDGET INITIATIVE FORM (BIF)

Summary of FY15 State Budget Requests

Growth Totals (4 Records)

		Positions	
<u>FY 14 Funding</u>	\$336,888	<u>FY 14 FTE</u>	1187
<u>FY 15 Incr/Decr</u>	\$6,541	<u>FY 15 Incr/Decr</u>	104
<u>FY 15 Requested</u>	\$343,429	<u>FY 15 FTE</u>	1,291

**NEW JERSEY INSTITUTE OF TECHNOLOGY
FY2015 BUDGET PRIORITY REQUESTS**

1) Smart Region Test Bed

A Program to Revitalize New Jersey's Urban Centers and Grow a Next-Generation High-Tech Economy

Summary

Demographic and technology trends are converging to create a point of departure in the products and services affecting the way people live and work in large metropolitan centers. This transformation in urban living is being made possible by the proliferation and confluence of miniaturized computing hardware, sensors, big data, massive backend computing, and high-speed wireless networks. However, these recent advances await the step change impacts made possible by integrating these technologies into an entirely new class of products and services.

Within the Smart Region Test Bed program, Newark and its surrounding region will be configured to be a working test-bed designed to develop this next generation of products and services. By doing so, it will attract and grow the companies and jobs serving this future. Sitting in the middle of the most densely populated region of the US, Newark poses all the problems of urban life and yet could demonstrate all of the potential for a revitalized population center. Large enough to have a critical mass of users, diverse enough to check off every demographic, and yet compact enough to be manageable, this city, and interested neighboring jurisdictions, could become a global model for high-tech living.

The Smart Region Test Bed program creates the opportunity for Newark to master a demographic and technological convergence. The competitive advantage resulting from the Smart Region Test Bed will accelerate the introduction of new technologies and products to improve urban living and bring an economic focus to accelerate Newark's revitalization. The resulting economic and job-creation benefits will diffuse throughout the region and New Jersey as a whole.

The Smart Region initiative will not only transform our image, but turn our challenge into an opportunity by providing new jobs across the economy. These jobs include: entry level positions like technology installers and service personnel, advanced manufacturing jobs associated with producing new technology infrastructure, innovation-based jobs attracted here because we will be the first practical test-bed for the Urban Internet of Everything (IoE), as well as companies attracted to locate here simply because of the livability that this approach will create.

The Smart Region Test Bed provides a critical function for ushering in the Urban IoE. The burst of the dot-com bubble taught us many lessons about the IT economy, not the least of which was that not all things that can be put on a computer should, if you wish a sustainable business, and that IT enthusiasts are often the worst judge of market appeal for their products and services. Without a suitable environment in which to judge the feasibility, utility, and acceptance of any IoE concept, there are large barriers of entry to any company with a vision for a new product or service. The Smart Region Test Bed provides a scaled laboratory for enterprising companies to test and refine their products and services.

**NEW JERSEY INSTITUTE OF TECHNOLOGY
FY2015 BUDGET PRIORITY REQUESTS**

Smart Region Approach – Creating a Test-Bed Infrastructure

Newark and the surrounding region will be configured as a working test-bed for IoE products and services. Within the most densely populated region of the US, Newark is a microcosm of urban life's challenges as well as its potential for a revitalized population center. Demographically diverse and sizeable enough to have a critical mass of users, Newark could become a model for high-tech living. It is more nimble than larger cities like New York, and more needs-driven than tech-based cities like San Jose or Seattle.

Setting up a test-bed requires basic infrastructure through which IoE elements can be linked, and performance data collected and analyzed. It takes staffing to operate the test-bed, to oversee vendor product insertions, to manage deployment and to ensure confidentiality across multiple, competing vendor projects. These are the resources that New Jersey can create to attract technology-based solutions that address the following applications areas.

Potential Areas of Product Application

Transportation - Moving people and goods throughout a congested urban region is a problem area rife for IoE based solutions. Dynamic traffic light timing, personalized and adaptive route management, parking allocation, toll collection and emergency services dispatch are but a few of the services that could enhance personal and commercial vehicular traffic flow in the region. Add concepts like Bus Rapid Transit, real-time mass transit availability alerts, multi-modal service integration tying rail, air, and land transit systems together in a seamless delivery system and more all possible today. Layer on that the prospect of automatically piloted cars as a commercial reality by 2020, and the opportunity for IoE technologies that lead to efficient transportation with lower environmental impact are immense.

Utilities – Urban utility infrastructure is another target of opportunity for IoE to turn a liability to an asset. Smart systems can monitor the operational health of complex distribution networks for electricity, gas, potable water and sewage. Impending problems can be identified and repaired before there is a catastrophic outage, minimizing service disruptions. Increased use of electric and natural gas powered vehicles will necessitate new approaches to distribution as residences become new, high load point sources. Sensing systems open the possibility of active management to optimally distribute resources during peak periods of use without oversizing systems.

Public Safety – Safer streets and faster emergency response are all part of the promise of IoE. From adaptive street lighting, remote eyes on troubled areas, and various means for connecting citizens in need to police, fire and rescue, IoE technologies play a primary role as eyes and ears connecting the community to assets for a safer living environment. In addition to the day-to-day tasks, IoE stands up in times of emergency by alerting citizens to calls for evacuation – or shelter in place. Organizing evacuation routes and identifying citizens who are stranded are all tasks aided by IoE.

Public Health – Monitoring air and water quality are simple tasks in the world of IoE. With a potentially massive number of monitoring points, problems can be pinpointed geographically.

**NEW JERSEY INSTITUTE OF TECHNOLOGY
FY2015 BUDGET PRIORITY REQUESTS**

Remediation steps are more promptly deployed and any necessary citizen interventions enacted. Infectious disease incidents can be monitored and managed to improve the timeliness of treatment to those affected and reduce spread across the population. New medical device technology will facilitate treatment of chronic conditions without necessitating hospitalization or prolonged stay in a specialized care facility.

Commercial and Residential Construction – IoE addresses the growing need for energy efficient, sustainable buildings from office towers to individual homes. Not only are these environments the nexus for much of the already discussed “smart utilities,” but they also are demonstration sites for many concepts in consumer- oriented products and services. The technology is part of the answer to resilient design by which our built infrastructure can survive the periodic ravages of natural disasters, like the series of storm- related disruptions that New Jersey has seen over the past few years.

Tourism – IoE opens new opportunities for dynamic public signage and information kiosks that change the experience of visitors to the city. Multi-language, interactive guidance systems not only in air and rail station but distributed throughout the city can both guide you to your destination and inform you of personally interesting sights to see. Public displays – electronic billboards – can adapt messaging to reflect the needs and interests of immediate passersby. Wearable displays like Google glasses allow an augmented reality in which local sites can be tagged with historical significance or other aspects of personal interest to the wearer.

Benefits - Job Creation, New Sector Growth, and a Revitalized, Next- Generation Newark Region

The accelerated introduction of IoE technologies offers wide-ranging citizen benefits that will diffuse throughout the region to give New Jersey a distinct competitive advantage in the battle to retain and attract business. Furthermore, over the long term, it will provide a legacy of job growth across any commercial sector that the state may wish to enhance. However, in the shorter term, this initiative will stimulate a next- generation urban test bed infrastructure for Newark and provide a catalyst for job growth in several areas. These include:

- **Installers** – from sensors, wireless transponders and network cabling to smart light poles and traffic lights, the project will have a continuous need for installers staffing the various pilot demonstrations and then scaling them out into full regional implementation.
- **Construction** – Smart infrastructure will stimulate classic construction industries for roadway, water and sewer, and office and residential building projects.
- **Service Technicians** – Widespread sensor deployments and communications hubs will drive a need for specialized service technicians to keep the IoE operational.
- **Advanced Manufacturing** – The test bed activity will make it advantageous for manufacturers to establish operations close to installed base of product.

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- Specialty Apps Developers – It is especially advantageous for entrepreneurial start-ups to be close to their demonstration sites. The test bed will be natural magnet for those looking to develop apps that work in concert with the instrumented IoE infrastructure.

Positioning for a Large Market - Existing New Jersey Competencies in Potential Public-Private Partners

In a recent study, Cisco calculated that the Internet of Everything, applied in 21 core “use cases” has the potential to deliver \$14.4 trillion of net profits for private-sector companies globally between now and 2022. In a follow-up study, Cisco estimated that, in 2013 alone, IoE will drive \$613 billion of value for private-sector companies in 12 of the world’s largest economies. New Jersey is fortunate to have a number of companies located here that can lead the growth of an Urban IoE test bed. To name a few:

- Alcatel Lucent has developed the lightRadio™ Network, an approach to wireless networking that dispenses with cell towers and large antenna arrays by replacing them with self-contained hand-held sized cubes that permit citywide coverage with no dead zones and throughput to meet the needs of IoE.
- Cisco is a leader in network systems solutions and a thought leader in developing concepts of IoE, including urban applications.
- Verizon has become the preeminent provider of state of the technology wireless connectivity using (Alcatel Lucent’s) LTE 4G broadband technology.
- IBM is building its corporate future on big-data analytics and has embraced the concept of Smarter Cities and a Smarter Planet as important commercial drivers for adoption of their technology.
- Panasonic, NA is establishing a leading position as a provider and domestic manufacturer of interactive display panel technology.
- Petra Solar is pioneering hardware concepts for distributed solar energy generation and management. Their statewide demonstration with -
- Public Service Electric & Gas using telephone pole mounted solar panels that have integrated power inverters, onboard device monitoring systems networked back to central control and can be controlled in a system-wide, managed grid is an example of the type of innovation that IoE can promote.
- WattLots is an NJIT incubator company that has novel concepts for solar power generation integrated with open parking coverage as well as solar energized street lights and signage all connected to the IT grid for the purpose of facilitating new concepts in consumerism.

**NEW JERSEY INSTITUTE OF TECHNOLOGY
FY2015 BUDGET PRIORITY REQUESTS**

Supporting the Test Bed - NJIT Resources

NJIT has established Information Everywhere as one of three long-term strategic priorities. The proposed program will benefit from the competencies and expertise that exist in our faculty and can inform the creation and operation of the test bed as well as the related evolution of interoperability standards by which the Urban IoE can accelerate growth. In addition to core academic strengths, NJIT has a long track record of success in technology-based economic development initiatives ranging from new business initiation and growth in its Enterprise Development Center (EDC), to outreach and extension programs serving small to medium-sized enterprises, through its leading position in transforming federal research dollars into invention disclosures.

NJIT's programs in entrepreneurship and its stewardship of the state's oldest and largest technology business incubator provide a spectrum of assets to support the test bed and its public and private sector users. Roughly one-third of the over 90 companies in our EDC are engaged in the information technology business sector. They are attracted by the mix of business acceleration programs and exposure to the investor community that EDC offers, as well as access to our students, faculty and specialized technical resources. More than 300 NJIT students are employed by EDC companies, and many bring IT competencies to the diverse set of businesses that have revenues over \$80M and employ 800 people.

NJIT academic research competencies are part of the attraction that brings companies to EDC and will support innovation in the IoE space. Critical expertise includes sensor technology and sensor-based systems, big data analytics and cloud computing, wireless signal processing, cyber security, location-aware computing systems and more. NJIT Professors Emeriti Murray Turoff and Roxanne Hiltz are acknowledged visionaries whose book "Network Nation," published in 1978, has been called "the defining document and standard reference for the field of computer mediated communication." The book foretold the world of the ubiquitous computing that is IoE. Professor Quentin Jones is a pioneer in location-aware computing and holds key patents in that area. Professors Zeke Barness' and Alex Haimovich lead the Center for Wireless Communication and Signal Processing with a rich history of work sustaining the progress in wireless communication bandwidth from low fidelity voice to 4G, mega-bit transmission rates.

Professors Steven Chien and Lazar Spasovic lead the NJDOT Intelligent Transportation Resource Center and their Civil Engineering colleagues partner with the state's water utilities to ensure the integrity of our supply system in the face of natural and man-made dangers. Our Center for Building Knowledge is a national leader in developing sustainable building concepts that are deployed in the public and private sector, and our faculty members in the School of Architecture have created a focus center for resilient design. Researchers like Physics Professors John Federici and Reggie Farrow have made breakthroughs in advanced sensor design and fabrication and include novel nano-electronics technologies that are ready for mass production.

The university is equally well poised to address the issues of big-data storage and retrieval, pattern recognition, and analytics that will draw value from the highly instrumented environment. Specialists in cyber security also are working on the technologies that can ensure the privacy and integrity of data exchanged in the open environment of the wireless internet.

NEW JERSEY INSTITUTE OF TECHNOLOGY FY2015 BUDGET PRIORITY REQUESTS

NJIT's ability to work with small to mid-sized enterprises extends beyond its incubator residents. The university created and maintains a variety of extension programs with sustained effort and impact. The New Jersey Manufacturing Extension Program was launched by NJIT in 1995 and has produced documented savings and increased profitability of over \$1B for the state's manufacturers. More recently it was awarded \$23M to establish the NJ Health Information Technology Extension Center and, in just over 3 years, it has become the national leader in converting primary care physicians from paper-based to electronic health record systems and is pioneering new software services to better connect patients, physicians, hospitals, pharmacies and clinical labs. NJIT's Defense Procurement Technical Assistance Center has helped New Jersey companies earn \$1B in federal contracts since its creation in 1986, and NJIT's EPA Technical Assistance to Brownfields Communities has 20 years of service to EPA Regions 1, 2 and 3. Finally, NJIT hosts NJEdge.net, providing next-generation broadband connectivity and related services to the state's higher education and K-12 communities.

Workforce training is an important, related need if we are to mine the maximum benefit from this project. In addition to the traditional degree programs by which NJIT has educated over one-quarter of the state's STEM workforce, the university has a long history in non-matriculated programs across the spectrum of skill levels. NJIT's Division of Continuing and Professional Education has trained over 70,000 professionals in 600 companies since 1990. It works closely with the state's community college system to coordinate integrated training services, and NJIT is

the only 4-year university that is a member of the Community College Consortium for Workforce and Economic Development. NJIT is the organizational lead for two relevant New Jersey Department of Labor and Workforce Development Talent Networks – the Advanced Manufacturing Network and the Technology Networks. In this capacity, NJIT is positioned to bring together Urban IoE providers, the state's workforce and requisite training resources to match population skill sets to the emerging needs of this sector.

Requirements

NJIT requests state support at the level of \$9.9M over 3 years to initiate the test bed activity. This would provide for core staff to recruit industrial partners, serve as liaison between industry, state and local authorities, and cost share the deployment of core physical infrastructure. The allocation of expenses on an annual basis is described in the following table.

**NEW JERSEY INSTITUTE OF TECHNOLOGY
FY2015 BUDGET PRIORITY REQUESTS**

Smart Region Test Bed Budget Request (\$000's)

Description	Total \$	FTE
Application Sector Specialists	\$ 500	6
Utilities – Water & Sewer, Gas, Electric		
Transportation – automotive, mass transit, air, sea (port)		
Buildings		
Municipal & State Agency Coordinators	\$ 150	2
Test-bed Technologists	\$ 700	8
Training Services Coordinator	\$ 150	1
Technical Infrastructure Industry Match Funds	\$ 1,800	
Annual Total	\$3,300	17
3 Year Project Total	\$9,900	17

2) Campus Facilities and Institutional Support Services

NJIT has achieved many noteworthy milestones this year including exceeding the 10,000 student mark for our fall 2013 enrollment for the first time, and research expenditures reaching \$107 million. To keep pace with our continuing growth in students and research, facilities have expanded. Since 2005 the university has added three new buildings totaling approximately 500,000 square feet, which include the addition of the Central King Building, the Naimoli Athletic Facility, and the Warren Street Village. NJIT campus facilities now exceed 3 million square feet with a replacement value approaching \$1 billion. Our FY15 budget submission requests supplemental support for facilities and institutional support personnel, utilities, and facilities equipment needs.

Facilities and Institutional Support Personnel

NJIT has significantly increased enrollment and research, to meet the demands of STEM graduates, without added State Operating support, which has contributed to increased strain on the university's resources. Owing to this continuing growth, NJIT is in need of additional facilities and institutional support staff, to assure appropriate levels of service and good business practices are followed. Departments such as purchasing, accounting, environmental health and safety, and risk management have not increased to meet demand. NJIT's custodial and public safety staff has not kept pace with facility growth and usage, making it increasingly difficult to maintain facilities at appropriate levels of cleanliness and ensuring that our faculty, students, and staff are safe.

- 13 new administrative/support staff positions totaling \$755,000
- 13 Custodians with estimated salaries totaling \$550,000
- 2 Security Officers with estimated salaries totaling \$80,000
- Total - \$1,385,000 (28 FTE)

**NEW JERSEY INSTITUTE OF TECHNOLOGY
FY2015 BUDGET PRIORITY REQUESTS**

Utilities

The university continues to grow into a “24/7” environment. There are currently 31 buildings exceeding 3 million square feet, an increase of 18% above FY05. Since 2005, the cost electric, water, and gas has risen by approximately 48% or 6% a year on average, despite significant energy efficiencies put into place. NJIT is requesting a base increase of \$480,000, approximately 6% of our FY14 utilities budget.

Equipment Needs for Facilities

Increased enrollment has contributed to increased demands on our facilities management department to keep up with recycling and refuse on campus. Vehicles to transport waste, recycling, and snow removal are costly but important for overall student satisfaction and to keep the university open. NJIT is requesting a one-time budget increase of \$146,000 to support facilities vehicles:

- 3 Snow Throwers – \$8,000
- 2 Gators (plow and salting package) for transportation of recycling and refuse - \$56,000
- 1 Ford F-350 XL Supercab with 11’ Dump body snow package (plower & salter) - \$42,000
- 2 Passenger Vans - \$40,000

Summary of Campus Facilities and Institutional Support Services Budget Request (\$000’s)

Request	Recurring	I-Time	Total	FTE
Personnel	\$1,385		\$1,385	28
Utilities	\$480		\$480	0
Equipment		\$146	\$146	0
Total	\$1,865	\$146	\$2,011	28

3) Enhancement of Existing Business Continuity Plan

To ensure the well-being of students, faculty, staff, and the university infrastructure, the university requests a one-time increase of \$1.23 Million to enhance the university’s business continuity plan. While a plan was already in place, Superstorm Sandy highlighted areas that could be improved to make us better prepared for any future emergency events. To improve the campus-wide response to emergency situations the updated business continuity plan objectives include the following:

- Maintain safety of the campus community and surrounding environment
- Protect the loss of intellectual property
- Maintain safety of campus facilities; including buildings, laboratories, communications, and networks
- Ability to return to normal operations as quickly as possible

To implement this plan the following is needed:

**NEW JERSEY INSTITUTE OF TECHNOLOGY
FY2015 BUDGET PRIORITY REQUESTS**

- Install an auxiliary natural gas powered generator for Public Safety department to support their critical systems and HVAC equipment - \$200,000
- Purchase a portable storage tank or assign a location for a fixed in place storage tank large enough to keep NJIT systems functioning for up to three days. Provisions to transport the fuel to various locations will also be necessary - \$70,000
- Better support for our food services facilities with emergency generators to ensure that NJIT can provide food to our campus community, primarily our residential students and support staff needed to maintain campus during emergencies - \$300,000
- Emergency generator support for the computer center, phone systems, and also to support numerous bio-engineering research laboratories that require 24/7 power supply to maintain research - \$600,000
- Purchase inverter type portable generators, install manual transfer switches, and gas powered portable utility pumps in critical locations to provide power for sensitive control equipment - \$60,000

Without this type of emergency response preparation, instructional time is lost, research efforts are delayed or irreparably damaged, payroll and the ability to pay vendors is halted, and safety of students, faculty, and staff is affected.

Summary of Enhancement of Business Continuity Plan Budget Request (\$000's)

Request	Recurring	1-Time	Total	FTE
Business Continuity Plan		\$ 1,230	\$ 1,230	0

4) State Authorized FTE

NJIT continues to display significant growth in enrollment, research, and operations. Total operations have grown from \$259 Million in FY09 to \$343 Million in FY13, an increase of \$84 million, or 32%. Student enrollment has increased from 11,344 in FY09 to 13,071 for FY14, a growth of 15.2%.

In FY09, after a detailed review of NJIT authorized positions by NJ OMB, the State increased NJIT's State authorized FTE count to 1,246 (95% of 1,313). During subsequent State budget processes the authorized FTE count was reduced to 1,187. Our FY15 budget request for campus facilities and institutional support personnel includes an additional 28 FTE, therefore NJIT requests that State Authorized FTE count be increased to 1,291 (1,187+59+28+17).

Summary of State Authorized FTE Request

Request	Recurring	1-Time	Total	FTE
State Authorized FTE Increase				59

SECTION 5.

CAPITAL BUDGET

Department Priority Summary Report- All Fund Sources

Department Priority	Project Title	Organization	Project Number	FY 2015	FY 2016	FY 2017	FY 2018 - 2021	Total
75 C	New Jersey Institute of Technology							
1	CURRENT/DEFERRED MAINTENANCE	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY	838	\$5,000	\$5,000	\$5,000	\$20,000	\$35,000
2	MODERNIZATION OF LABORATORY AND INFRASTRUCTURE	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY	1091	\$15,000	\$16,000	\$0	\$0	\$31,000
3	LAND ACQUISITION	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY	24	\$0	\$6,000	\$0	\$0	\$6,000
4	LIBRARY	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY	324	\$9,000	\$6,000	\$3,000	\$0	\$18,000
5	ELECTRICAL & COMPUTER ENGINEERING F	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY	1050	\$0	\$0	\$0	\$6,900	\$6,900
6	STUDENT ACADEMIC SUCCESS CENTER	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY	1053	\$0	\$0	\$0	\$6,250	\$6,250
7	INTEGRATIVE NANOFABRICATION CENTER	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY	1046	\$5,000	\$4,600	\$0	\$0	\$9,600
8	ARCHITECTURE, ART, & DESIGN STUDIO F	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY	1052	\$0	\$0	\$15,000	\$18,000	\$33,000
9	ENGAGEMENT CENTER FOR SCIENCE, TEC	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY	1051	\$0	\$0	\$18,000	\$9,500	\$27,500
10	PARKING FACILITY	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY	322	\$0	\$0	\$0	\$41,406	\$41,406
11	MULTIPURPOSE BUILDING	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY	27	\$0	\$0	\$0	\$138,020	\$138,020
12	EDUCATIONAL INFRASTRUCTURE FOR THE I	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY	1116	\$15,770	\$29,400	\$21,867	\$0	\$67,037
Department Total				\$45,770	\$67,000	\$62,867	\$240,076	\$415,613

Project Status Report
Capital Improvement Projects FY2007 - FY 2013
 (000's)

Project Name	Proj No.	Start Year	Status	Total Available	General	Bond	Federal	Other
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New Jersey Institute of Technology

NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY

LABORATORY UPGRADES	30	2009	Completed	2,300	2,300	0	0	0
ATHLETIC FACILITY	31	2010	Completed	4,000	0	0	0	4,000
LABORATORIES, CLASSROOMS, AND STUDIO FOR	32	2013	Continuing	59,659	0	30,659	0	29,000
CENTER FOR INTEGRATIVE LIFE SCIENCES	33	2014	Continuing	11,093	0	9,000	0	2,093
EDUCATIONAL INFRASTRUCTURE FOR THE IGENERATION	34	2014	Planning	100	0	0	0	100
TOTAL FOR:				\$77,152	\$2,300	\$39,659	\$0	\$35,193
NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY								

Department Totals	\$77,152	\$2,300	\$39,659	\$0	\$35,193
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Capital Project Report by Org & Priority

12/16/2013

Project Number:	838	Project Title:	CURRENT/DEFERRED MAINTENANCE
Project Type:	A06 Preservation-Other	Department:	NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	1	Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	Yes	Facility Name:	NEW JERSEY INSTITUTE OF TECHNOLOGY
		Project Location:	NJIT NEWARK

PROJECT DESCRIPTION AND JUSTIFICATION

The university has continued to extend the standard replacement lifecycle for campus facilities. Limited, non-recurring resources have been identified to address emergencies. Current identified projects include: Tieman and Faculty Hall HVAC system replacement (\$13.1 Million), Elevator Repairs/Replacement (\$2.75 Million), Roof Replacement (\$2.6 Million), Sidewalks and Roadways (\$1.5 Million), Windows Campbell, Cullimore, Colten Hall, and Tieman Faculty Hall (\$9.5 Million), Reclad Gutenberg Information Technology Center (\$3 Million), Faculty, Tieman, and Cullimore Restrooms (\$2.65 Million).

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	\$0	\$0

EXPLANATION:

Cost avoidance by installing more energy efficient equipment and systems. If funds are not available, tuition rates will be increased to cover required repairs.

		PROJECT PHASE		ESTIMATED COST (000's)		
		CONSTRUCTION		\$35,000		
		Total Estimated Cost:		\$35,000		
PRIOR YEARS' APPROP.	FUND TYPE	(000's)				TOTAL PROJECT COST
		FY-2015	FY-2016	FY-2017	FY 2018 - 2021	
	<i>General</i>	\$5,000	\$5,000	\$5,000	\$20,000	\$35,000
	TOTALS	\$5,000	\$5,000	\$5,000	\$20,000	\$35,000

Capital Project Report by Org & Priority

12/16/2013

Project Number: 1091	Project Title: MODERNIZATION OF LABORATORY AND
Project Type: E03 Construction-Renovations and Rehabilitation	Department: NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority: 2	Organization: NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project: Yes	Facility Name: NEW JERSEY INSTITUTE OF TECHNOLOGY
	Project Location: NEW JERSEY INSTITUTE OF TECHNO

PROJECT DESCRIPTION AND JUSTIFICATION

The frontier areas of science and engineering are increasingly dependent upon experimental studies, after decades in which computer modeling and simulation were the dominant tools. Nano-systems technology and molecular biology are examples in which the underlying scientific principles are not well enough understood to use model based approaches to discovery. Hands-on and eyes-on are needed and this requires a new generation of analytic and imaging systems to support both research and instruction.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	\$0	\$0

EXPLANATION:

		PROJECT PHASE		ESTIMATED COST (000's)	
		CONSTRUCTION		\$23,214	
		FURNISHING AND FIXTURES		\$4,643	
		OTHER		\$1,789	
		FEES		\$1,474	
		Total Estimated Cost:		\$31,100	

PRIOR YEARS' APPROP.	FUND TYPE	(000's)				TOTAL PROJECT COST
		FY-2015	FY- 2016	FY- 2017	FY 2018 - 2021	
	General	\$16,000	\$16,000	\$0	\$0	\$31,000
	TOTALS	\$16,000	\$16,000	\$0	\$0	\$31,000

Capital Project Report by Org & Priority

12/16/2013

Project Number:	24	Project Title:	LAND ACQUISITION
Project Type:	D04	Department:	NEW JERSEY INSTITUTE OF TECHNOLOGY
Acquisition-Other		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	3	Facility Name:	NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	Yes	Project Location:	NEWARK

PROJECT DESCRIPTION AND JUSTIFICATION

A critical element of the campus master plan is to acquire a limited amount of land to permit the construction of new facilities and to complete the campus edge at the intersection of Central Avenue and Marlin Luther King BLVD. The area is within the Campus Gateway Development Plan, which is a subset of the City approved Broad Street Station District Redevelopment Plan. NJIT is the designated Redeveloper by the City of Newark.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	\$0	\$0

EXPLANATION:

		PROJECT PHASE		ESTIMATED COST (000's)	
		CONSTRUCTION		\$4,500	
		FURNISHING AND FIXTURES		\$900	
		OTHER		\$300	
		FEES		\$300	
		Total Estimated Cost:		\$6,000	

PRIOR YEARS' APPROP.	FUND TYPE	(000's)				TOTAL PROJECT COST
		FY-2015	FY- 2016	FY- 2017	FY 2016 - 2021	
	General	\$0	\$6,000	\$0	\$0	\$6,000
	TOTALS	\$0	\$6,000	\$0	\$0	\$6,000

Capital Project Report by Org & Priority

12/16/2013

Project Number: 324	Project Title: LIBRARY
Project Type: E03 Construction-Renovations and Rehabilitation	Department: NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority: 4	Organization: NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project: Yes	Facility Name: NEW JERSEY INSTITUTE OF TECHNOLOGY
	Project Location: VAN HOUTEN LIBRARY - NJIT NEWA

PROJECT DESCRIPTION AND JUSTIFICATION

Planned expansion of existing library to expand capacity and provide added stack, study carrels and on-line/multimedia library material and access. It will provide a new learning environment including provisions for group projects utilizing current technologies.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	\$343	\$0

EXPLANATION:

Additional operating and maintenance cost.

		PROJECT PHASE		ESTIMATED COST (000's)	
		CONSTRUCTION		\$13,432	
		FURNISHING AND FIXTURES		\$2,887	
		OTHER		\$806	
		FEES		\$1,075	
		Total Estimated Cost:		\$18,000	

PRIOR YEARS' APPROP.	FUND TYPE	(000's)				TOTAL PROJECT COST
		FY-2015	FY- 2016	FY- 2017	FY 2018 - 2021	
	General	\$9,000	\$6,000	\$3,000	\$0	\$18,000
	TOTALS	\$9,000	\$6,000	\$3,000	\$0	\$18,000

Capital Project Report by Org & Priority

12/16/2013

Project Number:	1050	Project Title:	ELECTRICAL & COMPUTER ENGINEERING FACILITY
Project Type:	E03 Construction-Renovations and Rehabilitation	Department:	NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	5	Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	Yes	Facility Name:	NEW JERSEY INSTITUTE OF TECHNOLOGY
		Project Location:	NEW JERSEY INSTITUTE OF TECHNO

PROJECT DESCRIPTION AND JUSTIFICATION

The Electrical and Computer Engineering facility is to expand vertically. We are adding two floors consistent with the original design. Growth in enrollment and research in electrical and computer engineering drive the need for this facility expansion.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	\$700	\$0

EXPLANATION:

Increase in operating costs and maintenance.

		PROJECT PHASE		ESTIMATED COST (000's)	
		CONSTRUCTION		\$5,149	
		FURNISHING AND FIXTURES		\$1,030	
		OTHER		\$309	
		FEES		\$412	
		Total Estimated Cost:		\$6,900	

PRIOR YEARS' APPROP.	FUND TYPE	(000's)				TOTAL PROJECT COST
		FY-2015	FY-2016	FY-2017	FY 2018 - 2021	
	General	\$0	\$0	\$0	\$6,900	\$6,900
	TOTALS	\$0	\$0	\$0	\$6,900	\$6,900

Capital Project Report by Org & Priority

12/16/2013

Project Number:	1053	Project Title:	STUDENT ACADEMIC SUCCESS CENTER
Project Type:	E03	Department:	NEW JERSEY INSTITUTE OF TECHNOLOGY
Construction-Renovations and Rehabilitation		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	6	Facility Name:	NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	Yes	Project Location:	NEW JERSEY INSTITUTE OF TECHNOLOGY

PROJECT DESCRIPTION AND JUSTIFICATION

There are a number of services, including counseling and the Center for Academic and Professional Education that assists students in their transition from high school to college. In addition, these vital support services increase the number of retained students and supports appropriate academic progress towards graduation. NJIT plans to relocate these important support services into one common location facilitating easier access for students.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	\$0	\$0

EXPLANATION:

		PROJECT PHASE	ESTIMATED COST (000's)			
		CONSTRUCTION	\$4,664			
		FURNISHING AND FIXTURES	\$833			
		OTHER	\$280			
		FEES	\$373			
		Total Estimated Cost:	\$6,250			

PRIOR YEARS' APPROP.	FUND TYPE	(000's)				TOTAL PROJECT COST
		FY-2015	FY-2016	FY-2017	FY 2018 - 2021	
	<i>General</i>	\$0	\$0	\$0	\$6,250	\$6,250
	TOTALS	\$0	\$0	\$0	\$6,250	\$6,250

Capital Project Report by Org & Priority

12/16/2013

Project Number:	1048	Project Title:	INTEGRATIVE NANOFABRICATION CENTER
Project Type:	E03	Department:	NEW JERSEY INSTITUTE OF TECHNOLOGY
Construction-Renovations and Rehabilitation		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	7	Facility Name:	NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	Yes	Project Location:	NEW JERSEY INSTITUTE OF TECHNOLOGY

PROJECT DESCRIPTION AND JUSTIFICATION

Building on our existing clean room, the proposed construction will create a unique resource for faculty and students to complete research in an Integrated Nanofabrication Center. This facility will house a fully qualified class-10 CMOS process area with an aligned clean room for non-CMOS materials and processes.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	\$0	\$0

EXPLANATION:

		PROJECT PHASE		ESTIMATED COST (000's)	
		CONSTRUCTION		\$7,200	
		FURNISHING AND FIXTURES		\$1,080	
		OTHER		\$720	
		FEES		\$600	
		Total Estimated Cost:		\$9,600	

PRIOR YEARS' APPROP.	FUND TYPE	(000's)				TOTAL PROJECT COST
		FY-2015	FY- 2016	FY- 2017	FY 2018 - 2021	
	<i>General</i>	\$5,000	\$4,600	\$0	\$0	\$9,600
	TOTALS	\$5,000	\$4,600	\$0	\$0	\$9,600

Capital Project Report by Org & Priority

12/16/2013

Project Number: 1052	Project Title: ARCHITECTURE, ART, & DESIGN STUDIO FACILITY
Project Type: E03 Construction-Renovations and Rehabilitation	Department: NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority: 8	Organization: NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project: Yes	Facility Name: NEW JERSEY INSTITUTE OF TECHNOLOGY
	Project Location: NEW JERSEY INSTITUTE OF TECHNOLOGY

PROJECT DESCRIPTION AND JUSTIFICATION

New construction is proposed to provide needed space to accommodate programs in the College of Architecture and Design. The specialized facilities will include model, wood and metal working shops, paint rooms, and networking. The construction would permit the relocation of several remote studios that have been used as enrollment grew and new space was not available.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	\$480	\$0

EXPLANATION:

Increase in operating costs.

		PROJECT PHASE		ESTIMATED COST (000's)	
		CONSTRUCTION		\$24,626	
		FURNISHING AND FIXTURES		\$4,925	
		OTHER		\$1,478	
		FEES		\$1,971	
		Total Estimated Cost:		\$33,000	

PRIOR YEARS' APPROP.	FUND TYPE	(000's)				TOTAL PROJECT COST
		FY-2015	FY-2016	FY-2017	FY 2018 - 2021	
	General	\$0	\$0	\$15,000	\$18,000	\$33,000
	TOTALS	\$0	\$0	\$15,000	\$18,000	\$33,000

Capital Project Report by Org & Priority

12/16/2013

Project Number:	1051	Project Title:	ENGAGEMENT CENTER FOR SCIENCE, TECHNOLOGY,
Project Type:	E03	Department:	NEW JERSEY INSTITUTE OF TECHNOLOGY
Construction-Renovations and Rehabilitation		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	9	Facility Name:	NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	Yes	Project Location:	NEW JERSEY INSTITUTE OF TECHNOLOGY

PROJECT DESCRIPTION AND JUSTIFICATION

New construction to provide needed classroom and laboratory space, as well as facilities for K-12 outreach and performing arts that will service both the university and enable greater interaction with the Newark community.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	\$350	\$0

EXPLANATION:

Increase in operating costs.

		PROJECT PHASE		ESTIMATED COST (000's)	
		CONSTRUCTION		\$20,522	
		FURNISHING AND FIXTURES		\$4,104	
		OTHER		\$1,232	
		FEES		\$1,642	
		Total Estimated Cost:		\$27,500	

PRIOR YEARS' APPROP.	FUND TYPE	(000's)				TOTAL PROJECT COST
		FY-2016	FY- 2018	FY- 2017	FY 2018 - 2021	
	<i>General</i>	\$0	\$0	\$18,000	\$9,500	\$27,500
	TOTALS	\$0	\$0	\$18,000	\$9,500	\$27,500

Capital Project Report by Org & Priority

12/16/2013

Project Number:	322	Project Title:	PARKING FACILITY
Project Type:	E02	Department:	NEW JERSEY INSTITUTE OF TECHNOLOGY
Construction-New		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	10	Facility Name:	NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	Yes	Project Location:	NEW JERSEY INSTITUTE OF TECHNOLOGY

PROJECT DESCRIPTION AND JUSTIFICATION

Provide structured parking to accommodate students, faculty, staff and visitors. Essential for urban campus and not fully supportable by fee-based revenues. Development to be consistent with the Gateway Project.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	\$250	\$0

EXPLANATION:

Additional operating and maintenance cost.

		PROJECT PHASE		ESTIMATED COST (000's)		
		CONSTRUCTION		\$30,900		
		FURNISHING AND FIXTURES		\$6,180		
		OTHER		\$1,854		
		FEES		\$2,472		
		Total Estimated Cost:		\$41,406		

PRIOR YEARS' APPROP.	FUND TYPE	(000's)				TOTAL PROJECT COST
		FY-2015	FY-2016	FY-2017	FY 2018 - 2021	
	General	\$0	\$0	\$0	\$41,406	\$41,406
TOTALS		\$0	\$0	\$0	\$41,406	\$41,406

Capital Project Report by Org & Priority

12/16/2013

Project Number:	27	Project Title:	MULTIPURPOSE BUILDING
Project Type:	E04 Construction-Other	Department:	NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	11	Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	Yes	Facility Name:	NEW JERSEY INSTITUTE OF TECHNOLOGY
		Project Location:	NEWARK

PROJECT DESCRIPTION AND JUSTIFICATION

A new multi-purpose facility, constructed in a phased approach to meet current and projected demand - providing much needed instructional, research, academic and technical support space for a growing array of disciplines and multi-disciplinary areas of activity. Such disciplines, (in cooperation with other universities, public agencies and private enterprise), will include Health and Life Sciences, Telecommunications, Urban Infrastructure and Information Sciences.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
Yes	\$1,714	\$0

EXPLANATION:

Additional operating and maintenance costs.

		PROJECT PHASE		ESTIMATED COST (000's)	
		CONSTRUCTION		\$103,000	
		FURNISHING AND FIXTURES		\$20,600	
		OTHER		\$6,180	
		FEES		\$8,240	
		Total Estimated Cost:		\$138,020	

PRIOR YEARS' APPROP.	FUND TYPE	(000's)				TOTAL PROJECT COST
		FY-2015	FY- 2016	FY- 2017	FY 2016 - 2021	
	General	\$0	\$0	\$0	\$138,020	\$138,020
	TOTALS	\$0	\$0	\$0	\$138,020	\$138,020

Capital Project Report by Org & Priority

12/16/2013

Project Number:	1116	Project Title:	EDUCATIONAL INFRASTRUCTURE FOR THE
Project Type:	P04	Department:	NEW JERSEY INSTITUTE OF TECHNOLOGY
Infrastructure-Other		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	12	Facility Name:	NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	Yes	Project Location:	NEW JERSEY INSTITUTE OF TECHNOLOGY

PROJECT DESCRIPTION AND JUSTIFICATION

NJIT's strategic and academic plans call for the enhancement of facilities to provide NJ with technologically savvy STEM professionals. NJIT is moving from a traditional lecture model to technology-based classrooms using multi-media resources, collaborative learning, and continuous access to cloud computing and internet knowledge resources allowing for the delivery of a more effective curriculum. The proposal combines 3 interrelated components, cloud computing/ big data facility for education and research, restructuring campus learning spaces to take advantage of the cloud infrastructure, and necessary renovations to mechanical infrastructure in Tiernan and Faculty Halls to make these buildings technology ready and learning friendly.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	\$0	\$0

EXPLANATION:

		PROJECT PHASE		ESTIMATED COST (000's)		
		CONSTRUCTION		\$47,736		
		FURNISHING AND FIXTURES		\$8,252		
		OTHER		\$11,049		
		Total Estimated Cost:		\$67,037		

PRIOR YEARS' APPROP.	FUND TYPE	(000's)				TOTAL PROJECT COST
		FY-2015	FY- 2016	FY- 2017	FY 2018 - 2021	
	<i>Bond</i>	\$10,000	\$10,000	\$10,802	\$0	\$30,802
	<i>Other</i>	\$5,770	\$19,400	\$11,065	\$0	\$36,235
	TOTALS	\$15,770	\$29,400	\$21,867	\$0	\$67,037

