

Fiscal Year 2014

Budget Submission to the Office of Management and Budget November 2012



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### SECTION 1. PRESIDENT'S STATEMENT

### PRESIDENT'S STATEMENT



I am very proud to present NJIT's budget plan for FY 2014, which responds to the considerable challenges facing the State and contributes to the prospects for a strong New Jersey comeback. The plan emphasizes NJIT's exemplary programs in economic development, education, job creation, research, and service, for the benefit of students and New Jersey's business, industry, government, and education sectors. Our newly revised Strategic Plan builds on our key strengths, propelling NJIT toward achieving major gains in performance, the creation of external partnerships (particularly involving those on behalf of the State's economic growth), the strength and diversity of funding streams, and regional as well as national recognition

As New Jersey's Science and Technology University, 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. It is a truth that we at NJIT have responded to in a direct and practical sense. NJIT's vision has taken deep root as our institution takes its position as one America's most innovative and accomplished universities of science and technology. The result is a dramatic blueprint that has emphasized support for research and development, technology transfer, and job creation.

In point of fact, NJIT's technologically based research programs are closely aligned to support the life sciences and other innovation clusters identified in the *State Strategic Job Growth Plan* as essential to the vibrant economic development of New Jersey. The *State Plan* clearly recognizes the need for expanding translational research to bring technology and the life sciences to bear on cutting-edge solutions through intensive and industry collaborations. NJIT's faculty-led research and its business incubation have produced very considerable results in these areas and promises to do even more. This past year, NJIT's research continued to surpass \$100 million, and thus far has been issued over 140 patents, almost 80 of which have been licensed to 3<sup>rd</sup> parties. We are indeed proud that NJIT is home to the largest technology and life science incubator in the State fostering the commercialization of research with 90 start-up companies and 800 employees.

In addition, the past few months 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 rank of nationally prominent research institutes of science and technology.

This past August, the Middle States Commission on Higher Education 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 outline 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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In addition, this past September, we successfully attracted twenty-four new tenured/tenure track faculty from across the nation with expertise in our three thematic education and research areas of "sustainability, digital everyware, and the convergence of engineering, technology and the like sciences." As per our Strategic Hiring Plan, over the next two years we will recruit an additional fifteen distinguished faculty. 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 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, we are particularly proud that NJIT, in addition to its being ranked one of America's best national research universities by the *US News and World Report* (for the seventh year in a row), was also ranked among the top ten national universities for diversity by the same widely followed publication. The prestigious *Princeton Review* also ranked NJIT among the nation's best institutions of higher education. In addition, in studies published by *Bloomberg Businessweek* and *PayScale*, NJIT was ranked in the top one percent among the nation's top 400 state colleges and schools in the nation for annualized return in investment (ROI). These widely reported rankings are among those that reflect the increasing recognition that NJIT's excellence has garnered in recent years.

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

- A record fall 2012 total enrollment of almost 10,000 undergraduate and graduate students in STEM (science, technology, engineering, and mathematics) majors.
- A freshmen enrollment of over 1000 students with average math SAT scores of over 600, top 25%tile in the nation.
- A Dorman Honors College enrollment of 690 undergraduates that score in the top 10%; nationally.
- An Educational Opportunity Enrollment of 626 undergraduates, whose completion rates for underrepresented students in the STEM disciplines exceeds the national average.
- Research expenditures totaled over \$100 million in FY 2012.
- As of FY 2012, 134 patents were issued to NJIT, of which 60 are licensed to third parties.
- Over 90 companies, employing over 800 people are part of NJIT's Enterprise
  Development Center (EDC), New Jersey's largest high-technology business incubator,
  and one of the largest in the nation. The EDC companies have attracted more than \$67
  million in third-party funding and have revenues of more than\$80 million.
- This past year, NJIT refined and strengthened the university's recently inaugurated performance-based faculty compensation system.

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NJIT is proud of the widespread recognition it has garnered for its intensive commitment to economic development. In addition to leading-edge research developed by our faculty across over 20 doctoral degree programs, and students who satisfy the extensive needs of the state's commercial sector, NJIT has focused its efforts to provide access to shared infrastructure and non-academic technical staff that responds to the growing needs of businesses across the spectrum of sizes and markets.

What follows below is an array of initiatives that exemplify NJIT's commitment to supporting State and local economic development:

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, financial guidance and extensive technical/coaching advisory services, ultimately creating businesses that generate jobs and 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 Genètica Clinica of Portugal.

Descriptions of three representative EDC companies that align with each of our strategic priority areas (convergent life science, digital everyware 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. Test 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

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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 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 etailing 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 \$1.62 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'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
  academic researchers as well as to commercial users in need of results to drive their
  progress.

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- 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 Health Information Technology Extension Center (NJ-HITEC) is
  providing assistance to the state's over 20,000 primary care physicians to reduce medical
  costs and achieve compliance with new federal requirements for the "meaningful use" of
  electronic healthcare record systems. The center has received \$23M in federal funding to
  underwrite the services delivered, making it the third largest center award in the national
  program and the largest university-based center.
- 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.

### How NJIT's Educational Initiatives Aid Economic Development

NJIT produces more engineers in New Jersey than any other college or university. The university's record 10,000 undergraduate and graduate students, primarily enrolled in degree programs in engineering, science, and related fields, help attract and keep high-tech companies in the state. For example:

- 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.
- NJIT led two major, statewide efforts to secure federal funding for economic
  development initiatives. The NJ Solar Connection was a proposal to the 5-Agency (EDA,
  DOC, DOE, SBA, DOL) Advanced Manufacturing Jobs & Innovation Challenge that is
  designed to establish NJ as the supply chain hub for distributed solar energy generation
  and smart grid technologies. The second is a proposal to the USEDA's i6 Challenge for
  Proof of Concept Centers, that will leverage NJIT's various activities in healthcare
  information technology to stimulate new business formation to meet the needs of this
  growing segment of the IT industry.

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- 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.
- 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.
- NJIT's Career Development Services is an outstanding source of technological employees for NJ employers. Despite a down economy approximately 350 organizations visited campus this year to interview students and recent graduates for employment opportunities within their firms. Another 1,000 NJ companies posted over 6,000 technology job listings to its electronic database. Last year, over 500 NJIT students worked in internships 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. Career Services developed and launched a Green Careers section to its website with resources for green job searches and identifying green career opportunities. Over 1,100 students completed more than 20,000 hours of service at 197 non-profits.
- NJIT's Educational Opportunity Program educates and graduates more than a hundred minority engineers each year, making it easy for NJ businesses to diversify their workforce. Its graduation rate for the STEM (science, technology, engineering and mathematics) majors exceeds the national average and has enabled NJIT to be among the top engineering schools 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.

### How NJIT Research Helps the State's Economy

Research at NJIT has grown dramatically. The level of research grew to \$103 million in 2012, a 60 percent increase in the past eleven years and a ten-fold (1,000 percent) increase in Federal funding since 1990. This level of expenditure ranks NJIT in the top ten nationally among universities whose research is principally in engineering. In recent years NJIT led New Jersey's research universities by a factor of two in patent submissions per dollar of Federal research support.

 NJIT researchers are contributing to the growth of sustainable communities. The Center for Building Knowledge has been the advisor to the NJ Schools Development Authority providing design guidance and training to embed principles of sustainable design into

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new school construction. The Center staff are now 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. 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 including a program with \$1.5M from Apollo Solar in China; 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 recently 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.
- 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 both the Federal Highway Administration NJIT
  has developed and deployed sophisticated transportation project planning software
  called TELUS that is being using 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 quidance in the form of best practice throughout the country.

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- NJIT's 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 lowa 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.
- NJIT is helping the state transform the practice of healthcare through infusion of
  information technology into medical practice. In addition to the Regional Extension
  Center, NJ-HITEC, NJIT is partnering with the Newark area hospitals to pioneer a
  regional Health Information Exchange network as one of three major hubs under a state
  plan supported by ARRA funding. Also, it is working with the St. Barnabas Health Care
  System to create a Healthcare Innovation Center that will integrate and demonstrate
  state-of-the-technology solutions for every facet of patient care and in the process
  breed new and improved approaches through integration with the university's research
  programs.
- NJIT researchers have developed important new technologies for harnessing nanosystems 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.
- 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.

### How NJIT Assists State Government that Helps Businesses and Grows Jobs

 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.

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- NJIT 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 (<u>www.njsetc.net</u>).
- NJIT creates online versions of face-to-face training courses for the NJ Office of Homeland Security and Preparedness in such areas as Counter-Terrorism.

### How NJIT Assists Municipalities, which Helps Local Businesses and Grows Jobs

- 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.
- NJIT established and operates the Center for Information Age Technology. CIAT provides consultation and project implementation support to municipal offices across the state as they migrate to digital systems for the widest array of services.

### Recent Progress: Laying the Foundation for NJIT's Future

Building on progress already made, we have witnessed an acceleration of major changes at NJIT during the past few years.

 A newly revised Strategic Plan, for 2010-2015, including clear priorities on which the budget allocations and reallocations are significantly based has been completed and approved by the NJIT Board of Trustees.

These Strategic Priorities will allow us to:

- Further intensify NJIT's engagement in economic development of the state and region.
- Accelerate research and development partnerships that maximize NJIT's technological and scientific contributions.
- Continue to raise the level of excellence of undergraduate education.
- Expand NJIT's support of K-12 education in New Jersey.
- Expand NJIT's support of education and training for working professionals.
- Enhance the diversity of the NJIT community.

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 as the project received the necessary municipal approvals by the City of Newark and as NJIT officials selected a world-class real estate company and an architect to manage the renovation project. Jones Lang LaSalle, a real estate firm known for revitalizing

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campus neighborhoods, will oversee the project. Elkus Manfredi Architects prepared the design for the project.

The university is now constructing fraternity/sorority houses and dedicated housing for NJIT Honors College students along Warren Street, on a site that was university parking. A four-block renovation will include a large surface owned by St. Michael's Hospital to construct a multifunctional building which will include retail facilities, housing, and parking. The Campus Gateway plan will connect with a city project known as Transit Village. Together the two projects, part of the City's Broad Street Station District Redevelopment Plan, will create a vital urban center in the heart of Newark's University Heights section. The campus revitalization plan comes at a time when the city is undergoing a major renaissance.

Finally, we would state with pride that NJIT has a long tradition as a university of opportunity. Throughout the institution's history, the majority of its students have been the first in their families to attend college. The university's goal of transforming young lives began early in the last century and was based on the conviction that an excellent technological education guarantees a student's future success and financial security.

NJIT is ranked as having one of the most diverse student bodies in the nation. The university offers a wide range of Educational Opportunity and Pre-College initiatives designed to bring women and other underrepresented groups onto the campus and to help them succeed while they are here and prepare them for the high demand STEM careers.

At the same time, NJIT has been successful in attracting the most talented and motivated students through its Albert Dorman Honors College. The College today enrolls almost 700 of the nation's most academically accomplished students with SAT scores in the top ten percent nationally and with mathematics proficiency scores in the top two percent. The students are of diverse cultural backgrounds, many with multiple language skills, well-suited for world-class companies that continue to contribute to the State's competitiveness and prosperity.

Through its specially designed programs for technological and managerial professionals, NJIT also continues to assist New Jersey's workforce to acquire next generation knowledge and skills that are key to remaining productively employed in any economic climate.

A final note in closing: as the State's Science and Technology University, NJIT is fully cognizant of New Jersey's economic condition and our sense of shared responsibility inclines us not to include a supplementary priority request for the FY14 budget submission, with the sole exception that we are compelled to advocate for consideration special case-funding for three critical needs:

- Faculty Recruitment Initiative to attract 15 additional world-class faculty in three fundamental areas to enhance our quality of life and support economic growth: sustainable systems, life sciences and engineering, and digital everyware.
- NJIT Learning Communities to help freshmen students have academic success through peer networking, improved study skills, and increased overall engagement in the NJIT community. The goal is that with this early involvement, students are more likely to stay on the academic path to graduation.
- Enhancement of Existing Business Continuity Program to put additional provisions in place that will enhance the university response to emergency situations by better

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maintaining the safety of the campus community, protecting intellectual property, and the ability to return to normal operations as quickly as possible.

Accordingly, we are, within the body of this document providing detailed information for these "highest priority only" requests with this FY14 budget submission.

Respectfully submitted,

Joel S. Bloom President

### SECTION 2.

### EVALUATION DATA/ENROLLMENT/ ORGANIZATION CHART

### NEW JERSEY INSTITUTE OF TECHNOLOGY PY 2014 BUDGET REQUEST EVALUATION DATA

	EVALUATION DA				Durdoni
DDOGDAM DATA	Actual	Actual	Orginal	Revised	Request Sequest
PROGRAM DATA Institutional Support	FY 2011	FY2012	FY 2013	FY 2013	FY 2014
Enrollment total (headcount)	11,820	12,445	12,933	12,770	13,19
Enrollment total FTE's (a)	6,730	6,960	7,420	7,268	7,45
Undergraduate total (headcount)	6,103	6,604	6,946	7,111	7,1
Undergraduate total FTE's (a)	4,944	5,190	5,505	5,553	5,6
Full-time (headcount)	4,979	5,183	5,446	5,529	5,6
Full-time FTE's (a)	4,570	4,719	5,010	5,026	5,1
Part-time (headcount)	1,124	1,421	1,500	1,582	1,7
Part-time FTE's (a)	374	471	495	527	5
Graduate total (headcount)	2.831	2,954	3.087	2,832	2.9
Graduate total FTE's (a)	1,347	1,349	1,473	1,322	1,3
Full-time (headcount)	1,628	1,589	1,515	1,546	1,5
	887	780		780	8
Full-time FTE's (a) Part-time (headcount)	1,203	1,365	970 1,572	1,286	1,4
Part-time FTE's (a)	460	569	503	542	5
	700	307	503	512	,
Extension and Public Service	2.886	3 007	2000	2 027	7.0
Enrollment (headcount) (a)		2,887	2,900	2,827	2,8
Enrollment total FTE's (a)	439	421	442	393	3
Undergraduate (headcount)	2,325	2,347	2,300	2,297	2,3
Undergraduate FTE's [a]	344	329	340	302	3
Graduate (headcount)	561 95	540 92	600 102	530 91	5
Graduate FTE's (a)		137			1
Degree programs offered Courses Offered	138 3,694		137	137	
		3,493	3,800	3,541	3,6
Student credit hours produced	196,906	207,176	215,593	213,420	217,6
Degrees and Certificates	7.035	3.110	1.055	7 700	2.3
Granted - Total	2,035	2,119	1,955	2,200	
Ratio: Student/faculty (b)	15.1/1	16/1	15.9/1	16.4/1	16.0
Full-time, First-Time, Degree-Seeking Freshmen who	875	903	907	961	9
are Regular Admission Students	603	605	605	614	6
Average SAT Score - Math	538	536	535	548	5
Average SAT Score - Verbal	1,141	1,141			
Average SAT Score - Total	1,141	1,171	1,140	1,162	1,1
Outcomes Data (c)	90.6	01.4	01.5	07.1	
Third Semester Retention Rates	80.6	81.4	81.5	82.1 58.2	8
Seven Year Graduation Rates	58.0	57.9	58.1	58.2	5
tudent Tuition and Fees	70.004	70.774	71.100	31.100	
Total Cost of Attendance (d)	28,906	30,374	31,190 12,400	31,190	31,1
Full-Time Undergraduate Tuition State Residents	11,248 21,800	11,756 23,116		12,400	12,4
Full-Time Undergraduate Tuition Non - State Residents Full-Time Undergraduate Fees	2,122	2,218	24,800 2,340	24,800 2,340	24,8 2,3
OPERATING DATA					
Institutional Support					
Institutional Expenditures					
Instruction	84,079,000	86,291,000	90,999,000	90,999,000	
Sponsored Programs and Research	48,452,000	55,927,000	58,979,000	58,979,000	
Extension and Public Service	1,965,000	1,615,000	1,703,000	1,703,000	
Academic Support	19,287,000	22,075,000	23,280,000	23,280,000	
Student Services	15,687,000	17,134,000	18,069,000	18,069,000	
Institutional Support	32,067,000	37,664,000	39,719,000	39,719,000	
Physical Plant and Support Services	13,524,000	13,532,000	14,270,000	14,270,000	
PERSONNEL DATA					
State Euroded Boottops	1.344	1 107	1 107	1 107	
State Funded Positions	1,246	1,187	1,187	1,187	

 <sup>[</sup>a] Equated on the basis of 32 equivalant credit hours per undergraduate student and 24 equivalant credit hours per graduate student,
 [b] Calculated on the number of teaching positions (including adjunct faculty) and equated full-time (weighted) students.

<sup>(</sup>c) As calculated by the Student Unit Record Enrollment (SURE) system.

<sup>[</sup>d] As reported to the Higher Education Student Assistance Authority. Includes tuition, fees, room and board, transportation, and supplies.

### 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 received job offers upon degree completion, which is twice the national average for all college graduates this year, 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 Businessweek 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. Our October 2012 fall career fair was the largest to date, hosting 173 employing organizations and nearly 2,000 students and alumni. Our fall on-campus recruiting programs are projected to exceed 100 employers and 150 full day interview schedules.

The outcomes speak for themselves–NJIT graduates are what business and industry requires in New Jersey and NJIT is working 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 in virtually all of our disciplines. Our first year class in 2012 is our largest ever. Total enrollment for Fall 2012, including undergraduate and graduate students exceeded 9,900, also a record.

While increasing the number of graduates entering our workforce is necessary to meet business and industry demands, we must not only enroll but 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 in facilities and personnel, to deliver quality instruction and essential services. Indeed, we have already reached capacity for architecture and a number of science and engineering fields.

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, focusing on growing our undergraduate enrollment through retention. As such, we are engaging in vigorous and intentional efforts to graduate as many continuing students as possible.

### ENROLLMENT NARRATIVE

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

- Expanded the "Community Connections" a 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) who are not enrolled in Honors or EOP programs.
- Analysis and evaluation of last year's changes in placement testing and changes in the pre-calculus and calculus sequence, to determine if the changes were successful in both placement and retention of students in the math sequence appropriate to the students' academic discipline.
- Evaluation of and adjustments to last year's new, retention focused First Year
   Seminar curriculum for all first year students.
- 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.
- Increased the number of Greek organizations and increased the overall Greek population.
- Enhanced and expanded transfer and International Student Orientation.
- Continued to improved and strengthen tutoring and study support through CAPE.
- Continued to expand the number of activities and events on campus.
- Broke ground for the Warren Street Village, a new residential complex consisting of Greek housing, a new residence hall, including food service facilities and a fitness center, and Honors college facilities

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

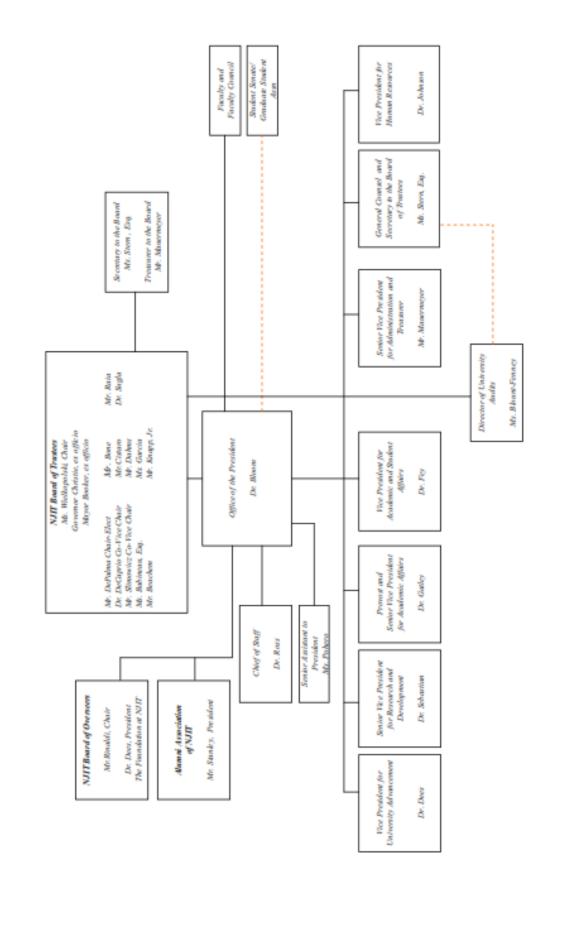
- Enhanced on-campus Open House events for prospective students and their parents.
- Continued to refine the International Students Ambassadors Program.
- Attended recruiting events at over 500 high schools throughout New Jersey and the region.
- Refined our competitive scholarship program to attract 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.

### ENROLLMENT NARRATIVE

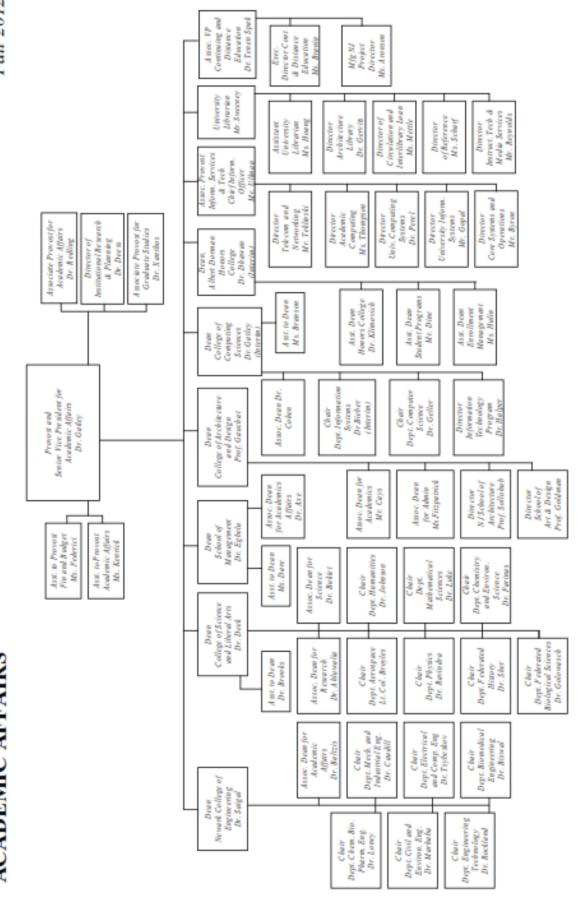
- Launched a BA in Theater Arts and Technology and continued to populate recently-created majors in Bio-Chemistry, Bio-Physics and Pharmaceutical Bioprocessing.
- Continued to focus efforts on increasing the enrollment of women in our undergraduate and graduate programs.
- Continued partnerships with 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 and technology. NJIT will continue to provide an increasing number of highly qualified graduates to serve New Jersey businesses and industry in the years to come.

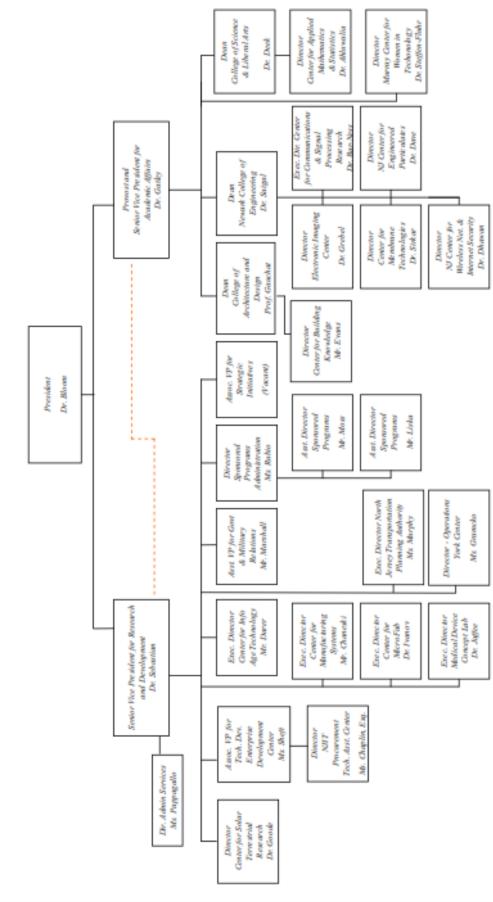
# NJIT BOARD OF TRUSTEES, OFFICERS, AND ADMINISTRATION



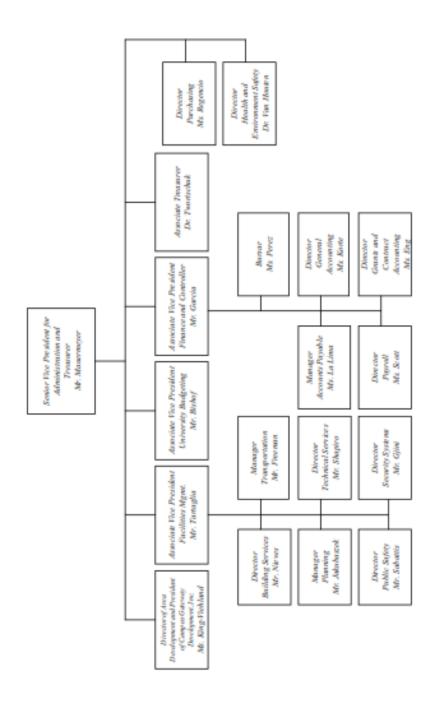
### ACADEMIC AFFAIRS



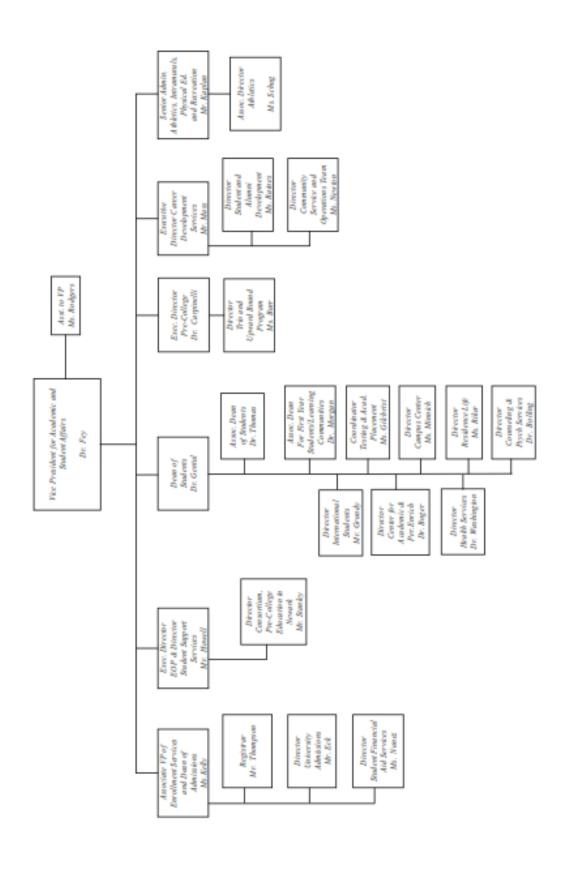
# RESEARCH ADMINISTRATION



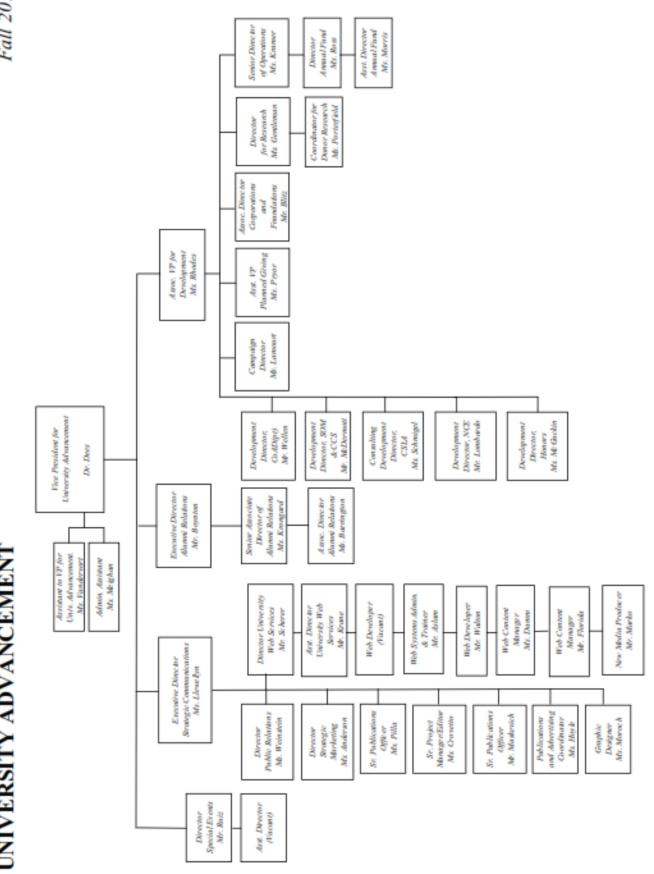
## FISCAL ADMINISTRATION

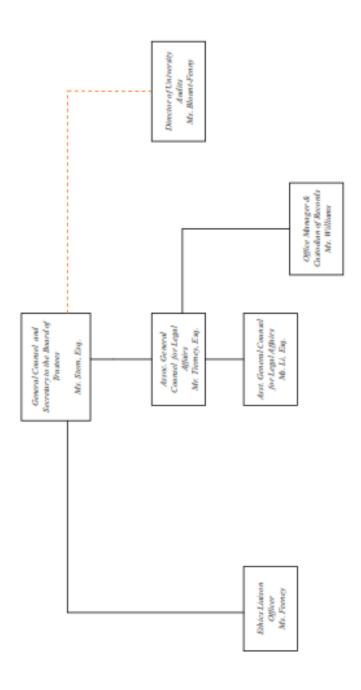


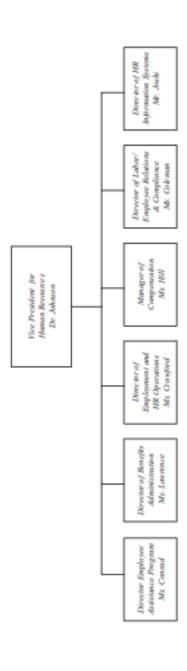
# ACADEMIC AND STUDENT SERVICES



# UNIVERSITY ADVANCEMENT







### SECTION 3.

### **BUDGET INFORMATION**

### Sate of New Jensy Department of the Treasury Office of Management and Budget P72014 Budget Request (88-102)

New Jersey Institute of Technology Department: Director Approved by: Citation DAKE

<u>Tothe State Treasurer.</u>
Appropriations as follows are requested for the above agency for fiscal year 2014. Attached are data covering the present and proceding fiscal years. The statements given are true and correct to the best of my knowledge and belief. I certify that the request submitted is in accordance with instructions contained in the Budget has under a submitted is in accordance with instructions.

Joel Boom

Department Head/Officer

Original Respondant and and Supplemental Receipts	Expended 2012 A Transfers and Femore					410CV3
Respondant and and Receipts	Transfers					EV 2014
Reuppro and and Receipts	Transfers			Recapitulation	FY2013	11.00
Necepts 0.878		Total		By Department		Agency
		Available	Expended	By Fund Category	Appropriated	Request
	14925 \$ -	313,803	313,803	Protitutional Support	336,635	336,635
				Total Grantshn-Aid		
				Less		
95)		(5,660)	(2990)	Receipts from Tuttion Increases	(7230)	
	0 (513)	(128,202)	(128202)	General Services Income	(136,983)	(144,220)
	0 (777)	(15,948)	(15948)	Audiary Fundshicane	(16,147)	(16,147)
	(3330)	(36,369)	(996,969)	Special Funds Income	(106,246)	(106,246)
		(29, 328)	(25,338)	Employee Ringe Bendits	(32,336)	(32,336)
(261,182) (14,925)	925) 0	(276, 107)	(276, 107)	Total Income Deductions	(298,939)	(298,939)
37,696		37,696	37,696	Total State Appropriation	37,696	37,696
				Special Purpase		
298,878	14925 0	313,803	313803	General Institutional Operations	336,635	336,635
				Faculty Recruitment		90009
				Learning Communities		011
				Busines Continuity Raming		1,760
(261, 162) (14,925)	0 (528)	(276, 107)	(276, 107)	LESS: Income Deductions	(298,939)	(298,939)
37,696		37,696	37,696	Grand Total State Appropriation	37,696	45,566

Per OMB, Bringe amount is fixed. Audited financial statements reflect fringe benefits totaling \$27,686 million for FY12.

### New Jersey Institute of Technology FY 2014 Budget Request

### Spending Agency: New Jersey Institute of Technology

### **Appropriations Data**

(\$000)

	-Year En	ding June 30,	2012-		GRANTS - IN - AID			
Original	Reapprop. & Receipts	Transfers & Emerg.	Total Available	Expended	Distribution by Fund & Program	PY 2013 Adjust. Approp.	FY 2014 Request	PY 2014 Recom- mended
298,878	14,925	Q	313,803	313,803	Institutional Support	336,635	336,635	
					Total Grants - in - Aid			
	(5,660)	0	(5,660)	(5,660)	Receipts from Tuition Increase	(7,237)		
(123,024)	(5,178)	0	(128,202)	(128,202)	General Services Income	(136,983)	[144,220]	
(15,171)	(777)	0	(15,948)	(15,948)	Auxiliary Funds Income	(16,147)	(16,147)	
(93,659)	(3,310)	0	(96,969)	(96,969)	Special Funds Income	[106,246]	[106,246]	
[29,328]	0	0	(29,328)	(29,328)	Employee Fringe Benefits	(32,326)	(32,326)	
(261,182)	(14,925)	0	(276,107)	(276,107)	Total Income Deductions	[298,939]	(298,939)	
37,696	0	0	37,696	37,696	Total State Appropriations	37,696	37,696	
					istribution by Fund and Object			
					Special Purpose			
298,878	14,925	0	313,803	313,803	General Institutional Operations	336,635	336,635	
					Faculty Recruitment		6,000	
					Learning Communities		110	
					Enhance Business Continuity Plan		1,760	
					LESS	1700 0701	1200 0201	
(261,182)	(14,925)	0	(276,107)	(276,107)	Income Deductions	(298,939)	(298,939)	
					Grand Total State Appropriation	37,696	45,566	
37,696	0	0	37,696	37,696	TOTAL ALL FUNDS	37,696	45,566	

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

### New Jersey Institute of Technology FY 2014 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 2012 Ending June 30, 2012 ACTUAL	FY 2013 Ending June 30, 2013 ESTIMATED	FY 2014 Ending June 30, 2014 ESTIMATED
EDUCATION & GENERAL REVENUE			
General Services: Tuition and Fees			
Gross Tuition	107,058	115.673	122,910
Receipts from Tuition Increase (BB-102 & BB-105)	5,660	7,237	122,910
Required fees	19,355	20,338	20,338
Subtotal Tuition and Fees (Gross)	132,073	143,248	143,248
Less student awards	(37,175)	(39,364)	(39,364)
Subtotal Tuition and Fees (Net)	94,898	103,884	103,884
Non - Operating Revenue			
Investments	592	250	250
Miscellaneous nonoperating revenues	1,197	722	722
Subtotal Non - Operating Revenue	1,789	972	972
Subtotal General Services Income;			
excluding rate increase (BB-102 & BB-105)	128,202	136,983	144,220
Subtotal General Services Income;			
including rate increase	133,862	144,220	144,220
Other Non - Operating Revenue			
Base State Appropriation	37,696	37,696	37,696
Employee Fringe Benefits (Per OMB)	29,328	32,326	32,326
FY 2014 Critical Needs Request	47.034	70.022	7,870
Subtotal, Other Non - Operating Revenue	67,024	70,022	77,892
TOTAL EDUCATION & GENERAL REVENUE	200,886	214,242	222,112
NET EDUCATION & GENERAL REVENUE	163,711	174,878	182,748
Auxiliaries			
Resident Life	13,079	13,369	13,369
Bookstore	300	300	300
Other	2,569	2,478	2,478
Total Auxiliaries (BB-102 & BB-105)	15,948	16,147	16,147
Less student awards	(3,690)	(3,801)	(3,801)
Subtotal Auxiliaries (Net)	12,258	12,346	12,346
Special funds	00.510	03.044	03.044
Grants & Contracts	88,518	92,944	92,944
Other operating revenues Nonoperating revenues	2,314 1,970	3,642 3,101	3,642 3,101
Other revenues	4,167	6,559	6,559
Subtotal Special funds(BB-102 & BB-105)	96,969	106,246	106,246
TOTAL REVENUE	272,938	293,470	301,340
	2.2,730	2,2,77	201,210

<sup>(1)</sup> Actual FY2012 expense for Employee Fringe Benefits per the audited financials is \$27,686.

<sup>(2)</sup> FY2013 Operating Budget for Employee Fringe Benefits is \$29,200.

### NEW JERSEY INSTITUTE OF TECHNOLOGY

Revenue Reconciliation To Annual Financial Statement (Dollars in thousands) For the year ended June 30, 2012

Financial Statement Description							FY12
	E&G		Special		Additions/		Financial
Operating revenues:	Revenue	Auxiliaries	Funds	Subtotal	Deductions		Statement
Student tuition and fees	132,073	0	0	132,073	(37,175)	(1)	94,898
Federal grants and contracts	0	0	66,078	66,078	0		66,078
State grants and contracts	0	0	17,781	17,781	0		17,781
Other grants and contracts	0	0	4,659	4,659	0		4,659
Auxiliary enterprises	0	15,948	0	15,948	(3,690)	[2]	12,258
Other operating revenues	0	0	2,314	2,314	0		2,314
Total operating revenues	132,073	15,948	90,832	238,853	(40,865)		197,988
Nonoperating revenues:							
State appropriations	65,382	0	0	65,382	0		65,382
Gifts and bequests	0	0	2,730	2,730	0		2,730
Investment income	592	0	(1,631)	(1,039)	0		(1,039)
Other nonoperating revenues, net	1,197		871	2,068	0		2,068
Net nonoperating revenues	67,171	0	1,970	69,141	0		69,141
Other revenues:							
Capital grants and gifts	0	0	159	159	0		159
Additions to permanent endowments	0	0	4,008	4,008	0		4,008
Total other revenues	0	0	4,167	4,167	0		4,167
Total revenues	199,244	15,948	96,969	312,161	(40,865)		271,296

<sup>(1)</sup> Deductions for student awards: -\$37,175 (tuition & fees).

<sup>(2)</sup> Deductions for scholarship awards: -\$3,690 (Auxiliary)

### New Jersey Institute of Technology FY 2014 Budget Request

### FY 2013 Projected Tuition Revenue Based Upon FY 2013 Revised FTE Estimates

A. In-State					
F 100 FTF Hadamand are Train	· ·	£13.400	(D) 2012 Tolking Door		*********
5,109 FTE Undergraduate (Est.)	×	\$12,400	(FY 2013 Tuition Rate)	-	\$63,351,600
551 FTE Graduate (Est.)	x	\$16,836	(FY 2013 Tuition Rate)	_	\$9,276,636
		**	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
B. Out-of-State					
444 FTE Undergraduate (Est.)	×	\$24,800	(FY 2013 Tuition Rate)	-	\$11,011,200
720 FTE Graduate (Est.)	x	\$24,370	(FY 2013 Tuition Rate)	-	\$17,546,400
		*	, , , , , , , , , , , , , , , , , , , ,		************
			SUBTOT	AL	\$101,185,836
FTE Undergraduate is equated to 32 student	credit hours.				
FTE Graduate is equated to 24 student credit	hours.		J		
			1		
	Y N				
to find a time and described on the training of first control.	x				
ls full - time undergraduate tuition a flat rate?	<u>×</u> _				
If yes, the flat rate applies to students tail	ring at least				
12 credits, but not more than 19 credits.					
Is full - time graduate tuition a flat rate?	x				
If yes, the flat rate applies to students tai	ring at least				
12 credits, but not more than 19 credits.			J		
C. FTE Executive Management Programs (I	Est)				837,000
c. Pre executive management Programs [	au .				837,000
D. FTE E-Tuition Rate (Est)	24				512.000
E. FTE Beijing Program (Est)	19				221,000
F. Continuing Professional Education - Nor	n-Credit			-	450,000
G. Summer / Winter Session Tuition	393			-	6,796,000
			SUBTOTA	AL.	110,001,836
			ADJUSTMEN	TS: (1)	12,908,164
			J MARKET HILLY		12,700,104
NET TUITION REVENUE ANTICIPATED FOR F	7 2013				122,910,000
				-	,,

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 withdrawls.

### New Jersey Institute of Technology FY 2014 Budget Request

### FY 2013 Tuition & Fee Schedule

	Charge Per Credit Hour	Annual Rate For Full-Time Student	Charge Per Occurrence (If Applicable)
Tuition			
Resident			
Undergraduate	472	12,400	N/A
Graduate	915	16,836	N/A
Non-Resident			
Undergraduate	1060	24,800	N/A
Graduate	1286	24,370	N/A
ees Required Of All Students			
Registration	105 <sup>(1)</sup>	210	N/A
Student Activity - UG	6	110	N/A
Student Activity - G	5	88	N/A
Athletic	14	320	N/A
Technology Infrastructure	29	420	N/A
Academic Facilities	58	1,092	N/A
Student Services	9	140	N/A
Health Services	22 <sup>(1)</sup>	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	828	828
International Students	912	912
Distance Learning	85	85
Room And Board - Academic Year		
Typical Student Housing	7.550	7,550
Typical Meal Plan Charge	3,192	3,192
-,p	10,742	10,742

<sup>(1)</sup> Flat rate per semester

FY 2013 Projected Tuition and Fee Schedule (FEES)

TUTTION;   Resident   Charge per student   Student   Charge per student   Charge per student   Charge per student   Charge per student   Cachuse   915   12.46   12.48   16.82   16.	Heise   Grapheshke)   Crapheshke)   Craphe	N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	Revenue for FY 2013 NA NA NA NA	Total Revenue for FY 2013	Agency Revenue for FY 2013
1000   1000	210 N/A 210 N/A 210 N/A 420 N/A 440 N/	$\vdash$	N/A N/A N/A N/A N/A N/A 1,146,000 8,52,000 1,146,000 1,146,000 1,146,000 1,146,000	NA NA NA NA		
1000   1000	200 N/A	N N N N N N N N N N N N N N N N N N N	N/A N/A N/A N/A N/A 1.346,000 3,467,000 8,522,000 1,142,000 1,142,000 1,142,000	NA NA NA NA	_	
1000   1000	2400 N/A (2500 N/A) (2500 N/A (2500 N/A (2500 N/A) (2500 N/A (2500 N/A) (2500 N/A (2500 N/A) (2500 N/A (2500 N/A) (2500		N/A N/A N/A N/A N/A 1.346,000 3,467,000 8,522,000 1.142,000 1.142,000 1.142,000	N N N N N N N N N N N N N N N N N N N		
1,000   24,     1,000   24,	200 N/A N/A N/A 110 N/A 140 N/A 140 N/A N/A 140 N/A 140 N/A 140 N/A N/A 140 N/	S	N/A N/A N/A N/A 1.346,000 3,467,000 8,522,000 1.142,000 1.142,000	NA NA NA	NA	VV
1000   24,	210 N/A N/A 110 N/A 420 N/A 440 N/A A40 N/A A40 N/A A40 N/A A40 N/A A40 N/A A4	N N N N N N N N N N N N N N N N N N N	N/A N/A N/A 2.051,000 	NA	N/A	VV
TRED FEES: (Required for all students)   105	210 N/A 110 N/A 120 N/A 420 N/A 440 N/A 140 N/A 440 N/A A40 N/A A40 N/A A40 N/A A40 N/A A40 N/A A40 N/	K K K K K K K K K K K K K K K K K K K	2,051,000 2,136,000 3,467,000 8,522,000 1,142,000 397,000	NA	* 1	*/2
HED FEES: (Required for all stude mts)   105   14	210 N/A 110 N/A 320 N/A 420 N/A 440 N/A 48	N N N N N N N N N N N N N N N N N N N	2,051,000 		N/A	NA
HRED FEES; (Required for all stude mb)   105   14	210 N/A 110 N/A 320 N/A 420 N/A 440 N/A 460 N/A	N N N N N N N N N N N N N N N N N N N	2,051,000 			
105   107   108   108   109	210 N/A 320 N/A 420 N/A 440 N/A A40 N/A 440 N/A A40 N/	X X X X X X X X X X X X X X X X X X X	2,051,000 			
Activity - UG	88 N/A 320 N/A 420 N/A 440 N/A 460 N/A	X X X X X X X X X X X X X X X X X X X	2,368,000 3,467,000 8,522,000 1,142,000 397,000	•	2,061,000	•
Control   Cont	330 N/A 420 N/A 140 N/A 84 N/A	N N N N N N N N N N N N N N N N N N N	2,346,000 3,467,000 8,522,000 1,142,000 397,000			691,000
begy Infrastructure 59 14 1	320 N/A 420 N/A 140 N/A 48	N'A N'A N'A	2,346,000 3,467,000 8,522,000 1,142,000 397,000	•	•	152,200
Services   S8   1,	420 N/A 140 N/A 48 N/A	N/A N/A	3,467,000 8,522,000 1,142,000 397,000	•	2,368,000	•
Services   98   99   99   99   99   99   99   9	092 N/A 140 N/A 48 N/A	N/N N/N	8,522,000 1,142,000 397,000	•	3,467,000	•
Services   22   14     Reference	040 N/A	K/X	397,000	•	8,522,000	•
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The Marin Carry	7,530 N/A	N/A		13,369,000	V/V	

NOTES:
(a) Revenuese duarge for part time students.

### NEW JEISEPINSTITUTE OF TECHNOLOGY SALARY PROGRAM FY2013 AND FY2014

### ESTIMATED SALARY PROGRAM BY BARGAINING UNIT:

FY13 Head		FY13 Extrated Salary	FY 13 Anticipated		FY14 Estimated	FY14 Antidipated Cash
50	FY13 Base Salary	Program	Cash Need	PY14Base	Salary Program	Need
95.00	4,385,960	153,509	4,539,469	4,539,469	124,835	4,664,304
5.00			218,531	218,531	6,010	
22.00	1,369,641		1,424,427	1,424,427	28,489	1,452,915
7.00			628,637	628,637	12,573	
300			338,880	338,880	9,319	
150.00			19,433,029	19,433,029	534,408	
167.00			8,168,667	8, 168, 667	224,638	
284.00			39,907,648	39,907,648	1,097,460	
353.00			26, 147, 260	26, 147, 260	719,050	
1086.00			100,806,547	100,806,547	2,756,782	

### SALARY PROGRAM PARAMETERS:

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### DISTRIBUTION BY BLEMENT.

Electors	Estimated Salaw Program! <sup>1</sup>	FY2014 Estimated
uction	1,784,545	1,451,217
search	118,833	96,636
Dic Service	18,397	14,961
denic Support	405,643	329,875
lent Services	289,502	235,427
tutional Support	989009	
peration and Maintenance of Plant	200,848	
Srand Total	3418454	2,756,782

# SECTION 4.

# **NEW PROGRAM NEEDS**

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 most critical needs for FY2014.

### 1) Faculty Recruitment Initiative

 Requesting \$6 Million for start-up equipment and new laboratory construction needed to attract 15 new faculty members. The salaries of the 15 new faculty will be supported through the use of Faculty Separation Incentive Program (FSIP) funds in FY14.

### 2) NJIT Learning Communities

 Requesting \$110 Thousand to support a new position needed to manage the learning community operations in addition to non-salary operating support.

### 3) Enhancement of Existing Business Continuity Plan

 Requesting \$1.76 Million to put provisions in place that will enhance the university's response to emergency situations.

Total FY2014 Priority Requests \$(000's)

TOTAL LITE OF THOME	darse stood st		
Priority Request:	Recurring	One-Time	<u>Total</u>
1)Faculty	\$6,000		\$6,000
Recruitment			
Initiative			
2)NJIT Learning	110		110
Communities			
3)Enhancement of		\$1,760	1,760
Business Continuity			
Plan			
Total	\$6,110	\$1,760	\$7,870

### 1) Faculty Recruitment Initiative:

NJIT is focusing its strategic efforts on education, research and economic development in three fundamental areas to enhance our quality of life and support economic growth: sustainable systems, life sciences and engineering, and digital everyware. To meet these expectations we are hiring faculty in areas such as: advanced manufacturing processes, architecture design and construction, big data, biochemistry, business systems and processes, materials science and engineering, and sensing and control.

In FY11 NJIT established a Faculty Separation Incentive Program (FSIP) that is anticipated to result in approximately 30 to 45 faculty separations by 12/31/13. Through the use of salary savings made possible primarily through the FSIP program, but also through normal attrition, NJIT recently hired 24 new faculty.

### Recruitment Process

A new, cross-disciplined approach targeted to the three fundamental areas rather than specific departments was used. A significant pool of highly qualified applicants permitted NJIT to hire faculty that will be able to work effectively in their areas. The following highlights these newly recruited faculty members' areas of expertise:

### Sustainable Systems

- Michel Boufadel, professor in Civil and Environmental Engineering (advanced manufacturing processes), served on the EPA Science Advisory Board for natural gas extraction from shale formation, flood plain delineation for FEMA, and predicting contamination in urban streams.
- Wenbo Selina Cai, assistant professor of Mechanical and Industrial Engineering (business systems and processes), is an expert in the field of operations research and dynamic pricing decisions. She has built custom applications, behavioral and collection scorecards, and performed segmentation analysis for financial institutions. She is interested in researching questions related to sustainable energy systems and health care.
- Martina Decker, assistant professor of Architecture (architecture design and construction), focuses her work on how new materials with novel properties might generate solutions to various challenges in sustainability and health and safety.
- Keith Krumwiede, associate professor of Architecture (architecture design and construction), focuses on the design work and development of sustainable, climateresponsive, high design urban housing prototypes.
- Jesse LeCavalier, assistant professor of Architecture (architecture design and construction), investigates the spatial consequences of Walmart's logistics operations.
- Wen Zhang, assistant professor of Civil and Environmental Engineering (advanced manufacturing systems), focuses his areas of interest on sustainable water-energy environment systems and sustainable design and manufacturing.

### Life Sciences and Engineering

- Bharat Biswal, professor and Chair of Biomedical Engineering (biochemistry), is internationally renowned researcher recognized for mapping the brain's activity. The National Institute of Mental Health has cited his recent finding as the second most significant research advancement of 2010.
- Cristiano L. Dias, assistant professor of Physics (biochemistry), studies the molecular makeup of proteins in drugs used for medical purposes.
- Eric Fortune, associate professor of Biological Sciences (sensing and control), studies the
  careful measurements of natural animal behavior which, when coupled with
  sophisticated quantitative approaches, can be applied in brain experiments to discover
  the cellular mechanisms used by the brain to control behavior.

- Simon Garnier, assistant professor of Biological Sciences (sensing and control), focuses his research on the emergence of intelligent collective behaviors in groups of social animals. He applies the principles underlying self-organization in social animals to the coordination of swarm robotics.
- Alison Lefkovitz, assistant professor of History (business systems and processes),
  published a book manuscript "The Politics of Marriage in the Era of Women's Liberation"
  argues that the battle to unravel marriage's economic and social mandates
  revolutionized the gendered order as significantly as the much more familiar struggle for
  workplace equality. The creation of gender equity has produced a more sustainable
  social structure.
- Caitlin Turc, associate professor of Mathematical Sciences (sensing and control), is focused on designing numerical and analytical tools for solving challenging problems in diverse scientific and technological areas.

### Digital Everyware

- Cesar Bandera, assistant professor of Management (business systems and processes), is a
  pioneer in the emerging field of mobile or m-health. Through his company Cell Podium
  has research supported from the National Institutes of Health to develop applications of
  environmental public health outreach via cell phone.
- James Cicon, assistant professor of Management (business systems and processes), uses advanced computer methodologies to analyze the writing and expressions of investors, management, analysts, and others. Once quantified, the results are used as explanatory variables in existing models of corporate/market behavior.
- Xiaoning Ding, assistant professor of Computer Sciences (big data/cloud computing), studies how to improve multicore systems for use in data-intensive applications in cloud computing centers.
- Lian Duan, assistant professor of Information Systems (business systems and processes), focuses his research on large-scale data mining and correlated search, community detection, and density-based clustering and outlier detection.
- Abdallah Khreishah, assistant professor of Electrical and Computer Engineering (big data), performs research on the latest work in computer networking with an emphasis on improving the flow of information. His most recent research focuses on what electrical engineers call "mobihoc", in the world of mobile networking. Mei Liu, assistant professor of Computer Sciences (big data), uses advanced informatics approaches to improve health care. Lui's long-term goal is to develop data-mining methodologies to uncover clinical knowledge from Electronic Medical Records, to improve the quality, safety, efficiency and effectiveness of health care.
- Ji Meng Loh, associate professor of Mathematical Sciences (big data), has implications for advances in the fields ranging from functional magnetic resonance imaging and epidemiology to telecommunications and astronomy.

- Bernadette Longo, associate professor of Humanities, (business systems and processes), uses cultural studies to investigate technical communication practices within a particular cultural contexts, mediated by technological devices.
- Songhua Xu, assistant professor of Information Systems (business systems and processes), uses advanced techniques to build human-centered applications that benefit society.

NJIT plans to continue implementation of the faculty recruitment plan by attracting fifteen more world-class scientists using existing salary budget. Like their current colleagues, it is expected that these new recruits will be among the best in their fields with an established track record of securing both State and Federal grants and contracts.

Some specific multidisciplinary fields in which we will hire faculty are:

### Sustainable Systems

- Biological Processing: genetic modification to facilitate bioprocessing for biofuels; production of petrochemicals through cellular engineering; and separation technologies with pharmaceutical applications.
- Solar Energy Systems: materials and process technologies for distributed solar energy generation and storage; building materials and design concepts for implementation of building integrated photovoltaics.
- Bioenvironmental Science and Engineering: recruiting faculty at the interface of biology, biochemistry and environmental science building on NJIT's strength in nanotechnology.
- Biomaterial and Bio-Energy: there exists an enormous opportunity in the areas of biosensors and biocoatings including the development of environmental sensing, remediation and energy conversion.

### Life Sciences and Engineering

- Molecular biology: understanding the connection between genetic structure and the
  protein chemistry at the nuclear, cellular and organism levels will be the key to new
  therapies, disease prevention and personalized medicine.
- Neural Engineering: specifically in infrared imaging of motor activities, neuro-imaging, and stem cell repair
- Tissue Imaging: for biological inspired materials and cardiovascular and neuron tissue engineering

Mechatronics and Robotics: focused on modern robotic platforms, bio-inspired robotics; ultraprecision systems for medical robotics; and mobile sensing and communication. <u>Digital</u> <u>Everyware</u>

- Health Care Economics: research in health care demand and management.
- Health Care Information Management: operation planning, data mining and decision support methods.

- Nanoelectronics: material and process technologies for producing ultra-small, ultra-low power device technology for applications ranging from computation and communication to remote sensing and biologic implantation.
- Wireless Ultra broadband: high speed wireless connectivity increases the number of users and diversity of applications that will tax networking infrastructure. Improving throughput, data security, signal quality and range are all issues to be resolved.
- Natural language processing: smaller form factors and mobility make keyboard computer interfaces difficult if not impossible to be used reliably. Speech recognition and synthesis still require active research to be reliable alternatives.

To continue expanding our expertise in these emerging fields, we are requesting \$6 million to support the laboratory construction and equipment needed to recruit 15 new faculty members. The cost, per faculty hire, is estimated to be approximately:

- \$200,000 for wet laboratory construction.
- \$200,000 for high tech laboratory equipment such as: microscopes, lasers, and centrifuges, culture freezers, spectrometers, gas tanks, optical tables, exhaust hoods, and gas/dry boxes.

The proposed initiative would result in a material change in the landscape of research and collaboration at NJIT and throughout the state and provide a steady stream of graduating students entering the New Jersey workforce. Going forward it is envisioned that new research centers and multidisciplinary programs would be established requiring additional operating expenses such as: equipment, supplies, maintenance contracts, educational and research support staff, post-doctoral research associates etc.

By making significant commitments to tomorrow's primary scientific and technological frontiers and taking a strategic approach to multi-disciplinary hiring of the best and the brightest, we will make a major impact on the economy and quality of life in New Jersey, and beyond.

### 2) NJIT Learning Communities

As students transition to university life, their experience is more likely to be positive and successful if they get the support they need. Learning Communities engage students within a network of faculty, advisors, and peer mentors focused on facilitating this transition and enhancing their learning experience. The Learning Community structure embraces assessment and advisement and creates an environment where students can celebrate a common purpose with integrity and civility. Social networking means students will be introduced to teams before the start of their first semester. The outcomes from our first year of this program were very positive, student's participating in this program had much higher rates of overall satisfaction, retention rates, improved study skills, and are much more engaged in the NJIT community. With the support of team affiliation in their first year, students begin navigation along an academic timeline to graduation.

We are requesting \$110,000 to support a new position and operations. The new position is needed to coordinate the learning community activities, organize curriculum, work with the

associate dean and first year advisors to schedule and maintain oversight of the program. This person will work with the Center for First Year Students to hire and train instructors, organize, develop, and plan major events for Learning Communities.

### 3) Enhancement of Existing Business Continuity Plan

To ensure the well-being of students, faculty, staff, and the university infrastructure, the university requests approximately \$1.76 million to enhance the university's business continuity plan. While a plan is already in place, the recent storm 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:

- Install diesel fuel high capacity tanks, sufficient to enable 72 hour operation for the 7 existing diesel generators - \$500,000
- 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
- Gasoline supply is necessary to keep police vehicles and support services operational -\$30,000
- 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 life sciences 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.

# SECTION 5

**CAPITAL BUDGET** 

# Department Priority Summary Report- All Fund Sources

Department Priority	Project Title	Organization	Project Number	FY 2014	FY 2015	FY 2016	FY 2017 - 2020	Total
75 C	New Jersey Institute of Technology							
-	CURRENT/DEFERRED MAINTENANCE	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	838	\$6,000	\$6,000	\$5,000	\$20,000	\$36,000
CI	LABORATORIES, CLASSROOMS AND STUDI	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	1092	\$40,000	\$30,000	\$6,000	GS.	\$78,000
en	CENTER FOR INTEGRATIVE LIFE SCIENCES	NJIT - NEW JERSEY INSTITUTE OF TECHNOL:	1046	\$6,000	\$5,100	8	80	\$11,100
4	MODERNIZATION OF LABORATORY AND IN:	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	1091	\$15,000	\$16,000	ŝ	8	\$31,000
w	LAND ACQUISITION	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	24	8	\$6,000	S	80	\$8,000
10	UBRARY	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	324	\$9,000	\$6,000	\$3,000	8	\$18,000
7	ELECTRICAL & COMPUTER ENGINEERING F	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	1050	8	8	8	\$6,900	\$6,900
œ	STUDENT ACADEMIC SUCCESS CENTER	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	1053	8	8	S	\$8,250	\$6,250
Ó	INTEGRATIVE NANDFABRICATION CENTER	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	1048	\$5,000	\$4,600	S	8	89,600
2	ARCHITECTURE, ART, & DESIGN STUDIO F/	NJT - NEW JERSEY INSTITUTE OF TECHNOL-	1052	8	S	\$15,000	\$18,000	833,000
Ξ	ENGAGEMENT CENTER FOR SCIENCE, TEC	NJT - NEW JERSEY INSTITUTE OF TECHNOL	1051	23	8	\$18,000	\$9,500	827,500
12	PARKING FACILITY	NJT - NEW JERSEY INSTITUTE OF TECHNOL	322	S	8	S	\$41,406	541,408
£3	MULTIPURPOSE BUILDING	NJT - NEW JERSEY INSTITUTE OF TECHNOL.	27	0\$	os	20	\$138,020	\$138,020

\$240,076 \$439,778

\$47,000

\$72,700

\$80,000

Department Total

# Project Status Report

# Capital Improvement Projects FY2006 - FY 2012

(000's)

Project	Name

Proj No.	Stert 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 ATHLETIC FACILITY	30	2009	Completed	2,300	2,300	0	0	0
TOTAL FOR:	Completes	4,000 \$6,300	0	o	0	4,000		
NJIT - NEW JERSEY INSTITUTE OF TE			ent Totals	\$8,300	\$2,300	\$0 \$0	\$0	\$4,000

STAT-01: Page 1 of 1

### 10/9/2012 Capital Project Report by Org & Priority Project Number: 838 Project Title: CURRENT/DEFERRED MAINTENANCE Project Type: A06 Department: NEW JERSEY INSTITUTE OF TECHNOLOGY Preservation-Other Organization: NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY Department Priority: Facility Name: NEW JERSEY INSTITUTE OF TECHNOLOGY New Project: Yes 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: Tiernan 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, Coltan Hall, and Tiernan Faculty Hall (\$9.5 Million), Reciad Guttenberg Information Technology Center (\$3 Million), Faculty, Tiernan, and Cullimore Restrooms (\$2.55 Million).

PROJECT	ANNUAL OPERATING IMPACT	(000's)
IMPACT	INCREASE	DECREASE
No	\$0	90

### 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		\$35,0	00	
		Total E	stimated Cost:	\$35,0	00	
PRIOR YEARS' APPROP.	FUND TYPE	FY-2014	(000's) FY- 2015	FY- 2016	FY 2017 - 2020	TOTAL PROJECT
	General	\$5,000	\$5,000	\$5,000	\$20,000	\$35,000
	TOTALS	\$5,000	\$5,000	\$5,000	\$20,000	\$35,000

10/9/2012

Project Number: 1092

Project Title: LABORATORIES, CLASSROOMS AND STUDIOS FOR

Project Type: D03

New Project: Yes

Depurtment:

NEW JERSEY INSTITUTE OF TECHNOLOGY

Construction-Renovations and Rehabilitation

Organization:

NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY

Department Priority:

Facility Name: Project Location:

NEW JERSEY INSTITUTE OF TECHNO

NEW JERSEY INSTITUTE OF TECHNOLOGY

### PROJECT DESCRIPTION AND JUSTIFICATION

Today's STEM students learn these most rigorous curriculums more effectively and most efficiently when presented with hands-on experiences, and thrive when organized into learning cohorts. The spaces required to support these contemporary pedagogical methods are designed specifically to accommodate learning communities for project based learning, together with a strong emphasis on toaching laboratories and studios. The proposed construction will achieve the required custom spaces. through the complete rehabilitation of the recently acquired Newark Central High School.

PROJECT ANNUAL OPERATING IMPACT IMPACT INCREASE

\$1,714

DECREASE 90

Yes

### EXPLANATION:

Added space will increase operating and maintenance costs.

		PROJECT PHASE		ESTIMATED	COST (000's)	
		CONSTRUCTION		\$56,7	16	
		FURNISHING AND	FIXTURES	\$11,3	43	
		OTHER		\$3,4	04	
		FEES		\$4,5	37	
		Tot	al Estimated Cost:	\$76,0	00	
PRIOR YEARS' APPROP.	FUND TYPE	FY-2014	(000's) FY- 2015	FY- 2016	FY 2017 - 2020	TOTAL PROJECT
	General	\$40,000	\$30,000	\$6,000	50	\$76,000
	TOTALS	\$40,000	\$30,000	\$6,000	50	\$76,000

manufactured and the second of the second of

Project Number: 1046

Project Title:

CENTER FOR INTEGRATIVE LIFE SCIENCES &

Project Type: E03

Departments

NEW JERSEY INSTITUTE OF TECHNOLOGY

Construction-Renovations and Rehabilitation

Organization:

NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY

Department Priority:

New Project: Yes

Facility Name:

OTTO YORK ENGINEERING AND ENVIRONMENTAL

Project Location:

### PROJECT DESCRIPTION AND JUSTIFICATION

The convergence of the life sciences, physical sciences, and engineering is "The 3rd Revolution" in biomedical research. It has the potential to eclipse the impact of molecular biology and genomics revolutions and to serve as the basis for future growth in NJ's strategic sectors of pharmaceuticals, biotechnology. medical devices and health care delivery systems. The proposed construction will expand an existing research building through the addition of roughly 10,000 sq ft of wet laboratory space dedicated to integrative life science and engineering research.

PROJECT ANNUAL OPERATING IMPACT

INCREASE DECREASE

IMPACT Νo

\$200,000

\$0

EXPLANATION:

Additional operating costs

		PROJECT PHAS	Ε .	ESTIMATED	COST (000's)	
		CONSTRUCTION	:	\$8,2	84	
		FURNISHING AN	D FIXTURES	\$1,8	57	
		OTHER		\$4	97	
		FEES		\$5	62	
		To	otal Estimated Cos	2 \$11,1	00	
PRIOR YEARS' APPROP.	FUND TYPE	FY-20	(000's) 14 FY- 2015	FY- 2016	FY 2017 - 2020	TOTAL PROJECT
	General .	\$8,00	\$5,100	\$0	\$0	\$11,100
	TOTALS	\$6,00	55,100	\$0	\$0	\$11,100

10/9/2012

Project Number: 1091 Project Title: MODERNIZATION OF LABORATORY AND

Project Type: E03 Department: NEW JERSEY INSTITUTE OF TECHNOLOGY

Construction-Renovations and Rehabilitation | Organization: NET - NEW JERSEY INSTITUTE OF TECHNOLOGY

Department Priority: 4 Facility Name: NEW JERSEY INSTITUTE OF TECHNOLOGY

New Project: Yes 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 shough 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	- \$D	\$0

·	
PROJECT PHASE	ESTIMATED COST (800's)
CONSTRUCTION	\$23,214
FURNISHING AND FIXTURES	\$4,643
OTHER .	\$1,769
FEES	\$1,474
Total Estimated Cost:	\$31,100

EXPLANATION:

PRIOR YEARS' APPROP.	FUND TYPE	FY-2014	(000's) FY- 2015	FY- 2016	FY 2017 - 2020	TOTAL PROJECT
	General	\$15,000	\$16,000	\$0	80	\$31,000
	TOTALS	\$15,000	\$16,000	\$0	\$0	\$31,000

Project Number:

Project Fitte: LAND ACQUISITION

Project Type: D04

Department

NEW JERSEY INSTITUTE OF TECHNOLOGY

Acquisition-Other

Organization:

NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY

the shall the representation of the property of the second

Facility Name: Department Priority:

ENEW JERSEY INSTITUTE OF TECHNOLOGY

New Project: Yes

Project Location:

### 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 Contral Avenue and Martin Luther King BLVD. The area is within the Campus Galeway 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	(0007s)
IMPACT	INCREASE	DECREASE
No	\$0	\$0
EXPLANATION:		

	PROJECT PHASE		ESTIMATED	COST (000's)		
		CONSTRUCTION		\$4,5	00	
		FURNISHING AND FIX	FURNISHING AND FIXTURES		00	
		OTHER		\$3		
		FEES		\$3	. 00	
		Total E	stimated Cost:	\$6,0	00	
PRIOR YEARS' APPROP.	CHAID TYPE	(000/s) FY- 2015	FY- 2016	FY 2017 - 2020	TOTAL PROJECT COST	
	General	\$0	\$6,000	80	\$0	\$8,000
	TOTALS	\$0	\$8,000	\$0	\$0	\$6,000

By Org & Priority

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Project Number: Project Title:

Project Type: E03

Department:

LIBRARY

NEW JERSEY INSTITUTE OF TECHNOLOGY

Construction-Renovations and Rehabilitation

Organizations

NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY

Department Priority:

Facility Name:

NEW JERSEY INSTITUTE OF TECHNOLOGY

New Project: Yes

Project Location:

VAN HOUTEN LIBRARY - NUTT 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 envioronment Including provisions for group projects utilizing current technologies.

PROJECT ANNUAL OPERATING IMPACT

IMPACT

INCREASE

DECREASE

No

\$343

\$0

### EXPLANATION:

Additional operating and maintenance cost.

		PROJECT PHASE		ESTIMATED	COST (000's)	
		CONSTRUCTION		\$13,4	32	
		FURNISHING AND FIX	TURES	\$2,687		
		OTHER		\$8	06	
		FEES .		\$1,0	75	
		Total E	stimated Cost:	\$18,0	00	
PRIOR YEARS' APPROP.		(000's) FY- 2015	FY- 2016	FY- 2016 FY 2017 - 2020	TOTAL PROJECT	
	General	\$9,000	\$8,000	\$3,000	30	\$18,000
	TOTALS	\$9,000	\$6,000	\$3,000	\$0	\$18,000

Project Number: 1050

Project Fille:

ELECTRICAL & COMPUTER ENGINEERING FACILITY

Project Type; E03

Department:

NEW JERSEY INSTITUTE OF TECHNOLOGY

Construction-Renovations and Rehabilitation

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.

Organization:

NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY

Department Priority:

Facility Name:

NEW JERSEY INSTITUTE OF TECHNOLOGY

New Project: Yes

Project Location: NEW JERSEY INSTITUTE OF TECHNO

PROJECT ANNUAL OPERATING IMPACT IMPACT

INCREASE

(8'000)DECREASE

Nο

\$700

ŝo

### EXPLANATION:

Increase in operating costs and maintenance.

		PROJECT PHASE		ESTIMATED	COST (000's)	
		CONSTRUCTION FURNISHING AND FIXTURES		85,1	49	
				\$1,0	30	
		OTHER		\$3	09	
		FEES		84	12	
		Tota	i Estimated Cost:	\$6,9	00	
PRIOR YEARS' APPROP.	FUND TYPE	FY-2014	(000's) FY- 2015	FY- 2016	FY 2017 - 2020	TOTAL PROJECT COST
	General	50	90	\$0	\$8,900	\$6,900
	TOTALS	\$0	\$0	\$0	\$6,900	\$6,900

Project Number: 1053

Project Title: STUDENT ACADEMIC SUCCESS CENTER

Project Type: E03

PROJECT DESCRIPTION AND JUSTIFICATION

There are a number of services, including counseling and the

Center for Academic and Professional Education that assists

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 in their transition from high school to college. In addition, these vital support services increase the number of retained

Departmenti

NEW JERSEY INSTITUTE OF TECHNOLOGY

Construction-Renovations and Rehabilitation

Organization:

NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY

Department Priority:

Facility Name:

NEW JERSEY INSTITUTE OF TECHNOLOGY

New Project: Yes

students.

Project Location:

NEW JERSEY INSTITUTE OF TECHNO Name of the Control of the State of the Stat

PROJECT ANNUAL OPERATING IMPACT IMPACT

INCREASE

(000's)DECREASE

No

50

EXPLANATION:

		PROJECT PHASE		ESTUATED	COST (000's)	
		CONSTRUCTION		\$4,6	84	
		FURNISHING AND F	EXTURES	\$9	33	
		OTHER		\$2	90	
		FEES		\$3	73	
		Total	Estimated Cost:	\$6,2	50	
PRIOR YEARS' APPROP.	FUND TYPE	FY-2014	(000's) FY- 2016	FY- 2016	FY 2017 - 2020	TOTAL PROJECT
	General .	\$0	\$0	\$0	\$6,250	\$8,250
	TOTALS	\$0	\$0	\$0	\$6,250	\$6,250

10/9/2012

Project Number: 1048

Project Title:

INTEGRATIVE NANOFABRICATION CENTER

Project Topie: E03

Department:

NEW JERSEY INSTITUTE OF TECHNOLOGY

Construction-Renovations and Rehabilitation

PROJECT DESCRIPTION AND JUSTIFICATION

Organization:

NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY

Department Priority:

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 disse-10 CMOS process area with an aligned clean room for non-CMOS materials and processes.

Facility Nume:

NEW JERSEY INSTITUTE OF TECHNOLOGY

Project Location:

NEW JERSEY INSTITUTE OF TECHNO

PROJECT AMNUAL OPERATING IMPACT (8'000)

IMPACT No

INCREASE

DECREASE \$0

EXPLANATION:

PROJECT PHASE

ESTIMATED COST (000's)

CONSTRUCTION

\$7,200

FURNISHING AND FIXTURES

\$1,080

OTHER

8720

FEES

\$600

Total Estimated Cost:

\$9,600

PRIOR YEARS'	
APPROP.	

FUND TYPE

FY-2014

(0000's)FY- 2015 FY- 2016

FY 2017 - 2020

TOTAL PROJECT COST

General

TOTALS

\$6,000

\$5,000

\$4,600

\$0

\$9,600

\$4,600 \$0 80 \$0

\$9,600

By Org & Priority

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10/9/2012

Project Number: 1052

200

Project Title:

ARCHITECTURE, ART, & DESIGN STUDIO FACILITY

Project Type: E03

Department

NEW JERSEY INSTITUTE OF TECHNOLOGY

Construction-Renovations and Rehabilitation

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 TECHNO

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

SO

EXPLANATION:

Increase in operating costs.

		PROJECT PHASE			COST (000's)	
		CONSTRUCTION			26	
		FURNISHING AND FIXTURES OTHER		34,9	25	
				\$1,478		
		FEES		\$1,9	71	
		Total .	Estimated Cost:	\$33,0	00	
PRIOR YEARS* APPROP,	FUND TYPE	FY-2014	(000's) FY- 2016	FY- 2016	FY 2017 - 2020	TOTAL PROJECT COST
	General	\$0	\$0	\$15,000	\$18,000	\$33,000
	TOTALS	\$0		\$15,000	\$18,000	\$33,000

10/9/2012

Project Number: 1051

Project Title:

ENGAGEMENT CENTER FOR SCIENCE, TECHNOLOG

Project Type: E03

Department:

NEW JERSEY INSTITUTE OF TECHNOLOGY

Construction-Renovations and Rehabilitation

PROJECT DESCRIPTION AND JUSTIFICATION

Organization:

NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY

Department Priority:

New contatruction 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

Facility Name:

NEW JERSEY INSTITUTE OF TECHNOLOGY

New Project: Yes

with the Newark community.

Project Location:

NEW JERSEY INSTITUTE OF TECHNO

(000)

PROJECT ANNUAL OPERATING IMPACT IMPACT

INCREASE \$350

DECREASE \$0

No

EXPLANATION:

Increase in operating costs.

	PROJECT PHASE			ESTIMATED	COST (000's)	
		CONSTRUCTION FURNISHING AND FIXTURES		\$20,5	22	
				84,1	04	
		OTHER		\$1,2	32	
		FEES		\$1,6	42	
		Total Es	stimated Cost:	\$27,5	00	
PRIOR YEARS' APPROP.	FUND TYPE	FY-2014	(000's) FY- 2015	FY- 2016	FY 2017 - 2020	TOTAL PROJECT
	General	\$0	80	\$18,000	\$9,500	\$27,500
	TOTALS	\$0	S0	\$18,000	\$9,500	\$27,500

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: Facility Name:

NEW JERSEY INSTITUTE OF TECHNOLOGY

New Project: Yes

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

PROJECT DESCRIPTION AND JUSTIFICATION

consistent with the Gateway Project.

Project Location:

NEW JERSEY INSTITUTE OF TECHNO

PROJECT ANNUAL OPERATING IMPACT

IMPACT

INCREASE \$260

DECREASE

No:

\$0

### EXPLANATION:

Additional operating and maintenance cost.

		PROJEC	T PHASE		ESTIMATED	COST (000's)	
		CONSTR	UCTION		\$30,9	00	
		FURNISH	IING AND FIX	TURES	\$6,1	80	
		OTHER			\$1,8	54	
		FEES			\$2,4	72	
			Total Es	stimated Cost:	\$41,4	06	
PRIOR YEARS' APPROP.	EMND YVDE		FY-2014	(000's) FY- 2015	FY- 2016	FY 2017 - 2020	TOTAL PROJECT
	General .		\$0	90	90	\$41,406	\$41,406
	TOTALS		\$0	\$0	\$0	\$41,406	\$41,406

By Org & Priority

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10/9/2012

Project Numbers

27

Project Title:

MULTIPURPOSE BUILDING

Project Type: E04

04 Department:

NEW JERSEY INSTITUTE OF TECHNOLOGY

Construction-Other

Organization;

NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY

Department Princity:

13 122

Facility Nume:

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 \$1,714 DECREASE \$0

EXPLANATION:

Additional operating and maintenance costs.

		PROJECT PHASE		ESTIMATED COST (000's)		
		CONSTRUCTION FURNISHING AND FIXTURES		\$103,000		
				\$20,6	00	
		OTHER		\$8,1	80	
		FEES		\$8,2	40	
		Total E	stimated Cost:	\$138,0	20	
PRIOR YEARS' APPROP.	FUND TYPE	FY-2014	(000's) FY- 2015	FY- 2016	FY 2017 - 2020	TOTAL PROJECT
	General	\$0	\$0	30	\$138,020	\$138,020
	TOTALS	\$0	\$0	\$0	\$138,020	\$138,020