NJIT
New Jersey Institute of Technology

Fiscal Year 2018

Budget Submission to the Office of Management and Budget November 2016

njit.edu

NEW JERSEY INSTITUTE OF TECHNOLOGY
FY 2018 BUDGET REQUEST

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NEW JERSEY INSTITUTE OF TECHNOLOGY
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PRESIDENT'S STATEMENT

New Jersey Institute of Technology (NJIT) respectfully submits this annual budget request in support of our responsibilities for providing STEM educational programs that produce the necessary workforce to serve as a catalyst for the growth of our state's knowledge economy. Cognizant of New Jersey's financial demands, we limit our FY 2018 budget requests to priorities that will increase STEM enrollments, support innovation and job creation, and drive economic expansion. The requested funding totals approximately $7.1 million and is summarized below:

- NJIT is requesting a restoration of State Authorized FTE to our previously requested level of 1,313 (FY2009) in addition to the new positions requested within this budget submission. We are requesting total State Authorized FTEs of 1,344.
- NJIT is requesting $716 thousand for Inclusive Excellence Awards – to provide institutional need-based aid to students that require additional aid to close the gap between unmet Tuition and Fees.
- We are requesting operating and equipment funding of $2.098 Million to support a NJIT Engineering Makerspace. This Makerspace facility, the largest of its kind (12,000 sq. ft.), with the expressed intent of developing the most well-rounded and well-prepared STEM graduates possible, and creating partnerships with the manufacturing industry.
- NJIT is requesting $1.84 million for IT Infrastructure and Cybersecurity Support, to provide the resources for lifecycle replacement for key components of the university's IT infrastructure, to strengthen the university's information security defenses, raise awareness of cyber security threats, and to strengthen the university's overall business continuity efforts for ensuring that IT business and technical services can be resumed within required and agreed business timescales.
- We are requesting $2.446 million to recruit faculty who will work with NJIT to focus toward strategic efforts in education, research and economic development in four fundamental areas to enhance our quality of life and support economic growth: sustainable systems, life sciences and engineering, data sciences and information technology, and transdisciplinary areas.

Rationale for State Authorized FTE Restoration and Additions

NJIT is one of 32 polytechnic universities in the United States and is New Jersey's public STEM University. We enroll more than 11,400 students annually in bachelor's, master's, and doctoral degree programs; expend more than $124 million on research activity; and generate an economic impact of more than $1.74 billion on the State of New Jersey each year. Our technologically based education and research programs are closely aligned with the design, computing, engineering, and life sciences clusters identified in the *State Strategic Job Growth*

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Plan, which clearly recognizes the need to bring technology and the sciences to bear on in ways that will improve quality of life and spur economic growth. That is what NJIT does better than any other New Jersey institution of higher education, and our *2020 Vision* strategic plan calls for both enrollment growth and expanding the creation of economic development opportunities.

Restoration of State authorized FTE positions as well as the targeted addition of new positions will enable NJIT to effectively serve a growing student enrollment and provide New Jersey businesses with the STEM-trained employees they desperately need now and in the years to come. The requested support also will enable NJIT to partner with industry in order to create research and development opportunities for technological solutions to our society's most pressing challenges. Below are recent examples of NJIT's success in accomplishing these goals, which we seek to expand with adequate state support:

- In July 2015, NJIT released its *2020 Vision* strategic plan, which lays out a blueprint for growth. The plan offers specific objectives and strategies that will improve the way NJIT educates students, advances research and, ultimately, contributes to the local, regional and national economies.
- NJIT is attracting talented students who will be the future backbone of our state's economy; those enrolled in Fall 2016 have a combined SAT verbal/math average of 1215 out of 1600, and those enrolled in the Albert Dorman Honors College scored 1420 out of 1600.
- NJIT students are in demand, graduating with nearly three job offers in hand and starting salaries that exceed national averages by almost 20 percent.
- The average starting salary of NJIT graduates nearly quadruples the annual tuition/fee charged to New Jersey resident students.
- NJIT has established a Strategic Hiring Plan for faculty with expertise in three emerging thematic education and research areas of sustainability, information everywhere and the convergence of engineering, technology and the life sciences. These hires reflect critically important interdisciplinary growth areas.
- NJIT's faculty-led research and its business incubation have produced significant results. This past year, NJIT's research surpassed $124 million and, thus far, NJIT has been issued more than 200 patents, a significant portion of which have been licensed to 3rd parties. This level of research expenditure ranks NJIT in the top 10 nationally among universities whose research is principally in engineering.
- In recent years NJIT has placed in the top 20 nationally for industrial contract dollars per federal research dollar and fourth in the country for disclosures per dollar of federally sponsored research, the only New Jersey University in the top 20 for either designation.
- New Jersey's quality of life is being improved by numerous NJIT initiatives, including:
    - A recent $49.6 million federal grant awarded to New Jersey Innovation Institute (NJII), an NJIT Corporation, to help transform primary care delivery through technology

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- A $2.9 million grant from the Office of the National Coordinator for Health Information Technology will help the Department of Health ensure the sharing of quality data through its New Jersey Health Information Network (NJHIN).
- NJII is leading the deployment of the Highlander Health Data Network. One of four regional health information exchanges coordinated by NJDHSS, the system provides live patient data exchange across 7 area hospitals and is connecting over 3,000 physicians, all area clinical labs and pharmacies to achieve new efficiencies in coordinated patient care. Newark alone has reported avoidable hospitalization costs in excess of $250M per year.
- North Jersey Transportation Planning Authority (NJTPA) is the federally authorized Metropolitan Planning Organization for the 13-county northern New Jersey region. NJTPA is hosted and staffed by NJIT. The NJTPA serves a region of approximately 6.5 million people, making it the fifth most populous MPO region in the nation. Each year, NJTPA oversees over $2 billion in transportation improvement projects and provides a forum for interagency cooperation and public input.
- NJIT serves as the New Jersey Homeland Security Technology Systems Center. 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.
- A joint team from Kessler Foundation and New Jersey Institute of Technology is developing new applications for wearable robotic exoskeleton devices with a $5 million federal grant from the National Institute on Disability, Independent Living and Rehabilitation Research. The two institutions are working together on the next generation of robotic exoskeletons to improve mobility and enable safer, more independent functioning for people with spinal cord injuries, Duchenne Muscular Dystrophy and stroke. The team, which includes NJIT professors Richard Foulds and Sergei Adamovich, also will evaluate the efficacy of existing robots for restoring and expanding mobility to upper and lower extremities.
- Professor Michel Boufadel carries out assessment and remediation studies of pollution in natural settings and evaluates natural resources for potential production of energy, especially the production of renewable energy.
- Professor Namas Chandra and Professor Bryan Pfister are conducting vital research on traumatic brain injury by studying the effects of blast waves or pressure pulses on a human head to understand why and how blasts and blunt trauma cause injury.
- Over 3,000 students completed more than 45,000 hours of service at 260 nonprofits this year. Our civic engagement programs have been the catalyst for our 5th President's Honor Roll designation.

- Below are some initiatives that exemplify NJIT's commitment to supporting State and local economic development:
  - NJIT is home to the largest technology and life science incubator in the State. The Enterprise Development Center (EDC) helps start-up and expansion companies

commercialize and grow their innovative ideas by providing office and lab space, access to scientific and technological equipment, financial guidance and extensive technical/coaching advisory services, ultimately creating businesses that generate jobs and bolster the state's economy. The EDC has been launching and growing businesses since 1988 and today averages approximately 95 companies per month in the Center. EDC portfolio companies typically create as many as 800 jobs, employing as many as 335 students in a given year. These companies have attracted more than $80 million in third-party funding and had revenues surpassing $67 million.

- NJIT has launched $300 million in capital projects currently underway.
- New Jersey Innovation Institute (NJII) was incorporated to serve as the focal point for NJIT's technology and economic development initiatives. NJII serves the state's key industrial sectors through product & process innovation, technology development and business partnership formation. It is organized around i-Labs that overlay the State's target industrial clusters: Healthcare Systems, Biotechnology and Pharmaceutical Production, Defense & Homeland Security, Civil Infrastructure and Financial Services. Since its inception, NJII has secured multi-million dollar contracts with the Department of Defense, JP Morgan Chase, Osler Health IPA, and has funded corporate support from Panasonic, AECOM, Berger International, Cisco, and Torcon.
- MarketShift is a $6 million program funded by the U.S. Department of Defense's Office of Economic Adjustment to create a series of cross-cutting functions that serve to strengthen and grow the ecosystem of existing and future defense suppliers into new markets with new strategies and new products.
- The NJIT Highlanders Angel Network, Inc., an independent non-profit corporation, provides investment capital, mentoring, and access to a network of resources for EDC companies and NJIT student/faculty start ups and spin outs.
- NJII's Procurement Technical Assistance Center provides small, minority and women-owned businesses with assistance in procuring government contracts. Since its inception in 1986, New Jersey businesses have received more than $2.62 billion in government prime and subcontract awards as a direct result of the assistance provided by the Center. This translates into 78,594 jobs created or saved.
- NJIT hosts the Polymer Processing Institute, Inc. (PPI) as an affiliate of NJII. PPI works with its industrial partners to develop high performance materials and products that, among other successes, 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.
- NJIT-created New Jersey Manufacturing Extension Program (NJMEP) helps New Jersey's small and medium-sized manufacturers become more productive. NJMEP services have resulted in nearly $200 million in cost savings, new or retained sales and 3,000 jobs created or retained.

- NJII'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.
- NJII's Microelectronics Fabrication Center enables companies to translate design concepts into fully functional device prototypes that can be readily scaled to full production.
- NJIT is the lead institution for the NJ DoLWD Advanced Manufacturing Talent Network as well as the NJ DoLWD Technology & Entrepreneurship Talent Network.
- 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 has provided corporate training and professional development programs for more than 76,500 employees and residents at 665 New Jersey companies since 1990.

Rationale for Development of the NJIT Engineering Makerspace

NJIT is New Jersey's public STEM university and one of only 32 polytechnic institutions throughout the United States. We play an essential role in the development of the STEM workforce that will be needed to grow our regional and state economies. We also serve as a key contributor of research and innovation that solves industry challenges, improves quality of life for residents, and leads to the development of marketable technological solutions. The creation of a 12,000 sq. ft. Makerspace facility with the expressed intent of creating the most well-rounded and prepared engineering graduates possible would be a high-impact investment for the State of New Jersey. Below are some examples of NJIT's proficiency in this area as well as the need for well-trained engineering graduates:

- The *Wall Street Journal* noted that the United States has 1.3 million vacant jobs in STEM fields annually and only 600,000 new graduates within those disciplines.
- 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 as well as industry leaders to improve the way pharmaceuticals, foods and agriculture products are manufactured.
- 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's Educational Opportunity Program educates and graduates more than a hundred minority engineers each year, creating opportunities for New Jersey businesses to diversify their workforce. NJIT's graduation rate of EOP students for the STEM majors exceeds the

national average and ranks NJIT among the top universities graduating minority engineers in the nation.

- Our Center for Pre-College Programs work annually with 3,000 pre-college students who are predominantly underrepresented females and minorities from the greater Newark area and northern New Jersey. The vast majority of these students would not be inclined toward STEM if not for the "fun" STEM experiences they have during the summer on our campus or the help that they receive from NJIT after school during the academic year.
- NJIT civil engineers brought their expertise to help the state respond to Superstorm Sandy. Professor Michel Boufadel and his Center for Natural Resource and Preservation received an NSF Rapid Response Grant in the wake of the storm to study the patterns of damage and make recommendations for more resilient communities. He has since been engaged by FEMA to rethink floodplain delineations and funded by NJDEP to assist in flood mitigation planning. Colleagues in the Civil Engineering Department also received state funding to create the Flood Mitigation Engineering Resource (FMER) Center to provide technical assistance to New Jersey's Department of Environmental Protection to reduce the risk to vulnerable coastal and inland populations and to ensure a sustainable and robust landscape in the state that supports public safety and economic development.
- 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. NJIT has developed and deployed sophisticated transportation project planning software called TELUS that is being using in Metropolitan Transportation Organizations across the country.
- With funding from the China South Rail ZhuZhou Electric Locomotive Research Institute, NJIT launched a new initiative, the Laboratory for Rail System Network and Information Technologies. Working with the corporate lead responsible for deploying a China-wide system of ultra-high speed bullet trains, the Laboratory's researchers will examine technology platforms that serve every need for passenger amenities to train and rail system controls using modern high-speed wireless networks and advanced sensor technology. The outcomes will apply to modernizing U.S. rail systems.
- NJIT biomedical researchers have perfected breakthrough technology for brain shunts used to relieve the excessive cerebrospinal fluid pressure resulting from injury, aging and congenital conditions like spina-bifida.
- In 2015, NJIT broke ground for its Life Sciences and Engineering Building, a $19 million state-of-the-art research facility designed to foster interdisciplinary collaboration in fields ranging from biomedical engineering and the biological sciences to electrical engineering and healthcare technologies

External Validation of NJIT's Efforts

- NJIT is ranked number five among the nation's 32 polytechnic universities based on its increasing research expenditures.

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- Three years ago, the Middle States Commission on Higher Education reaffirmed NJIT's accreditation for the next decade. The Commission reported then that *"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."*
- In 2015, NJIT was designated an Innovative & Economic Prosperity University by the Association of Public Land-Grant Universities. Less than one percent of U.S. universities currently have this designation.
- NJIT again was ranked in the top 1 percent among all public research universities in the United States for ROI or mid-career earnings/salary of graduates with a bachelor's degree, according to PayScale's latest college salary report. NJIT ranked #1 in the State for public colleges and was only behind Princeton University and Stevens Institute of Technology for all New Jersey schools.
- The Brookings Institution, for the first time, released rankings and listed NJIT among the top 10 colleges and universities in the nation for high value-added in terms of occupational earning power. That placed NJIT alumni among the top 1 percent for occupational earnings and also among the top 10 percent for mid-career high earnings.
- *CBS Moneywatch* called NJIT a "hidden gem" in this 2015 "new ranking of college superstars."
- NJIT's Albert Dorman Honors College has been ranked among the top 10 honors colleges and programs in the United States in the new book "Inside Honors: Ratings and Reviews of Sixty Public University Honors Programs."
- *AffordableCollegesOnline.org* (ACO) ranked NJIT third in New Jersey for highest ROI. It also has ranked NJIT in its "Million Dollar ROI" ratings, a list of public universities whose graduates out-earn non-degree holders by at least one million dollars during their careers.
- The new U.S. Dept. of Education College Scorecard ranked NJIT first in public universities in New Jersey and third in the state overall based on post-graduation earnings.
- NJIT's ranking in *US News & World Report* has improved by 15 spots during the last three years; NJIT also is among the top 20 national universities for ethnic diversity, according to *US News & World Report*.
- *The Princeton Review* again named NJIT among its list of 379 best colleges. It also ranked NJIT's School of Management among the Best 296 Business Schools in 2015.
- The 2016 Fiske guide ranks NJIT as one of only 17 "top technical institutes" in the country.
- *Forbes* named NJIT one of "America's Top Colleges" again in 2015 and one of "50 College Gems" with bargain tuitions.
- In a *Triple Helix Innovation* article using Association of University Technology Managers (AUTM) data, NJIT was ranked 4th among all U.S. universities for the number of inventions disclosed per dollar of federally funded research and development. In the same article, NJIT was cited as 12th among all universities in the country for the proportion of industrially sponsored R&D to federally funded R&D expenditures. No other New Jersey university was in the top 20 in either of these metrics.

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Laying the Foundation for NJIT's Future

Building on progress already made, NJIT is accelerating its major changes as per State priorities and the commitments emerging from NJIT's own strategic planning process:

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

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

NJIT is committed to leading in economic development and job creation through hands-on education, applied research, innovation, entrepreneurship and business incubation. NJIT's efforts benefit New Jersey's high-tech businesses and industries and improve the quality of life of the State's citizens. NJIT is at 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 productivity and economic growth. For these reasons, I encourage you to invest in NJIT's budget requests for FY 2018.

Additional details supporting these requests are located in Section 4.

Respectfully submitted,

Joel S. Bloom

President

SECTION 2

EVALUATION DATA/ENROLLMENT/ ORGANIZATION CHART

NEW JERSEY INSTITUTE OF TECHNOLOGY
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EVALUATION DATA

PROGRAM DATA	Actual FY2015	Actual FY2016	Original FY 2017	Revised FY 2017	Budget Request FY 2018
Institutional Support					
Enrollment total (headcount)	13,609	14,488	14,665	14,657	14,870
Enrollment total FTE's (a)	9,112	9,621	9,755	9,770	9,881
Undergraduate total (headcount)	7,550	8,008	8,126	8,293	8,377
Undergraduate total FTE's (a)	6,179	6,539	6,648	6,868	6,913
Full-time (headcount)	5,923	6,178	6,290	6,591	6,617
Full-time FTE's (a)	5,586	5,886	5,993	6,282	6,307
Part-time (headcount)	1,627	1,830	1,836	1,702	1,760
Part-time FTE's (a)	593	653	655	586	606
Graduate total (headcount)	3,096	3,317	3,414	3,153	3,258
Graduate total FTE's (a)	1,960	2,132	2,148	1,924	1,983
Full-time (headcount)	1,802	2,055	2,007	1,873	1,922
Full-time FTE's (a)	1,478	1,652	1,613	1,436	1,474
Part-time (headcount)	1,294	1,262	1,407	1,280	1,336
Part-time FTE's (a)	482	480	535	488	509
Extension & Public Service					
Enrollment (headcount) (a)	2,963	3,163	3,125	3,211	3,235
Enrollment total FTE's (a)	973	1,020	959	978	985
Undergraduate (headcount)	2,357	2,439	2,500	2,476	2,500
Undergraduate FTE's (a)	763	758	743	720	727
Graduate (headcount)	606	724	625	735	735
Graduate FTE's (a)	210	262	216	258	258
Degree programs offered	129	129	128	130	130
Courses Offered	3,356	3,548	3,608	3,601	3,601
Student credit hours produced	253,103	267,958	278,635	271,912	275,864
Degrees and Certificates					
Granted - Total	2,516	2,682	2,450	2,722	2,763
Ratio: Student/faculty (b)	18/1	17/1	17/1	17/1	17/1
Full-time, First-Time, Degree-Seeking Freshmen who					
are Regular Admission Students	953	1,000	1,050	1,097	1,110
Average SAT Score - Math	629	637	640	640	641
Average SAT Score - Verbal	563	576	575	578	579
Average SAT Score - Writing	556	567	565	567	567
Average SAT Score - Total	1,748	1,780	1,780	1,785	1,787
Outcomes Data (c)					
Third Semester Retention Rates	88	88	86	88	89
Seven Year Graduation Rates	59	62	62	63	64
Student Tuition and Fees					
Total Cost of Attendance (d)	33,628	34,708	34,708	35,130	35,130
Full-Time Undergraduate Tuition State Residents	13,120	13,434	13,434	13,602	13,602
Full-Time Undergraduate Tuition Non - State Residents	26,760	27,652	27,652	28,206	28,206
Full-Time Undergraduate Fees	2,528	2,674	2,674	2,828	2,828
Operating Data					
Institutional Support					
Institutional Expenditures					
Instruction	101,286,000	114,446,000		120,091,000	
Sponsored programs and research	56,243,000	71,428,000		74,951,000	
Extension and public service	1,989,000	2,077,000		2,179,000	
Academic support	27,091,000	30,438,000		31,939,000	
Student services	21,444,000	24,866,000		26,093,000	
Institutional support	45,683,000	52,346,000		54,928,000	
Physical plant and support services	20,449,000	20,367,000		21,372,000	
Personnel Data					
Position Data					
State-funded positions	1,187	1,187		1,187	

(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.
(c) The date of record is the 10th day of the fall semester.
(d) As reported to the Higher Education Student Assistance Authority. Includes tuition, fees, room and board, transportation, and supplies.

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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. The increased enrollment is attributable to new program offerings and our solid reputation for academics. Total enrollment for Fall 2016, including undergraduate and graduate students reached 11,446, which is an all-time high for NJIT. Our efforts with student success have resulted in higher graduation numbers over the past six years (from 54% to 61%).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.

Each year NJIT Career Development Services produces an employment and graduate school report for the May graduating class. Sixty two percent (62%) of our BS and 52% of MS graduates are employed full time within 3 months of graduation. For our BS graduates this number is up 10% from a year ago and remains significantly higher than the national averages for all BS graduates. NJIT graduates continue to fuel local economies by beginning their careers locally with such firms as Verizon, Johnson & Johnson, UPS, Prudential and PSEG. Nationally more graduates are making an impact by accepting positions with Cisco, Microsoft, and ExxonMobil.

This year's graduates continued to fill the pipeline that has earned NJIT top spots among US colleges and universities for students' return on their tuition investment. Both Buzzfeed.com and PayScale.com place NJIT among the top 1% in the nation for return on investment based on the metrics of entry and mid-career salaries of NJIT graduates as compared to annual cost of tuition.

Our graduates' average starting salaries far exceed the national averages. Chemical engineering graduates average starting salary was an amazing $76,000 per year. Computer engineering grads averaged $69,500 and most all our College of Computing Science graduates' received salaries in the mid to upper $60,000 range.

Perhaps the year's most impressive outcome is the tremendous number of employment offers received by our Bachelor of Architecture graduates. Eighty-five percent (85%) of the survey respondents reported having attained an offer at the time of graduation. Among the hiring firms this year are Parette Somjen, Ware Malcomb, Perkins East, SSP, and Hatch Mott MacDonald.

In 2016, Career Development Services arranged for over 500 organizations to conduct on-campus recruitment through our career fairs and on-campus interview programs. The fall and spring career fairs filled to capacity with 180 employers each and over 4,700 students. Our on-campus interview programs increased this year as well. Over 150 employers held

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over 2,200 interviews for more than 1,000 students. Eight-seven (87%) of the employers rated NJIT students' interview preparation as excellent or good. More than 26,000 technology full time, co-op, and internship job listings were posted to the CDS electronic database, an increase of 3,500 from last year. Moreover, nearly 62,000 student and alumni resumes were referred to employers.

Cooperative education and internship learning experiences provided credit-bearing hands-on real world opportunities and exposure to industry for 603 undergraduate and graduate students. Moreover, our student co-ops' and interns' earnings exceeded $4.2 million this year. The companies involved in these NJIT programs employ approximately 60% of these students after they graduate.

While increasing the number of graduates entering our workforce is paramount to meet business and industry demands, we must not only enroll but also graduate as many students as possible. Increasing the number of students who graduate is therefore as critical to workforce demand as is recruitment. In order to achieve our goal of graduating each and every student we enroll, we must provide the infrastructure and support necessary to do so. If we continue to grow our enrollment at the present rate, we will soon reach capacity to deliver quality instruction and essential services, both in facilities and personnel. Indeed, we have already reached capacity in a number of science and engineering fields. Our laboratories, technology and learning facilities must provide 21st century experiences for our students for them to be competitive, nay superior, to those of other states.

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

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

- Expanding the "Community Connections" learning community initiative, now involving twenty-eight (28) discipline-focused student cohorts taking linked courses which are organized to foster collaboration. Learning communities at NJIT engage students within a network of faculty, advisors, staff, and peer mentors focused on facilitating their transition to college and enhancing their learning experience. Peer mentors play an important role, facilitating learning outside the classroom and connecting students with campus resources. The program currently enrolls over 550 First-time- Full-time Freshmen (+100 over last year). The learning community structure creates an environment where students can celebrate a common purpose with integrity and civility. This program takes best practices from the EOP and Honors College cohort programs.
- Revising institutional procedures, practices and policies to make our procedures more student friendly, enhancing student satisfaction.

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- Focusing more support to students who need academic support through tutoring centers in departments, supplementing that offered centrally in The Learning Center as well as supplemental instruction in certain math classrooms.
- Engaging students by increasing the number of clubs and organizations.
- Continuing to expand the number of activities and events on campus, including adding Signature Events to this year's mix of activities to build community.
- Enhancing the Transfer and International Student Orientations.

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

- Enhanced and expanded on-campus Open House events for prospective students and their parents.
- Attended recruiting events at over 500 high schools throughout New Jersey and the region.
- Refined our competitive scholarship program to attract highly qualified students and added funds to expand scholarship programs to transfer students as well as added assistance to those students approaching graduation but are in need of financial help to complete their studies.
- Increased enrollment opportunities in the Albert Dorman Honors College.
- Broadened intercollegiate athletic recruiting for our Division One teams, including adding Lacrosse as a varsity sport.
- Expanded on-line degree programs and offerings.
- Our anticipated total Pre-College enrollment for FY18 is 3,590 students including Academy, Options, Early College Preparatory Programs, ExxonMobil Bernard Harris Summer Science Camp, Talent Search, Upward Bound, Upward Bound for English Language Learners, GEAR UP/College Bound, Panasonic Creative Design Challenge, NJIT Regional NJ Science Olympiad, TSA/TEAMS Competition, and Newark City of Learning Collaborative Scholars.
- Continuing collaboration with NJ community colleges to increase transfer enrollment.
- Expanded the BS/MS programs with four-year institutions.
- Increased the number of applicants and enrollment of women in our undergraduate and graduate programs.
- Continued partnerships with the National Action Council for Minorities in Engineering, corporate and other science association programs to boost minority enrollments, NSF CUNY MAGNET Alliance, New Jersey Minority action Careers Program, Project 1000 and the GEM Program.

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

NJIT ORGANIZATION & GOVERNANCE

Fall 2016

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NJIT Board of Overseers
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Dr. Golden

New Jersey Innovation Institute

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Ms. Mary Jane Pohero

University Senate

Student Senate

Graduate Student Association

Provost and Senior Executive Vice President
Dr. Fadi Deek

Faculty Senate

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Fall 2016

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Provost and Senior Executive Vice President

Dr. Fadi Deek

Dean College of Science and Liberal Arts

Dr. Kevin Belfield

Dean of Martin Tuchman School of Management

Dr. Reggie Caudill

Dean College of Architecture and Design

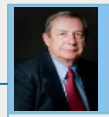
Prof. Urs Gauchat

Dean Newark College of Engineering

Dr. Moshe Kam

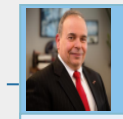
Dean Albert Dorman Honor's College (Interim)

Dr. John Bechtold



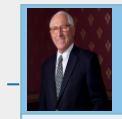
Dean of Ying Wu College of Computing

Dr. Marek Rusinkiewicz



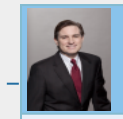
Senior Vice President for Finance and CFO

Mr. Edward Bishof



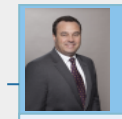
Senior Vice President for University Advancement

Dr. Charles Dees



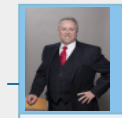
Senior Vice President for Technology and Business Development

Dr. Donald Sebastian



Vice President for Real Estate & Capital Development

Mr. Andrew Christ, P.E.



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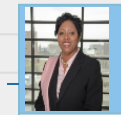
Dr. Charles Fey

Vice President Legal Affairs / General Counsel

Ms. Holly Stern, Esq.

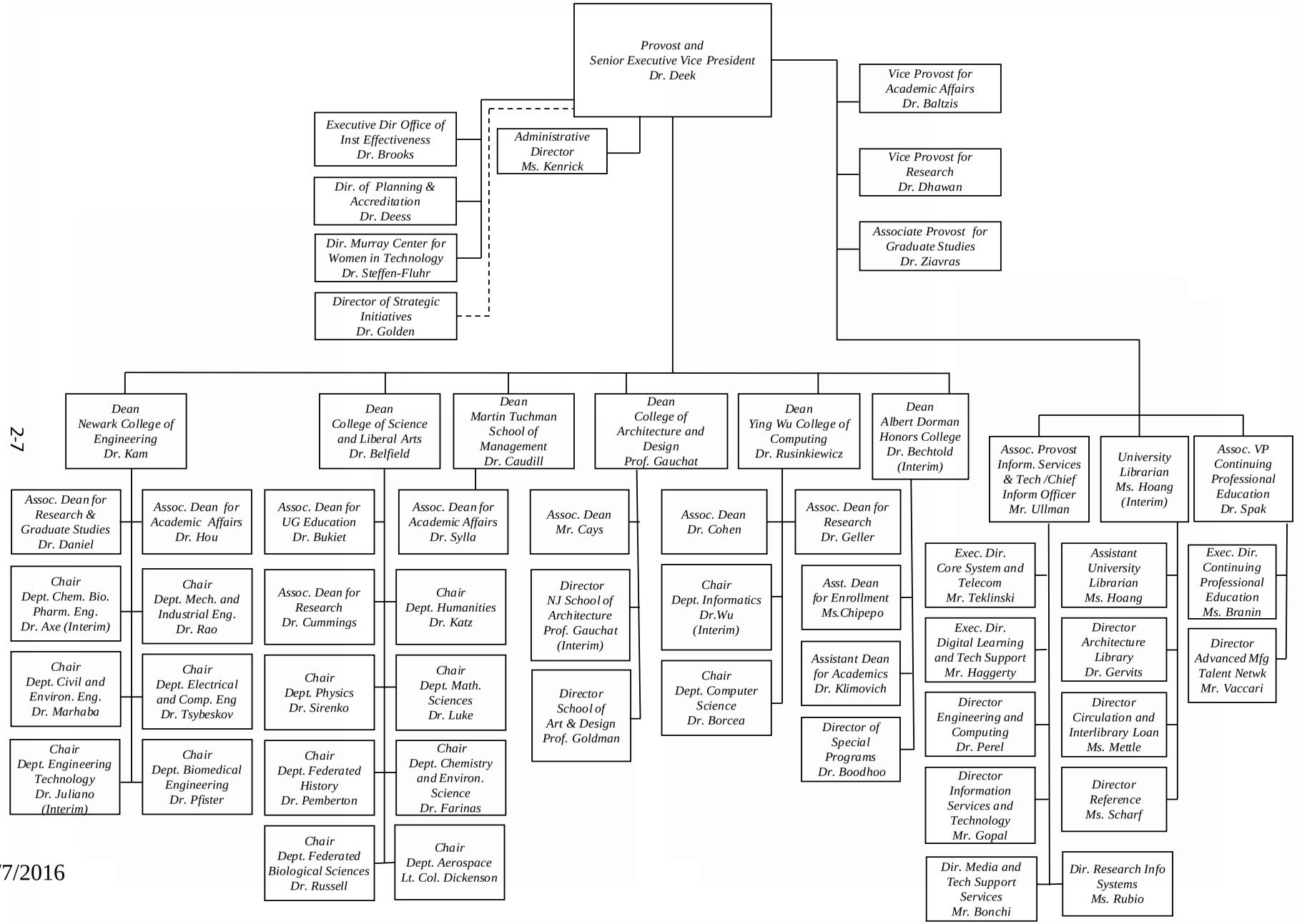


Vice President for Human Resources

Ms. Kay Turner, Esq.

PROVOST & SENIOR EXECUTIVE VP

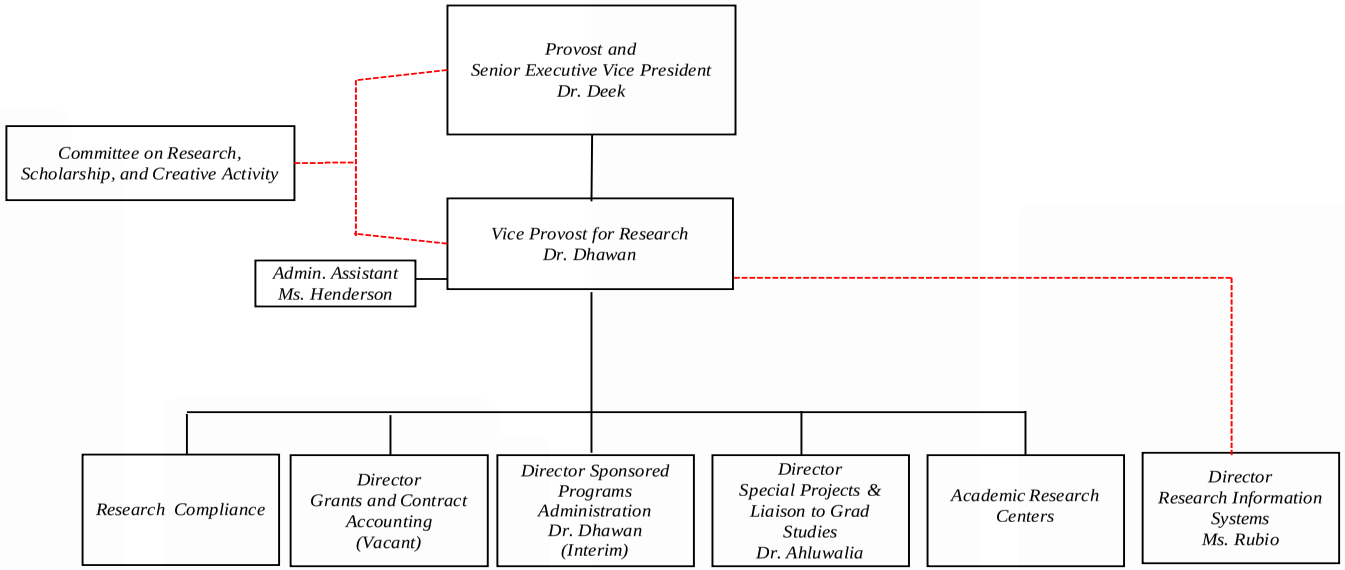
Fall 2016



10/7/2016

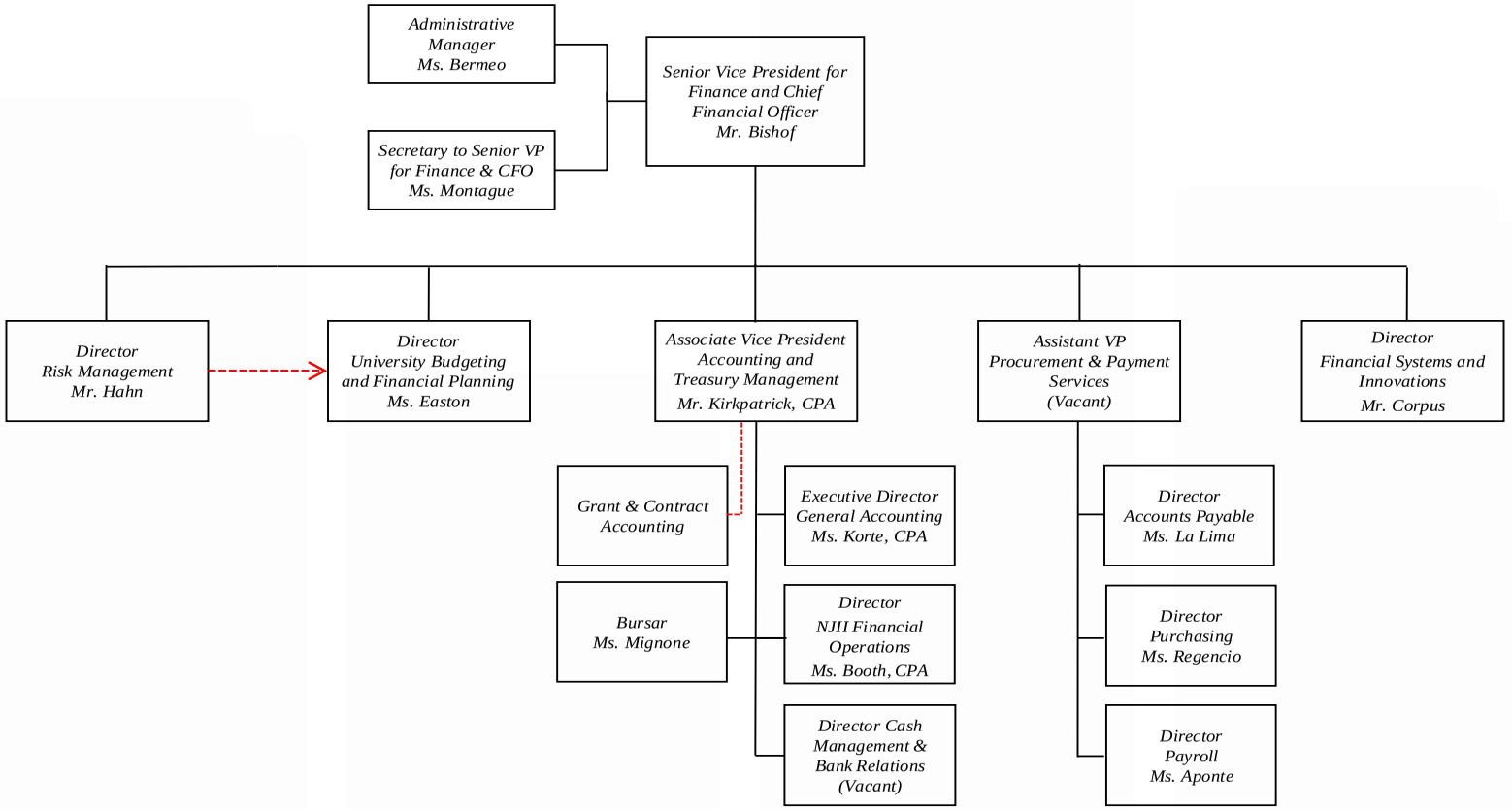
RESEARCH & DEVELOPMENT ADMINISTRATION

Fall 2016



FISCAL ADMINISTRATION

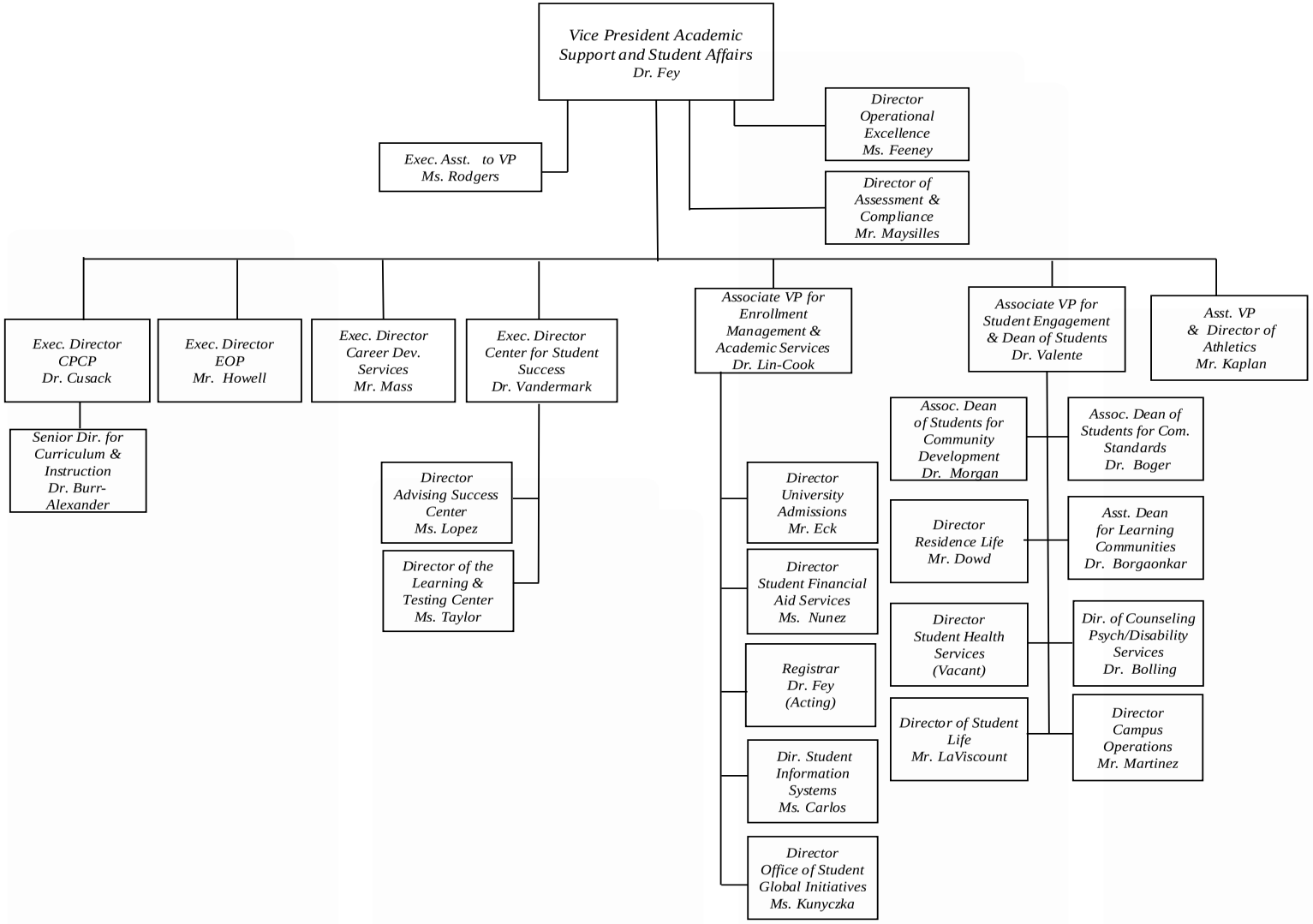
Fall 2016



11/4/2016

ACADEMIC SUPPORT & STUDENT AFFAIRS

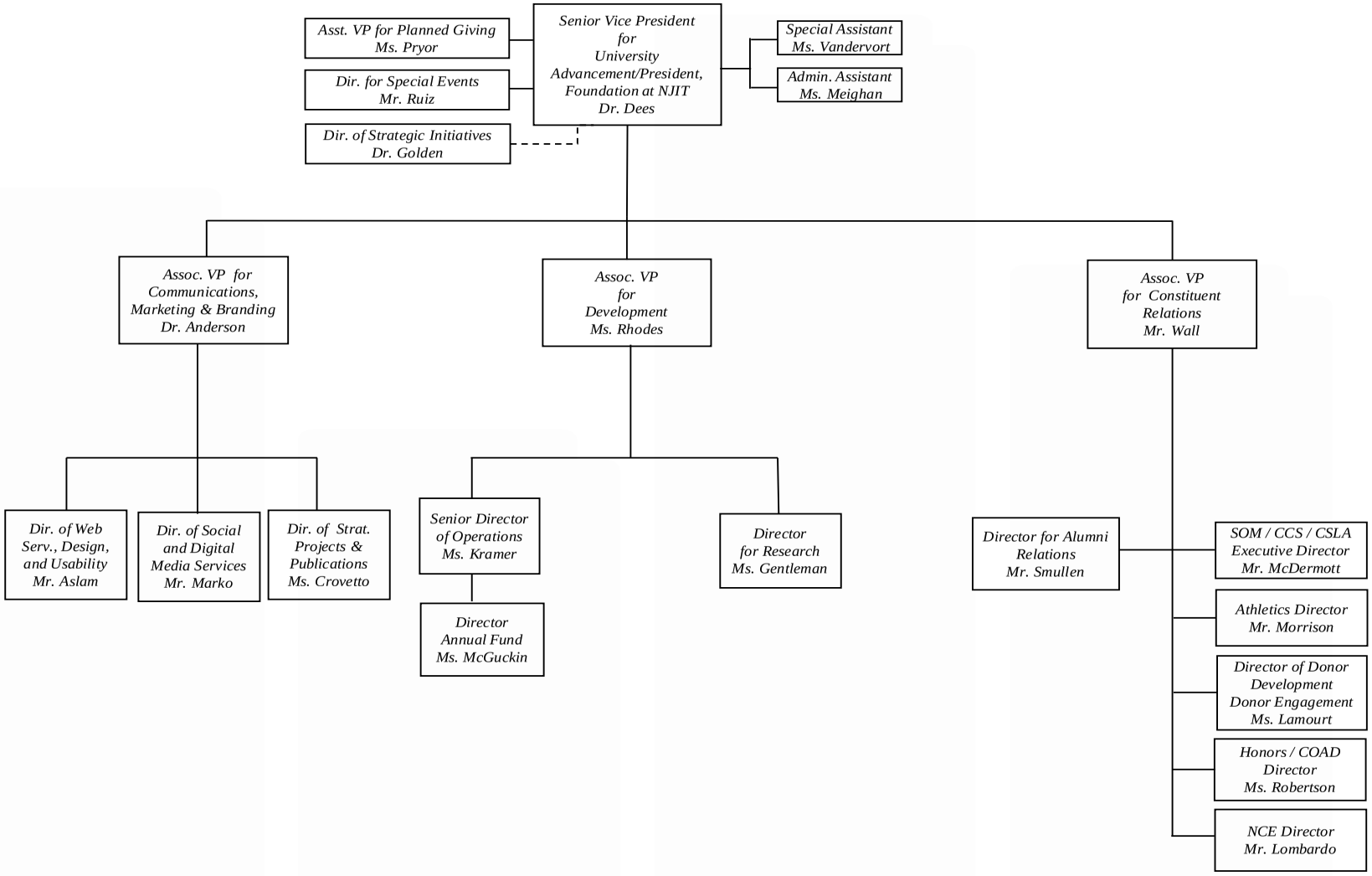
Fall 2016



11/4/2016

UNIVERSITY ADVANCEMENT

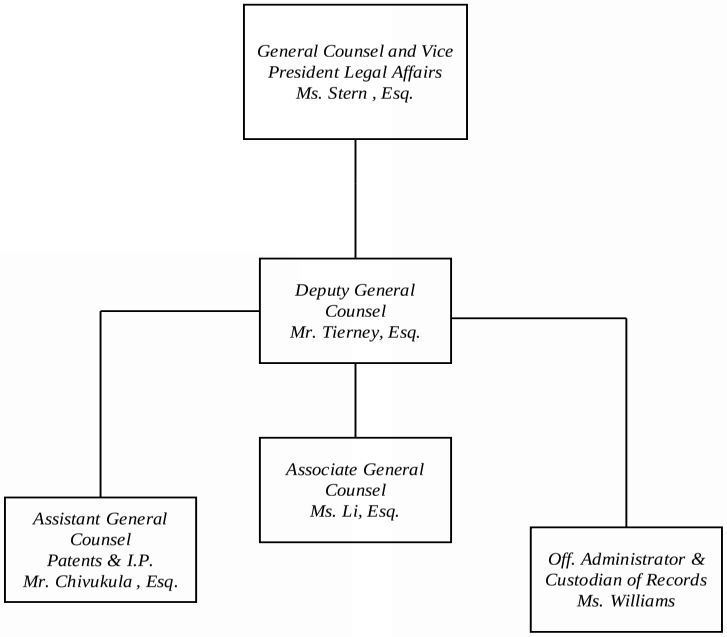
Fall 2016

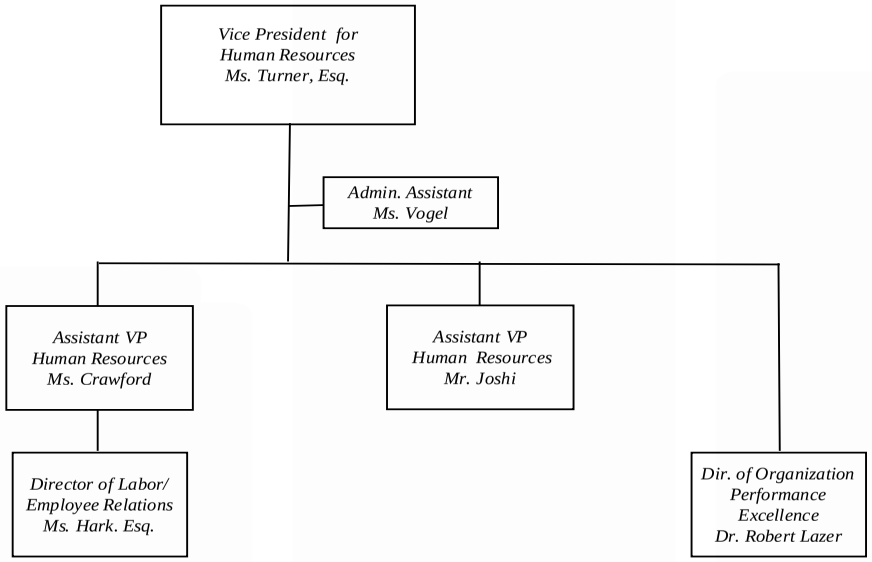


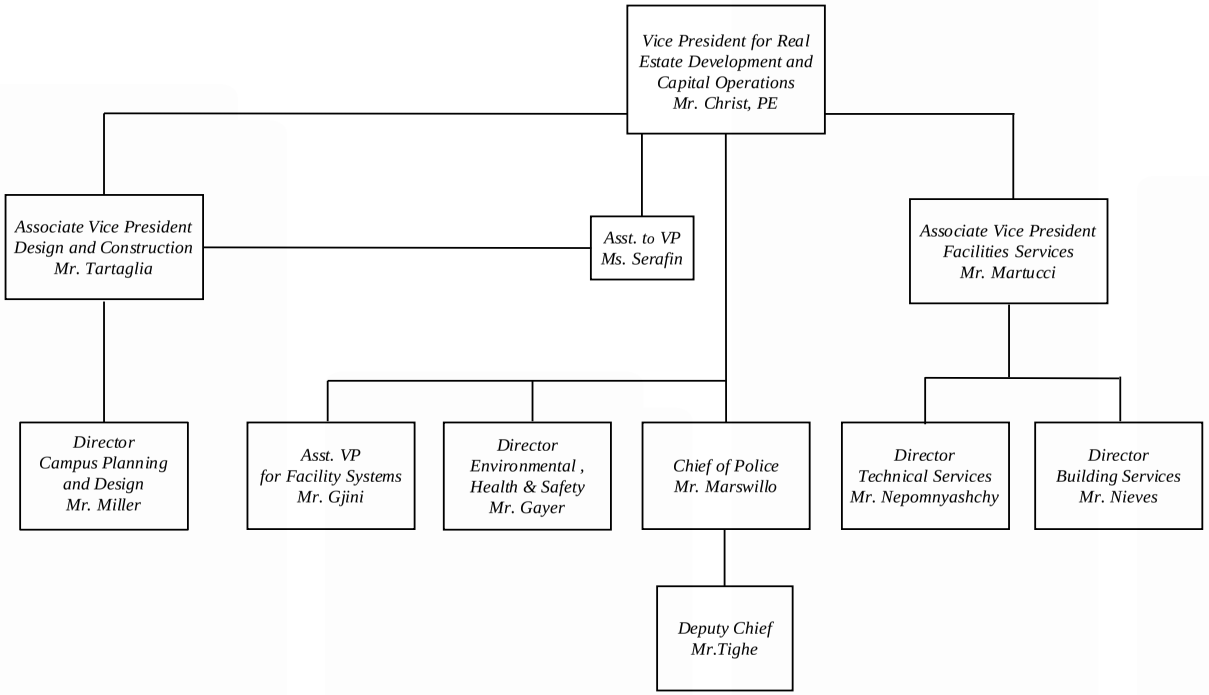
10/7/2016

OFFICE OF GENERAL COUNSEL

Fall 2016




Vice President for
Human Resources
Ms. Turner, Esq.
Admin. Assistant
Ms. Vogel
Assistant VP
Human Resources
Ms. Crawford
Assistant VP
Human Resources
Mr. Joshi
Director of Labor/
Employee Relations
Ms. Hark. Esq.
Dir. of Organization
Performance
Excellence
Dr. Robert Lazer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Associate Vice President Design and Construction
Mr. Tartaglia
Asst. to VP
Ms. Serafin
Associate Vice President Facilities Services
Mr. Martucci
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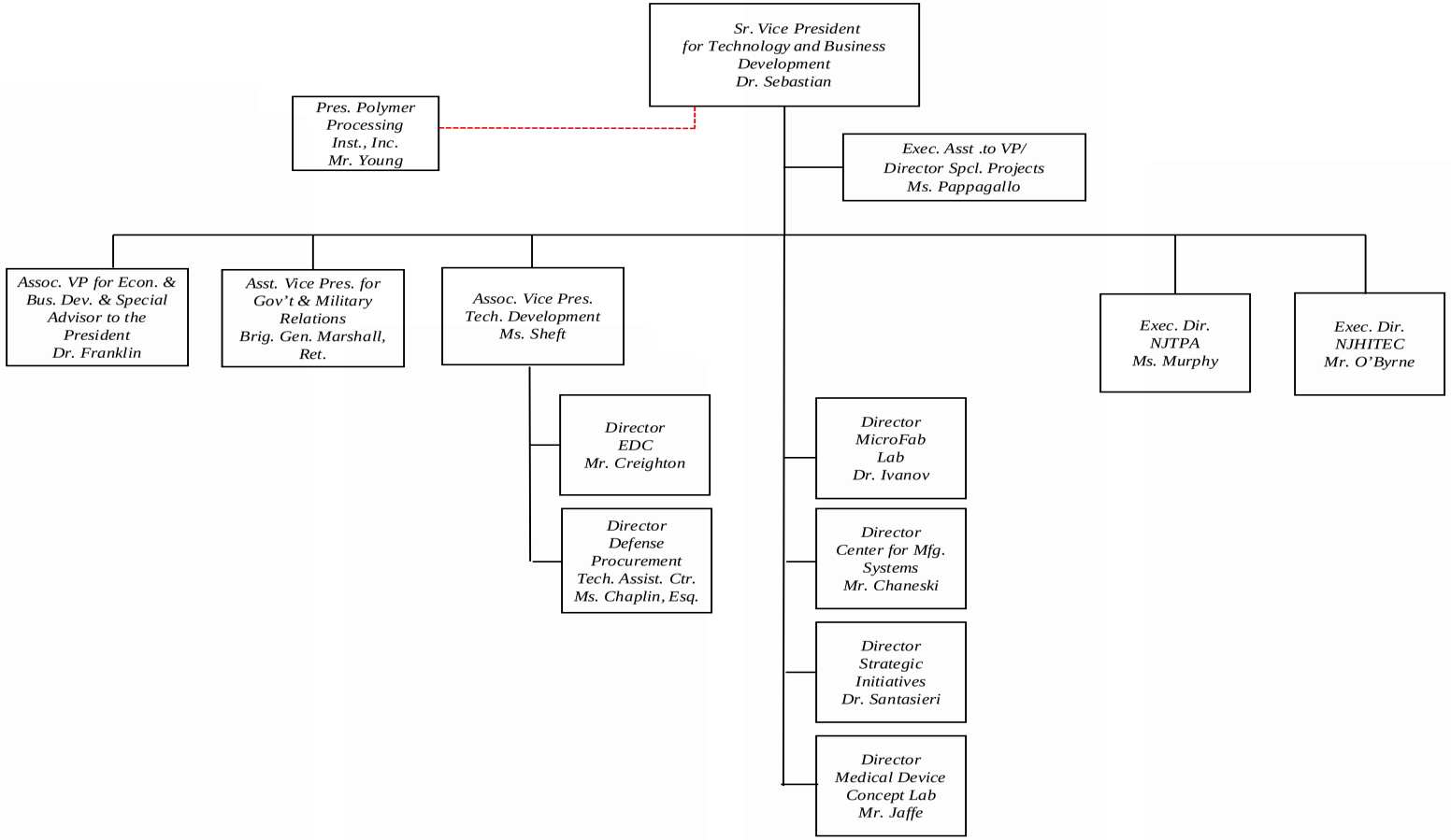
Mr. Miller
Asst. VP for Facility Systems
Mr. Gjini
Director Environmental , Health & Safety
Mr. Gayer
Chief of Police
Mr. Marswillo
Director Technical Services
Mr. Nepomnyashchy
Director Building Services
Mr. Nieves
Deputy Chief
Mr.Tighe

OFFICE OF TECHNOLOGY & ECONOMIC DEVELOPMENT

Fall 2016



10/7/2016

SECTION 3

BUDGET INFORMATION

State of New Jersey
Department of the Treasury
Office of Management and Budget
FY2018 Budget Request (BB-102)

Date:

Department: New Jersey Institute of Technology

Citation:

Approved by:

Director

To the State Treasurer:
Appropriations as follows are requested for the above agency for fiscal year 2018. Attached are data covering the present and preceding 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 Instruction Manual.

Department Head/Officer

Joel Bloom
President

Positions Budgeted by fund (1,2)	Budgeted FY2017	Agency Request FY 2018
State Funded (per Appropriations Act Language)	1,187	1,344
Non State Funded (per Appropriations Act Language)		
Total Positions	**1,187**	**1,344**

Expended 2016					Recapitulation	FY2017	Request
Original and Supplemental	Reappro. and Receipts	Transfers and Emerg.	Total Available	Expended	By Department By Fund Category	Appropriated	Agency Request
395,598	12,253	$ -	407,851	407,851	Institutional Support	451,714	451,714
					Total Grants-In-Aid		
	(4,033)	0	(4,033)	(4,033)	Less: Receipts from Tuition Increases	(2,757)	
(163,708)	(20,463)	0	(184,171)	(184,171)	General Services Income	(194,288)	(197,045)
(17,729)	(2,546)	0	(20,275)	(20,275)	Auxiliary Funds Income	(20,538)	(20,538)
(139,212)	14,789	0	(124,423)	(124,423)	Special Funds Income	(156,659)	(156,659)
(39,509)	-		(39,509)	(39,509) [1]	Employee Fringe Benefits	(42,032)	(42,032)
(360,158)	**(12,253)**	**0**	**(372,411)**	**(372,411)**	**Total Income Deductions**	**(416,274)**	**(416,274)**
35,440	-	**0**	**35,440**	**35,440**	**Total State Appropriation**	**35,440**	**35,440**
395,598	12,253	0	407,851	407,851	Special Purpose		
					General Institutional Operations	451,714	451,714
					State Authorized FTEs		-
					Inclusive Excellence Awards- Need Based Aid		716
					Operating Support for the NJIT Engineering Makerspace		2,098
					IT Infrastructure and Cybersecurity Support		1,840
					Faculty Recruitment Initiative		2,446
(360,158)	**(12,253)**	**0**	**(372,411)**	**(372,411)**	**LESS: Income Deductions**	**(416,274)**	**(416,274)**
35,440	-	**0**	**35,440**	**35,440**	**Grand Total State Appropriation**	**35,440**	**42,540**

[1] Per OMB, fringe amount is fixed. Audited financial statements reflect fringe benefits totaling $52,092 million for FY16.

New Jersey Institute of Technology
FY 2018 Budget Request

Spending Agency: New Jersey Institute of Technology

Appropriations Data

($000)

—Year Ending June 30, 2016— Original	Reapprop. & Receipts	Transfers & Emerg.	Total Available	Expended	GRANTS - IN - AID Distribution by Fund & Program	FY 2017 Adjust. Approp.	FY 2017 Request	FY 2018 Recom-mended
395,598	12,253	0	407,851	407,851	Institutional Support	451,714	451,714	
					Total Grants - in - Aid			
					LESS:			
	(4,033)	0	(4,033)	(4,033)	Receipts from Tuition Increase	(2,757)		
(163,708)	(20,463)	0	(184,171)	(184,171)	General Services Income	(194,288)	(197,045)	
(17,729)	(2,546)	0	(20,275)	(20,275)	Auxiliary Funds Income	(20,538)	(20,538)	
(139,212)	14,789	0	(124,423)	(124,423)	Special Funds Income	(156,659)	(156,659)	
(39,509)	0	0	(39,509)	(39,509)	Employee Fringe Benefits	(42,032)	(42,032)	
(360,158)	(12,253)	0	(372,411)	(372,411)	***Total Income Deductions***	(416,274)	(416,274)	
35,440	0	0	35,440	35,440	*Total State Appropriations*	35,440	35,440	
					Distribution by Fund and Object			
					Special Purpose			
395,598	12,253	0	407,851	407,851	General Institutional Operations	451,714	451,714	
					State Authorized FTEs		0	
					IT Infrastructure and Cybersecurity Support		716	
					Inclusive Excellence Awards- Need Based Aid		2,098	
					Operating Support for the NJIT Engineering Makerspace		1,840	
					Faculty Recruitment Initiative		2,446	
					LESS:			
(360,158)	(12,253)	0	(372,411)	(372,411)	**Income Deductions**	(416,274)	(416,274)	
					Grand Total State Appropriation	35,440	42,540	
35,440	0	0	35,440	35,440	**TOTAL ALL FUNDS**	35,440	42,540	

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

New Jersey Institute of Technology
FY 2018 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 2016 Ending June 30, 2016 ACTUAL	FY 2017 Ending June 30, 2017 ESTIMATED	FY 2018 Ending June 30, 2018 ESTIMATED
EDUCATION & GENERAL REVENUE			
General Services:			
Tuition and Fees			
Gross Tuition	154,599	162,880	165,637
Receipts from Tuition Increase (BB-102 & BB-105)	4,033	2,757	
Required fees	27,689	28,808	28,808
Subtotal Tuition and Fees (Gross)	**186,321**	**194,445**	**194,445**
Less student awards	(51,132)	(52,410)	(52,410)
Subtotal Tuition and Fees (Net)	**135,189**	**142,035**	**142,035**
Non - Operating Revenue			
Investments	0	600	600
Miscellaneous nonoperating revenues	1,883	2,000	2,000
Subtotal Non - Operating Revenue	**1,883**	**2,600**	**2,600**
Subtotal General Services Income; excluding rate increase (BB-102 & BB-105)	**184,171**	**194,288**	**197,045**
Subtotal General Services Income; including rate increase	**188,204**	**197,045**	**197,045**
Other Non - Operating Revenue			
Base State Appropriation	35,440	35,440	35,440
Employee Fringe Benefits (Per OMB)	39,509 (1)	42,032 (2)	42,032
FY 2018 Critical Needs Request			7,100
Subtotal, Other Non - Operating Revenue	74,949	77,472	84,572
TOTAL EDUCATION & GENERAL REVENUE	**263,153**	**274,517**	**281,617**
NET EDUCATION & GENERAL REVENUE	**212,021**	**222,107**	**229,207**
Auxiliaries			
Resident Life	15,033	15,105	15,105
Bookstore	263	189	189
Other	4,979	5,244	5,244
Total Auxiliaries (BB-102 & BB-105)	**20,275**	**20,538**	**20,538**
Less student awards	(4,554)	(4,645)	(4,645)
Subtotal Auxiliaries (Net)	**15,721**	**15,893**	**15,893**
Special funds			
Grants & Contracts	108,338	124,000	124,000
Other operating revenues	3,974	8,069	8,069
Nonoperating revenues	2,201	4,469	4,469
Other revenues	9,910 (1)	20,121	20,121
Subtotal Special funds(BB-102 & BB-105)	**124,423**	**156,659**	**156,659**
TOTAL REVENUE	**352,165**	**394,659**	**401,759**

(1) Actual FY2016 expense for Employee Fringe Benefits per the audited financials is $52,092.
(2) FY2017 Operating Budget for Employee Fringe Benefits is $53,014.

NEW JERSEY INSTITUTE OF TECHNOLOGY

Revenue Reconciliation To Annual Financial Statement

(Dollars in thousands)

For the year ended June 30, 2016

Financial Statement Description							
	E & G		Special		Additions/		FY16 Financial
Operating revenues:	Revenue	Auxiliaries	Funds	Subtotal	Deductions		Statement
Student tuition and fees	186,321	0	0	186,321	(51,132)	(1)	135,189
Federal grants and contracts	0	0	80,635	80,635	0		80,635
State grants and contracts	0	0	23,590	23,590	0		23,590
Other grants and contracts	0	0	4,113	4,113	0		4,113
Auxiliary enterprises	0	20,275	0	20,275	(4,554)	(2)	15,721
Other operating revenues	0	0	3,974	3,974	0		3,974
Total operating revenues	**186,321**	**20,275**	**112,312**	**318,908**	**(55,686)**		**263,222**
Nonoperating revenues:							
State appropriations	87,532	0	0	87,532	0		87,532
Gifts and bequests	0	0	2,468	2,468	0		2,468
Investment income	0	0	17	17	0		17
Other nonoperating revenues, net	1,883		2,201	4,084	0		4,084
Net nonoperating revenues	**89,415**	**0**	**4,686**	**94,101**	**0**		**94,101**
Other revenues:							
Capital grants and gifts	0	0	3,240	(4) 3,240	0		3,240
Additions to permanent endowments	0	0	4,185	4,185	0		4,185
Total other revenues	**0**	**0**	**7,425**	**7,425**	**0**		**7,425**
Total revenues	**275,736**	**20,275**	**124,423**	**420,434**	**(55,686)**		**364,748**

(1) Deductions for student awards: -$51,132 (tuition & fees).

(2) Deductions for scholarship awards: -$4,554 (Auxiliary)

(3) Employee Fringe Benefits totalled $52,092 versus 39,509 as reported by OMB

New Jersey Institute of Technology
FY 2018 Budget Request

FY 2017 Projected Tuition Revenue
Based Upon FY 2017 FTE Estimates

A. In-State						
6,495	FTE Undergraduate (Est.)	X	$ 13,602	(FY 2017 Tuition Rate)	=	$88,344,990
701	FTE Graduate (Est.)	X	$ 19,008	(FY 2017 Tuition Rate)	=	$13,324,608
B. Out-of-State						
373	FTE Undergraduate (Est.)	X	$ 28,206	(FY 2017 Tuition Rate)	=	$10,520,838
1,070	FTE Graduate (Est.)	X	$ 28,092	(FY 2017 Tuition Rate)	=	$30,058,440
				SUBTOTAL		$142,248,876

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

	Y	N
Is full - time undergraduate tuition a flat rate?	X	
If yes, the flat rate applies to students taking at least 12 credits, but not more than 19 credits.		
Is full - time graduate tuition a flat rate?	X	
If yes, the flat rate applies to students taking at least 12 credits, but not more than 19 credits.		

C.	FTE Executive Management Programs (Est)	17	690,000
D.	FTE E-Tuition Rate (Est)	4	260,000
E.	FTE Embanet Compass Program	132	4,617,000
F.	Continuing Professional Education - Non-Credit		635,000
G.	Summer / Winter Session Tuition	959	9,125,000
		SUBTOTAL	157,575,876
		ADJUSTMENTS: (1)	8,061,124
	NET TUITION REVENUE ANTICIPATED FOR FY 2017		165,637,000

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

New Jersey Institute of Technology
FY 2018 Budget Request

FY 2017 Tuition & Fee Schedule

	Charge Per Credit Hour	Annual Rate For Full-Time Student	Charge Per Occurrence (If Applicable)
Tuition			
Resident			
Undergraduate	517	13,602	N/A
Graduate	1034	19,008	N/A
Non-Resident			
Undergraduate	1206	28,206	N/A
Graduate	1484	28,092	N/A
Fees Required Of All Students			
University Fee [1]	160	2,718	N/A
Student Activity - UG	6	110	N/A
Student Activity - G	5	88	N/A

Other Fees	Undergraduate	Graduate
Application	75	75
Commencement [2]	120	120
Matriculation [2]	120	120
Payment Plan Set-up	100	100
Payment Plan Late Fee	100	100
Re-instatement	N/A	N/A
Late Registration	100	100
Late Payment Penalty	500	500
First Year Student Fee	230	N/A
F/T Commuter Parking	285	285
P/T Commuter Parking	160	160
Parking- On Campus Resident	430	430
Thesis	N/A	75
Dissertation Binding	N/A	100
Maintaining Registration	25	50
Transfer Student Orientation	30	N/A
International Student	125	125
Optional Practical Training Application Fee	200	200
Health Insurance - if needed:	1338	1338
Room And Board - Academic Year		
Typical Student Housing	8,567	8,567
Typical Meal Plan Charge	3,600	3,600
	12,167	12,167

[1] The 'University Fee' is charged to students enrolled in college-credit courses at NJIT. The purpose of this fee is to continue to help support a portion of the costs associated with an array of varied, but integral services and projects that directly affect our students. Some of these important areas include: Student Health Services Office, Campus Center, computer Labs and technology infrastructure, campus facilities, Admissions, Student services, and Career Services offices, and an array of academic, student, and athletics programs.

[2] A one-time matriculation fee will be assessed to all new matriculating students (full or part-time) beginning with their first registration (fall 2014 semester). Students assessed this fee would not be assessed the commencement fee once they apply for graduation. The commencement fee will continue being assessed to all students who had been previously registered prior to fall 2014 semester.

FY 2017 Projected Tuition and Fee Schedule (FEES)

Institution: New Jersey Institute of Technology

Use appropriate column for each fee

	Charge per credit hour		Annual rate for full-time student	Undergraduate Charge per occurrence (if applicable)	Graduate Charge per occurrence (if applicable)	Estimated Gen Services Revenue for FY 2017	Estimated Auxiliary Revenue for FY 2017	NJIT Estimated Total Revenue for FY 2017	Estimated Restricted/ Agency Revenue for FY 2017
TUITION:									
Resident									
Undergraduate	517		13,602	N/A	N/A	N/A	N/A	N/A	N/A
Graduate	1,034		19,008	N/A	N/A	N/A	N/A	N/A	N/A
Non-Resident									
Undergraduate	1,206		28,206	N/A	N/A	N/A	N/A	N/A	N/A
Graduate	1,484		28,092	N/A	N/A	N/A	N/A	N/A	N/A
REQUIRED FEES: (Required for all students)									
University Fee - Academic Year Fall & Spring	160	(a)	2,718	N/A	N/A	25,869,000	-	25,869,000	-
Summer Fee						390,000		390,000	
Winter Fee						71,000		71,000	
Student Activity - UG	6		110	N/A	N/A	-	-	-	786,000
Student Activity - GR	5		88	N/A	N/A	-	-	-	190,000
OTHER FEES:									
						260,000		260,000	
						-		-	
						11,000		11,000	
						15,000		15,000	
Application/Re-admission/Non-Matriculation	N/A		N/A	75	75	286,000	-	286,000	-
Commencement	N/A		N/A	120	120	280,000	-	280,000	-
Matriculation Fee	N/A		N/A	120	120	185,000			
Payment Plan Set-Up	N/A		N/A	100	100	340,000		340,000	
Late Registration	N/A		N/A	100	100	50,000	-	50,000	-
Late Payment Penalty	N/A		N/A	500	500	403,000			
First Year Student Fee	N/A		N/A	230	N/A	282,000	-	282,000	-
Thesis	N/A		N/A	N/A	75	-	-	-	-
Dissertation	N/A		N/A	N/A	100	-	-	-	-
Transfer Student Orientation	N/A		N/A	30	N/A	33,000	-	33,000	-
Health Insurance (Resident, Non-Resident, International)	N/A		N/A	1,338	1,338	-	-	-	-
International Student	N/A		N/A	125	125	436,000	-	436,000	-
ID Card Replacement	N/A		N/A	25	25	28,000	-	28,000	-
Optional Practical Training				200	200	155,000			
Commuter Parking - FT	-		-	285	285	-	1,293,000	1,293,000	-
Commuter Parking - PT	-		-	160	160	-	336,000	336,000	-
On-Campus Resident Parking	-		-	430	430	-	-	-	-
	-		-	-	-	-	-	-	-
TOTAL FEE REVENUE:						**28,808,000**	**1,629,000**	**29,694,000**	**976,000**
ROOM AND BOARD:									
Typical Student Housing	N/A		8,567	N/A	N/A		15,591,000	N/A	
Typical Meal Plan Charge	N/A		3,600	N/A	N/A		1,200,000	N/A	

NOTES:

(a) Per semester charge for part time students.

NEW JERSEY INSTITUTE OF TECHNOLOGY
SALARY PROGRAM FY2017 AND FY2018

ESTIMATED SALARY PROGRAM BY BARGAINING UNIT:

Union Totals	FY17 FTE	FY17 Base Salary	FY17 Estimated Salary Program	FY17 Anticipated Cash Need	FY18 Base Salary	FY18 Estimated Salary Program	FY18 Anticipated Cash Need
afscme	101.00	4,800,026	96,001	4,896,026	4,896,026	97,921	4,993,947
aft-ucan	14.00	699,202	13,984	713,186	713,186	14,264	727,450
fop	20.00	1,141,974	45,679	1,187,653	1,187,653	0	1,187,653
fop - soa	8.00	700,177	14,004	714,181	714,181	14,284	728,464
njsolea	3.00	326,124	6,522	332,646	332,646	6,653	339,299
non-aligned	158.00	22,364,249	670,927	23,035,176	23,035,176	403,116	23,438,292
opeiu	142.50	7,013,308	140,266	7,153,574	7,153,574	143,071	7,296,645
psa Faculty	279.00	41,773,405	1,253,202	43,026,607	43,026,607	752,966	43,779,573
psa Lecturer	111.00	7,513,902	225,417	7,739,319	7,739,319	135,438	7,874,758
psa non tenure Faculty	5.00	375,550	11,266	386,816	386,816	6,769	393,586
psa Staff	309.00	24,530,165	735,905	25,266,070	25,266,070	442,156	25,708,226
Grand Total	**1150.50**	**111,238,081**	**3,213,174**	**114,451,255**	**114,451,255**	**2,016,637**	**116,467,892**

SALARY PROGRAM PARAMETERS:

	FY16	FY17	FY18
	FY16 Deferred Salary Program	Est. Salary Program	Est. Salary Program
afscme	2.00%	2.00%	2.00%
aft-ucan	2.00%	2.00%	2.00%
fop		4.00%	0.00%
fop - soa		2.00%	2.00%
njsolea		2.00%	2.00%
non-aligned		3.00%	1.75%
opeiu		2.00%	2.00%
psa Faculty	2.00%	3.00%	1.75%
psa Lecturer	2.00%	3.00%	1.75%
psa non tenure Faculty		0.00%	0.00%
psa Staff	2.00%	3.00%	1.75%

DISTRIBUTION BY ELEMENT:

Element	FY2017 Estimated Salary Program	FY2018 Estimated Salary Program
Instruction	1,675,887	1,024,793
Research	143,919	89,248
Public Service	9,065	5,789
Academic Support	379,935	241,223
Student Services	284,162	183,351
Institutional Support	568,217	347,151
Operation and Maintenance of Plant	151,990	125,084
Grand Total	**3,213,174**	**2,016,637**

SECTION 4

FY2018 PRIORITY REQUESTS

NEW JERSEY INSTITUTE OF TECHNOLOGY
FY2018 BUDGET PRIORITY REQUESTS

This section identifies budgetary needs above our current appropriation that are defined as programs needed to move the university forward strategically. Over the next decade, change will come quickly to NJIT. Our strategic plan 2020 Vision: A Strategic Plan for NJIT will guide the development of students, the transformation of the curriculum, the growth of scholarship, the fostering of a diverse community, and the appropriate investment in human, physical, and technological resources. It charts a course that will move NJIT into the ranks of the premier research universities by fully embracing the possibilities of technology. Below is a summary of our priority requests for FY2018 which supports 2020 Vision objectives.

Total FY2018 Priority Requests ($000's)

Priority Request:	Total Identified Needs $	Total State Request $	FTE
1) State Authorized FTE	$0	$0	126
2) Inclusive Excellence Awards – Need Based Aid	$716	$716	0
3) Operating Support for the NJIT Engineering Makerspace	$4,160	$2,098	8
4) IT Infrastructure and Cybersecurity Support	$3,647	$1,840	0
5) Faculty Recruitment Initiative	$4,850	$2,446	23
Total	**$13,373**	**$7,100**	**157**

This strategic plan will energize the trajectory that NJIT has chosen to follow so that by 2020 it will be recognized as one of the leading science and technology research universities in the nation. The visionary and attainable priorities of this plan call for a student body of the best prepared and most ambitious, entrepreneurial young men and women. They will see themselves as future leaders in their fields, prepared because they know that an NJIT education will give them the knowledge they must have to succeed, as well as the knowledge of the world's complexity that provides them with the wisdom to be designers of a global society. The university will also be a local, regional, and national leader in economic development as it contributes directly to the knowledge-based society and partners with government and industry. We have limited our FY18 priority requests to just a portion of the critical personnel and infrastructure needs included in the 2020 Vision: A Strategic Plan for NJIT.

1) State Authorized FTE's

NJIT continues to display significant growth in enrollment, research, and operations. Total operations have grown from $259 Million in FY09 to $451.7 Million in FY17, an increase of $192.7 million, or 74.4%. Total student headcount has increased from 11,344 in FY09 to 14,657 for FY17, a growth of 29.2%.

In FY09, after a detailed review of NJIT authorized positions by NJ OMB, the State increased NJIT's State authorized FTE count to 1,246 (95% of 1,313 requested). During subsequent State budget processes the authorized FTE count was reduced to 1,187. Our FY18 budget request includes 126 additional FTEs to support and also enable NJIT to partner with industry in order to create research and development opportunities for technological solutions to our society's most pressing challenges, therefore NJIT requests that State Authorized FTE count be increased to 1,344, the 1,313 initially requested in FY09 and the 31 additional FTEs included in our FY18 priority requests.

Summary of State Authorized FTE Budget Request ($000's)

Request	Total Identified Needs $	Total State Request $	FTE
State Authorized FTE Increase	$0	$0	126

2) Inclusive Excellence Awards – Need Based Aid

The affordability of education is a growing concern nationwide. As a State Institution, opportunity and affordability is one of the vital roles NJIT serves in the State of NJ. Thus, NJIT is establishing need-based aid is for students with financial hardships that require additional aid to close the gap between unmet Tuition and Fees. The targeted population includes students with unmet financial need of $5K or less after federal, state, and institutional aid. These awards will be offered to freshman, transfer and current students.

Inclusive Excellence Awards support the 2020 Vision: A Strategic Plan by:

- Increasing student retention and graduation rates by helping students complete their education
- Increasing the enrollment at NJIT by providing aid that will allow more students to enroll and graduate.
- Allowing students from different economic and social backgrounds to attend without causing a financial hardship for the student or their family

Freshman

In FY18, NJIT would like to award 123 incoming freshman with $216k in need based aid. Eligibility would be based on their academic performance and their SAT/ACT score. These awards would range from $1k for a student with an SAT score of 1000 to 1200, and $2k for a student with an SAT score of more than 1200.

Transfer

There is also a need among transfer students that face the same hardships as they continue through their education. NJIT would like to offer transfer students with a 1 year college GPA of 3.0 or higher to be eligible up to $5,000 annually per student not exceeding unmet need. The cost of awards estimate is $250k which would be split between fall and spring semesters.

Current Students

NJIT recognizes that our current students have unmet financial needs that can keep them from completing their degree program. As such, a separate program for continuing students is being established for full-time students at NJIT for at least 1 year, with cumulative GPA of 3.0 or higher, would be eligible for up to $5,000 annually per student not exceeding their unmet need. The cost is estimated to be 250k which would be split between fall and spring semesters.

The investment needed to provide institutionally funded need based aid is estimated to be $716 thousand per academic year.

Summary of the NJIT Inclusive Excellence Awards Budget Request ($000's)

Request	Total Identified Needs $	Total State Request $	FTE
Freshman	$216	$216	0
Transfer Students	$250	$250	0
Current Students	$250	$250	0
Total	**$716**	**$716**	**0**

3) Operation Support for the NJIT Engineering Makerspace

Makerspaces and the Maker Movement have impacted and influenced the creative community from artists to engineers at a variety of abilities and ages, from children to adults. In a time of app development, design-build, and entrepreneurship, Makerspaces provide locations and resources that may not otherwise be available, therefore creating opportunity to bring ideas to life. Often thought of as a part of engineering, Makerspaces also contribute to industrial design, prototyping, fabrication and manufacturing. The NJIT Makerspace will be a flagship facility with the expressed intent of creating the most well-rounded and prepared graduates possible, regardless of the source of their inspiration.

The 12,000 sq. ft. NJIT Makerspace will be the largest educational facility of its kind in New Jersey. State-of-the-art equipment and infrastructure will be designed to augment NJIT's rigorous course work, supporting hands on learning and tangible product development and engineering skills. The facility will support the new Manufacturing Engineering Technology Program (MNET), student organizations, assigned projects, construction and testing of prototypes, student-initiated projects, and entrepreneurial activities.

The NJIT Makerspace can also be used to supplement the lack of Makerspaces in many 6th-12th grade New Jersey public schools. As a facility designated to support the success from design to build, students and teachers can have access to tools and machines that might not otherwise be available therefore fostering an atmosphere of hands-on learning and collaboration between public schools and our University. Early exposure to our Makerspace would also set the standard for us to be a resource and supporter of technology enabled design education therefore contributing to future enrollment and recruiting efforts of the University.

The Makerspace will demonstrate NJIT's commitment to the best practices in engineering education and community support, increasing NJIT's ability to attract students and educate these students in key areas that are currently unavailable.

Faculty and students will come together in a proving ground of design-build engineering, dedicated to creativity and innovation. The Makerspace at NJIT will not only bring engineering alive, but also provide a recruiting model for future students. Practice will leverage the theory learned in the classroom. The essential foundation for engineering in a variety of areas of study at NJIT will rise to a new and higher level.

Makerspace supports 2020 Vision, NJIT's strategic plan by:

- Builds a supportive environment – it will provide educational and instructional support to a host of hands-on educational and experimental activities
- Continual updates to the curriculum – it will enable a host of new courses, laboratories and student experience
- Promote paths to professional success – experience gained by our students in the Makerspace will increase their success in the job marketplace and in the workplace
- Increase participation of current faculty in research/multidisciplinary research - capabilities will allow rapid prototyping and other avenues to enhance research

- Serve as a catalyst for regional and national economic growth – ideal for courses and labs for workforce training
- Educational investment – major investment in a unique state-of-the-art facility for education and training

In a broad sense, the NJIT Makerspace will be a college-operated workspace where students and faculty with common interests in engineering, technology, computing, science, machining, and digital or electronic art, can meet, socialize, collaborate, innovate, and produce.

The requested investment of $2.1 million needed to operate the facility, in addition to purchasing and installing the required equipment.

Summary of the NJIT Engineering Makerspace Budget Request ($000's)

Request	Total Identified Needs $	Total State Request $	FTE
Personnel	$660	$333	8
Equipment	$2,800	$1,413	0
Consumables	$200	$100	0
Maintenance	$500	$252	0
Total	**$4,160**	**$2,098**	**8**

4) IT Infrastructure and Cybersecurity Support

This request seeks resources to provide lifecycle replacement for key components of the university's IT infrastructure, to strengthen the university's information security defenses, raise awareness of cyber security threats, and to strengthen the university's overall business continuity efforts for ensuring that IT business and technical services can be resumed within required and agreed business timescales.

Information technology remains an intrinsic part of the campus culture, as vital a part of the university's infrastructure as the bricks and mortar of its physical plant. But unlike bricks and mortar, the useful life of the university's IT infrastructure ranges from four to seven years before obsolescence begins to stifle innovation. Extended delays with reinvestment in a lifecycle replacement cycle risk significant interruption of critical campus services. Infrastructure support for technology, is a key objective of the *2020 Vision, a Strategic Plan for NJIT.*

Investments in IT infrastructure will provide renewal for the campus wired and wireless networks, high performance computing and "big data" resources used in research, and the public computing labs and classroom technology used in teaching and learning.

A recent Global CEO Outlook report by KPMG identified cyber as the most unpredictable risk there is – more unpredictable than national disasters. Routine vulnerability testing and cybersecurity awareness programs are among the most important aspects of any organization's cyber-preparedness program. Resources are requested to launch in FY18 an annual program of vulnerability testing of NJIT systems and to conduct a robust cyber security awareness program among students, faculty, and staff.

Maintenance of critical IT services at agreed service levels is a critical output of enterprise risk management. Included within this request is funding to test outsourcing of the university's ERP and enterprise web services into the Amazon Web Services (AWS) cloud infrastructure. Successful demonstration of deployment to the AWS cloud will eliminate the need for significant capital upgrades for UPS (uninterruptible power supply) and generator services in the central campus data center currently targeted for FY19 and lifecycle server replacements scheduled for FY20. Successful deployment to the AWS cloud will also eliminate the risk of IT service outages for those services reliant on premise-based infrastructure.

Summary of the NJIT IT Infrastructure and Cybersecurity Support Budget Request ($000's)

Request	Total Identified Needs $	Total State Request $	FTE
IT infrastructure Renewal	$3,425	$1,728	0
Cybersecurity Support	$72	$36	0
AWS Cloud Testing	$150	$76	0
TOTAL	**$3,647**	**$1,840**	**0**

5) Faculty Recruitment Initiative

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

In FY16 NJIT established a 3rd Faculty Separation Incentive Program (FSIP III) that resulted in 20 faculty separations by 12/31/17. Through the use of salary savings, NJIT hired 20 new faculty in the Fall 2016 and plan on hiring 23 additional for Fall 2017.

Recruitment Process

A cross-disciplinary 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.

20 New Faculty hired in Fall 2016

- Dibakar Datta, assistant professor of Mechanical and Industrial Engineering, focuses primarily on three different themes: modeling of energy systems such as the rechargeable batteries used in portable electronics; the mechanics of materials at nanoscale when subjected to forces such as external loading; and the modeling of defects in materials under changing conditions.
- Bruno Goncalves da Silva, assistant professor of Civil and Environmental Engineering, research area is the multi-scale study of the fracturing mechanisms of various materials, including rock, construction materials such as reinforced concrete and steel, and biological materials. He focuses in particular on the seismicity and cracking that develop as a result of the hydraulic fracturing of rock that occurs both intentionally and naturally.
- Adam Modesitt, assistant professor of Architecture (architecture design and construction), explores the intersection of architecture, computational simulation, performance optimization and the appropriation of emerging digital fabrication methods.
- Gernot Riether, associate professor of Architecture (architecture design and construction), developed and fabricated novel public spaces that invite people to interact with cities in new ways.
- Mathew Schwartz, assistant professor of Architecture (architecture design and construction), bridges science and engineering with art and design, makes use of cutting-edge robotics and motion-capture technology to mimic human characteristics he then incorporates into commercial applications, architecture and models for scientific research.

Life Sciences & Engineering

- Yixin Fang, assistant professor of Mathematics, develops methods for extracting health information such as disease patterns, risk factors and the effectiveness of behavioral interventions from large medical data sets.
- Gennady Gor's, assistant professor of Chemical, Biological and Pharmaceutical Engineering, expertise is in modeling of materials on an atomistic or molecular level. His main scientific interests are modeling properties of porous materials ranging from nanoporous adsorbents and catalysts, to polymer membranes used in batteries, to geological materials such as coal and shale.
- Murat Guvendiren, assistant professor of Chemical, Biological and Pharmaceutical Engineering, works on diverse, novel substrates used in tissue engineering. In order to efficiently produce them, his aim is to expand the current capabilities of 3D printing to include a wide variety of biomaterials.
- Vivek Kumar, assistant professor of Biomedical Engineering, specializes in developing biomaterials and drugs to treat diverse diseases and conditions, such as chronic inflammation, cancer and cardiovascular disease through methods ranging from nanotechnology, to enhanced drug delivery, to biologically derived and synthetic biomaterials.
- Saikat Pal, assistant professor of Biomedical Engineering, aims to decode the mysteries of human movement and musculoskeletal disorders in order to develop next–generation orthopedic implants.
- Benjamin Thomas, assistant professor of Physics, focuses on experimental optics and laser-based spectroscopy applied to the remote sensing of atmospheric aerosols and trace gases in order to measure air quality and climate change.
- Yuanwei Zhang, assistant professor of Chemistry, focuses on organic chemistry and nanotechnology, with an emphasis on biological and biomedical applications such as disease diagnosis, drug delivery and therapy.

<u>Data Sciences & Information Technology</u>

- Senjuti Basu Roy's, assistant professor of Computer Science, primary research interests lie in the area of big-data management of structured and unstructured data with a focus on exploration, analytics and algorithms with applications in social networks, healthcare and crowdsourcing.
- Maggie Cheng, associate professor of Management (business systems and processes), focuses on developing data-analytics algorithms for complex systems such as the Internet, the electrical grid and social networks.
- Gary Liu, assistant professor of Electrical and Computer Engineering, focuses on high-performance computing and big data with an emphasis on fast data storage and analysis with applications in diverse fields ranging from fusion energy, to high-energy physics, to weather modeling, to cancer research.
- Qiang Tang, assistant professor of Computer Science, focuses on the topic of accountability, and in particular, how to control the movement of digital data.
- NhatHai Phan's, assistant professor of Information Systems, research is applicable to the development of healthier communities through a better understanding of human behavior

and self-expression, including self-motivation and social influences on behavior modification within health social networks and through social media.

- Yong Yan, assistant professor of Chemistry, focuses on chemical approaches to produce sustainable and renewable fuels, with a particular emphasis on the design and development of inorganic catalysts, photoelectrocatalysts and other chemical methods to convert carbon dioxide under solar illumination into fuels such as methanol.
- Dontang Yu's, associate professor of Management (business systems and processes), research interests include machine learning, data mining, high-speed networking and high-performance data storage.

Transdisciplinary Area

- Calista McRae's, assistant professor of Humanities, current book project, *Lyric as Comedy*, explores humor in five recent American poets; a version of the first chapter will appear this fall in the journal *Modern Philology.*

The FY18 request is supporting the recruitment of an additional 23 faculty for the fall 2017. The competitive faculty recruitment process will yield new faculty that will contribute to: Sustainable systems, Life Sciences, Engineering, Data Sciences, IT, and inter related transdisciplinary areas. These faculty will enable NJIT to effectively serve our growing student enrollment and provide NJ businesses with STEM trained employees needed now and for years to come. Research and Development opportunities will support the critically important and growing interdisciplinary growth areas.

Summary of the NJIT Faculty Recruitment Initiative Budget Request ($000's)

Request	Total Identified Needs $	Total State Request $	FTE
New Faculty Salaries	$1,600	$807	23
New Faculty Start-up Funds	$3,250	$1,639	0
Total	**$4,850**	**$2,446**	**23**

STATE OFNEW JERSEY
DEPARTMENT OF THE TREASURY
OFFICE OF MANAGEMENT AND BUDGET
FISCAL YEAR 2018
PLANNING DOCUMENT BUDGET INITIATIVE FORM (BIF)
For

DEPARTMENT OF STATE
NJ INSTITUTE OF TECHNOLOGY

Title: **State Authorized FTE**

Type: Growth

CIC: Potential Growth (Discretionary) ☐ Legislation ☐ Capital Request ☐ It Component

Space Needs: No Effect **Rank:** 1

Initiative Description:

NJIT continues to display significant growth in enrollment, research, and operations. Total operations have grown from $259 Million in FY09 to $451.7 Million in FY17, an increase of $192.7 million, or 74.4%. Total student headcount has increased from 11,344 in FY09 to 14,657 for FY17, a growth of 29.2%.
In FY09, after a detailed review of NJIT authorized positions by NJ OMB, the State increased NJIT's State authorized FTE count to 1,246 (95% of 1,313 requested). During subsequent State budget processes the authorized FTE count was reduced to 1,187.

Performance Indicator Impact

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

Out-year Considerations

We are requesting that the State increase our FTE's to 1,344 to restore us to previously requested FTE count (1,313=1,187+126). In addition, to support the new positions (31) that are included within the FY18 budget priority requests (1,344=1,313+31).

Language

FY Funding

	FY 2018	FY 2019	FY 2020	FY 2021
Total Fiscal Year Funding:		$0	$0	$0
Change:				
Total FY Budget Request:	$0	$0	$0	$0

Position:

Saving initiative start date: 7/1/2017

Position Type	Positions #	Positions $	Comments
Increase FTE	126	$0	
Total Positions	126	$0	

STATE OFNEW JERSEY
DEPARTMENT OF THE TREASURY
OFFICE OF MANAGEMENT AND BUDGET
FISCAL YEAR 2018
PLANNING DOCUMENT BUDGET INITIATIVE FORM (BIF)
For

DEPARTMENT OF STATE
NJ INSTITUTE OF TECHNOLOGY

Title: **Inclusive Excellence Awards – Need Based Aid**

Type: Growth

CIC: Potential Growth (Discretionary) ☐ Legislation ☐ Capital Request ☐ It Component

Space Needs: No Effect **Rank:** 2

Initiative Description:

The affordability of education is a growing concern nationwide. As a State Institution, opportunity and affordability is one of the vital roles NJIT serves in the State of NJ. Thus, NJIT is establishing need-based aid is for students with financial hardships that require additional aid to close the gap between unmet Tuition and Fees. The targeted population includes students with unmet financial need of $5K or less after federal, state, and institutional aid. These awards will be offered to freshman, transfer and current students.

Inclusive Excellence Awards support the 2020 Vision: A Strategic Plan by:
•Increasing student retention and graduation rates by helping students complete their education
•Increasing the enrollment at NJIT by providing aid that will allow more students to enroll and graduate.
•Allowing students from different economic and social backgrounds to attend without causing a financial hardship for the student or their family

Performance Indicator Impact

In FY18, NJIT would like to award 123 incoming freshman with $216k in need based aid. Eligibility would be based on their academic performance and their SAT/ACT score. These awards would range from $1k for a student with an SAT score of 1000 to 1200, and $2k for a student with an SAT score of more than 1200.

There is also a need among transfer students that face the same hardships as they continue through their education. NJIT would like to offer transfer students with a 1 year college GPA of 3.0 or higher to be eligible up to $5,000 annually per student not exceeding unmet need. The cost of awards estimate is $250k which would be split between fall and spring semesters.

NJIT recognizes that our current students have unmet financial needs that can keep them from completing their degree program. As such, a separate program for continuing students is being established for full-time students at NJIT for at least 1 year, with cumulative GPA of 3.0 or higher, would be eligible for up to $5,000 annually per student not exceeding their unmet need. The cost is estimated to be 250k which would be split between fall and spring semesters.

Out-year Considerations

The investment needed to provide institutionally funded need based aid is estimated to be $716,000 per academic year.

Language

FY Funding

	FY 2018	FY 2019	FY 2020	FY 2021
Total Fiscal Year Funding:	$0	$716,000	$716,000	$716,000
Change:	$716,000	$0	$0	$0
Total FY Budget Request:	$716,000	$716,000	$716,000	$716,000

STATE OFNEW JERSEY
DEPARTMENT OF THE TREASURY
OFFICE OF MANAGEMENT AND BUDGET
FISCAL YEAR 2018
PLANNING DOCUMENT BUDGET INITIATIVE FORM (BIF)
For

DEPARTMENT OF STATE
NJ INSTITUTE OF TECHNOLOGY

Title: **Operation Support for the NJIT Engineering Makerspace**

Type: Growth

CIC: Potential Growth (Discretionary) ☐ Legislation ☐ Capital Request ☐ It Component

Space Needs: No Effect **Rank:** 3

Initiative Description:

The 12,000 sq. ft. NJIT Makerspace will be the largest educational facility of its kind in New Jersey. State-of-the-art equipment and infrastructure will be designed to augment NJIT's rigorous course work, supporting hands on learning and tangible engineering skills. The facility will support the new Manufacturing Engineering Technology Program (MNET), student organizations, assigned projects, construction and testing of prototypes, student-initiated projects, and entrepreneurial activities.

Performance Indicator Impact

In a broad sense, the NJIT Makerspace will be a college-operated workspace where students and faculty with common interests in engineering, technology, computing, science, machining, and digital or electronic art, can meet, socialize, collaborate, innovate, and produce.

Out-year Considerations

NJIT is requesting a recurring increase of $2,098,000 needed to operate the facility, in addition to purchasing and installing the required equipment.

Language

FY Funding

	FY 2018	FY 2019	FY 2020	FY 2021
Total Fiscal Year Funding:	$0	$2,098,000	$2,098,000	$2,098,000
Change:	$2,098,000	$0	$0	$0
Total FY Budget Request:	$2,098,000	$2,098,000	$2,098,000	$2,098,000

Position:

Saving initiative start date: 7/1/2016

Position Type	Positions #	Positions $	Comments
Increase FTE	8	$333,000	
Total Positions	8	$333,000	

STATE OFNEW JERSEY
DEPARTMENT OF THE TREASURY
OFFICE OF MANAGEMENT AND BUDGET
FISCAL YEAR 2018
PLANNING DOCUMENT BUDGET INITIATIVE FORM (BIF)
For

DEPARTMENT OF STATE
NJ INSTITUTE OF TECHNOLOGY

Title: IT Infrastructure and Cybersecurity Support

Type: Growth

CIC: Potential Growth (Discretionary) ☐ Legislation ☐ Capital Request ☐ It Component

Space Needs: No Effect **Rank:** 4

Initiative Description:

This request seeks resources to provide lifecycle replacement for key components of the university's IT infrastructure, to strengthen the university's information security defenses, raise awareness of cyber security threats, and to strengthen the university's overall business continuity efforts for ensuring that IT business and technical services can be resumed within required and agreed business timescales.

Information technology remains an intrinsic part of the campus culture, as vital a part of the university's infrastructure as the bricks and mortar of its physical plant. But unlike bricks and mortar, the useful life of the university's IT infrastructure ranges from four to seven years before obsolescence begins to stifle innovation. Extended delays with reinvestment in a lifecycle replacement cycle risk significant interruption of critical campus services. Infrastructure support for technology, is a key objective of the 2020 Vision, a Strategic Plan for NJIT.

A recent Global CEO Outlook report by KPMG identified cyber as the most unpredictable risk there is – more unpredictable than national disasters. Routine vulnerability testing and cybersecurity awareness programs are among the most important aspects of any organization's cyber-preparedness program. Resources are requested to launch in FY18 an annual program of vulnerability testing of NJIT systems and to conduct a robust cyber security awareness program among students, faculty, and staff.

Performance Indicator Impact

Investments in IT infrastructure will provide renewal for the campus wired and wireless networks, high performance computing and "big data" resources used in research, and the public computing labs and classroom technology used in teaching and learning.

Out-year Considerations

Maintenance of critical IT services at agreed service levels is a critical output of enterprise risk management. Included within this $1,840,000 request is funding to test outsourcing of the university's ERP and enterprise web services into the Amazon Web Services (AWS) cloud infrastructure. Successful demonstration of deployment to the AWS cloud will eliminate the need for significant capital upgrades for UPS (uninterruptible power supply) and generator services in the central campus data center currently targeted for FY19 and lifecycle server replacements scheduled for FY20. Successful deployment to the AWS cloud will also eliminate the risk of IT service outages for those services reliant on premise-based infrastructure.

Language

FY Funding

	FY 2018	FY 2019	FY 2020	FY 2021
Total Fiscal Year Funding:	$0	$1,840,000	$1,840,000	$1,840,000
Change:	$1,840,000			
Total FY Budget Request:	$1,840,000	$1,840,000	$1,840,000	$1,840,000

STATE OFNEW JERSEY
DEPARTMENT OF THE TREASURY
OFFICE OF MANAGEMENT AND BUDGET
FISCAL YEAR 2018
PLANNING DOCUMENT BUDGET INITIATIVE FORM (BIF)
For

DEPARTMENT OF STATE
NJ INSTITUTE OF TECHNOLOGY

Title: **Faculty Recruitment Initiative**

Type: Growth

CIC: Potential Growth (Discretionary) ☐ Legislation ☐ Capital Request ☐ It Component

Space Needs: No Effect **Rank:** 5

Initiative Description:

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

Performance Indicator Impact

In FY16 NJIT established a 3rd Faculty Separation Incentive Program (FSIP III) that resulted in 20 faculty separations by 12/31/17. Through the use of salary savings, NJIT hired 20 new faculty in the Fall 2016.

Out-year Considerations

The FY18 request is $2,446,000 to support the recruitment of an additional 23 faculty for the fall 2017. The competitive faculty recruitment process will yield new faculty that will contribute to: Sustainable systems, Life Sciences, Engineering, Data Sciences, IT, and inter related transdisciplinary areas. These faculty will enable NJIT to effectively serve our growing student enrollment and provide NJ businesses with STEM trained employees needed now and for years to come. Research and Development opportunities will support the critically important and growing interdisciplinary growth areas.

Language

FY Funding

	FY 2018	FY 2019	FY 2020	FY 2021
Total Fiscal Year Funding:	$0	$2,446,000	$2,446,000	$2,446,000
Change:	$2,446,000	$0	$0	$0
Total FY Budget Request:	$2,446,000	$2,446,000	$2,446,000	$2,446,000

Position:

Saving initiative start date: 7/1/2016

Position Type	Positions #	Positions $	Comments
Increase FTE	23	$807,000	
Total Positions	23	$807,000	

SECTION 5

CAPITAL BUDGET

NEW JERSEY INSTITUTE OF TECHNOLOGY
FY 2018 CAPITAL BUDGET REQUEST

Executive Summary

The FY18 Capital Budget Request of the New Jersey Institute of Technology was crafted to meet the priorities of our strategic plan, 2020 Vision: A Strategic Plan for NJIT. The request has been prepared for submission to the New Jersey Commission on Capital Budgeting and Planning in accordance with State guidelines. While the submission was crafted with all of the strategic priorities as a basis, we specifically focus on the strategic priority of investments, which is outlined below:

> Investments: NJIT will ensure that the human, physical and technological resources for student learning and faculty research have the highest priority. The university's faculty will continue to grow in numbers and renown. They will work in the best laboratories with the highest-quality equipment and technology infrastructure. All classrooms will accommodate a variety of instructional layouts and will offer the latest technology. A multiyear campus plan for student learning, faculty, research and community investment will propel NJIT to state, regional, national and international prominence.

Chartered by the State of New Jersey in 1881 as Newark Technical School, NJIT has grown into a major research University and premier educational institution. The University has grown it enrollment from 6,300 students in 1979 to over 11,000 students for the 2015-16 academic year. This growth has been accomplished without compromising quality of the NJIT student. Students entering in the 2015 fall semester had average SAT scores for critical reading and mathematics of over 1200 and 33% were from the top 10% of their high school class. Research has grown during the same period from $375,000 to over $100,000,000, making NJIT one of the preeminent research universities in the region.

To continue the growth trajectory in both education and research, the NJIT FY18 request reaches across all aspects of the University as we work to steward our existing resources as well as adding new facilities. As the State of New Jersey's only polytechnic university, NJIT has facilities that require more resources and technology than the traditional educational institution. The total request outlines $327,870,000 in capital projects through 2024. The FY18 projects range from $5,000,000 to renew our existing capital assets, a priority of the 2020 Vision, to a $13,108,000 investment in classroom and teaching labs to enhance the availability of technology and multi-media resources.

NJIT has continued to invest in it is physical assets in order to deliver on our promise of a premier educational experience to our highly competitive students. The FY18 request is in alignment with our strategic plan and our facilities mission to provide a healthy, safe and helpful campus experience for students, parents, faculty, staff and alumni. We will maximize the use of human and financial resources to create an environment for learning, research, and innovation for the NJIT family through the incorporation of teamwork, communication, and creativity. The projects requested herein will continue the good work of the institution for generations of students to come.

Department Priority Summary Report- All Fund Sources

Department Priority	Project Title	Organization	Project Number	FY 2018	FY 2019	FY 2020	FY 2021 - 2024	Total
75 C	**New Jersey Institute of Technology**							
1	CURRENT/DEFERRED MAINTENANCE	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	838	$5,000	$10,000	$15,000	$20,000	$50,000
2	THE IDEAS CENTER: INNOVATION, DESIGN,	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	1230	$13,105	$33,105	$15,890	$0	$62,100
3	LIBRARY	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	324	$7,750	$10,000	$10,000	$0	$27,750
4	MODERNIZATION OF LABORATORY AND INI	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	1091	$3,300	$15,000	$12,800	$0	$31,100
5	LAND ACQUISITION	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	24	$8,000	$0	$0	$0	$8,000
6	ELECTRICAL & COMPUTER ENGINEERING F	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	1050	$0	$0	$6,900	$0	$6,900
7	MULTIPURPOSE BUILDING	NJIT - NEW JERSEY INSTITUTE OF TECHNOL	27	$0	$0	$0	$138,020	$138,020
		Department Total		$37,155	$68,105	$60,590	$158,020	$323,870

Project Status Report

Capital Improvement Projects FY2010 - FY 2016

(000's)

Project Name	Proj No.	Start Year	Status	Total Available	General	Bond	Federal	Other
New Jersey Institute of Technology								
NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY								
LABORATORIES, CLASSROOMS, AND STUDIO FOR STEM	32	2013	Continuing	79,137	0	66,342	0	12,795
CENTER FOR INTEGRATIVE LIFE SCIENCES	33	2014	Continuing	19,000	0	13,500	0	5,500
WELLNESS EVENTS CENTER	34	2015	Continuing	102,000	0	92,000	0	10,000
PARKING DECK	35	2015	Completed	23,800	0	23,800	0	0
INTEGRATED MARKERSPACE	36	2016	Continuing	20,000	0	20,000	0	0
TOTAL FOR: NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY				**$243,937**	**$0**	**$215,642**	**$0**	**$28,295**
Department Totals				**$243,937**	**$0**	**$215,642**	**$0**	**$28,295**

Capital Project Report

9/15/2016

Project Number:	**838**	***Project Title:***	CURRENT/DEFERRED MAINTENANCE
Project Type:	Preservation-Other	***Department:***	NEW JERSEY INSTITUTE OF TECHNOLOGY
		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	1	***Facility Name:***	NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	No	***Project Location:***	NJIT NEWARK

PROJECT PHASE	***ESTIMATED COST (000's)***
CONSTRUCTION	$50,000
	Total Estimated Cost: **$50,000**

(000's)

FUND TYPE	FY-2018	FY- 2019	FY- 2020	FY- 2021 - 2024	TOTAL PROJECT COST
General	$5,000	$10,000	$15,000	$20,000	$50,000
TOTALS	**$5,000**	**$10,000**	**$15,000**	**$20,000**	**$50,000**

PROJECT DESCRIPTION AND JUSTIFICATION

The university has continued to extend the standard replacement lifecycle for campus facilities. NJIT has invested resources to begin the mitigation of the deferred maintenance backlog, however, the resources are limited and have been addressing the most emergent issues. Current identified projects include, but are not limited to, the following: Campus wide rood replacements ($10 Million), Elevator modernization/upgrade in several buildings ($3.5 Million), Sidewalk and roadways ($2 Million), Window replacement in Campbell, Cullimore, Colton, Tiernan, and Faculty Hall ($12.5 Million), and HVAC modernization in Cullimore Hall ($5 Million).

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	$0	$0

EXPLANATION:

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

Capital Project Report

9/15/2016

Project Number:	1230	**Project Title:**	THE IDEAS CENTER: INNOVATION, DESIGN,
Project Type:	Construction-Renovations and Rehabilitation	**Department:**	NEW JERSEY INSTITUTE OF TECHNOLOGY
		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	2	**Facility Name:**	
New Project:	Yes	**Project Location:**	

PROJECT PHASE	ESTIMATED COST (000's)
CONSTRUCTION	$50,000
FURNISHING AND FIXTURES	$5,890
FEES	$6,210
Total Estimated Cost:	**$62,100**

(000's)

FUND TYPE	FY-2018	FY- 2019	FY- 2020	FY- 2021 - 2024	TOTAL PROJECT COST
Bond	$10,000	$30,000	$15,890	$0	$55,890
Other	$3,105	$3,105	$0	$0	$6,210
TOTALS	**$13,105**	**$33,105**	**$15,890**	**$0**	**$62,100**

PROJECT DESCRIPTION AND JUSTIFICATION

The project converts Tiernan Hall into an IDEAS Center and transforms the entire building. Currently, Tiernan Hall is an aging building in need of an overhaul of all mechanical and electrical systems. It also requires renovation and modernization of twelve classrooms, including two large lecture halls, and thirteen instructional laboratories (five for chemistry, four for physics, and four for chemical engineering). When complete, the building will provide state of the art homes for three departments: Chemistry and Environmental Science; Physics; Chemical, Biological, and Pharmaceutical Engineering.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	$0	$0

EXPLANATION:

Cost avoidance due to new, modern equipment

Capital Project Report

9/15/2016

Project Number:	324	**Project Title:**	LIBRARY
Project Type:	Construction-Renovations and Rehabilitation	**Department:**	NEW JERSEY INSTITUTE OF TECHNOLOGY
		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	3	**Facility Name:**	NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	No	**Project Location:**	VAN HOUTEN LIBRARY - NJIT NEWA

PROJECT PHASE	ESTIMATED COST (000's)
CONSTRUCTION	$20,000
FURNISHING AND FIXTURES	$4,000
OTHER	$1,000
FEES	$2,750
Total Estimated Cost:	**$27,750**

(000's)

FUND TYPE	FY-2018	FY- 2019	FY- 2020	FY- 2021 - 2024	TOTAL PROJECT COST
General	$7,750	$10,000	$10,000	$0	$27,750
TOTALS	**$7,750**	**$10,000**	**$10,000**	**$0**	**$27,750**

PROJECT DESCRIPTION AND JUSTIFICATION

Planned expansion of existing library to create a learning commons with additional student support services 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 (000's)

IMPACT	INCREASE	DECREASE
No	$343	$0

EXPLANATION:

Additional operating and maintenance cost.

Capital Project Report

9/15/2016

Project Number:	1091	**Project Title:**	MODERNIZATION OF LABORATORY AND
Project Type:	Construction-Renovations and Rehabilitation	**Department:**	NEW JERSEY INSTITUTE OF TECHNOLOGY
		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	4	**Facility Name:**	NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	No	**Project Location:**	NEW JERSEY INSTITUTE OF TECHNO

PROJECT PHASE	ESTIMATED COST (000's)
CONSTRUCTION	$23,214
FURNISHING AND FIXTURES	$4,643
OTHER	$1,769
FEES	$1,474
Total Estimated Cost:	**$31,100**

(000's)

FUND TYPE	FY-2018	FY- 2019	FY- 2020	FY- 2021 - 2024	TOTAL PROJECT COST
General	$3,300	$15,000	$12,800	$0	$31,100
TOTALS	**$3,300**	**$15,000**	**$12,800**	**$0**	**$31,100**

PROJECT DESCRIPTION AND JUSTIFICATION

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

It is proposed to update a range of laboratories, particularly in the engineering departments and to create shared space where cross-disciplinary research teams can come together in collaborative endeavors that relate to the technology based industrial sectors critical to the states future economic growth. NJIT will continue to upgrade classrooms and laboratories to incorporate the most current technologies for distance learning,

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	$0	$0

EXPLANATION:

Capital Project Report

9/15/2016

Project Number:	24	**Project Title:**	LAND ACQUISITION
Project Type:	Acquisition-Other	**Department:**	NEW JERSEY INSTITUTE OF TECHNOLOGY
		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	5	**Facility Name:**	NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	No	**Project Location:**	NEWARK

PROJECT PHASE	ESTIMATED COST (000's)
OTHER	$8,000
Total Estimated Cost:	**$8,000**

(000's)

FUND TYPE	FY-2018	FY- 2019	FY- 2020	FY- 2021 - 2024	TOTAL PROJECT COST
General	$8,000	$0	$0	$0	$8,000
TOTALS	**$8,000**	**$0**	**$0**	**$0**	**$8,000**

PROJECT DESCRIPTION AND JUSTIFICATION

A critical element of the campus master plan is to acquire a limited amount of land to permit the construction of new facilities and to complete the campus edge at the intersection of Central Avenue and Martin Luther King BLVD. The area is within the Campus Gateway Development Plan, which is a subset of the City approved Broad Street Station District Redevelopment Plan. NJIT is the designated Redeveloper by the City of Newark. In addition, acquisition of another adjacent, strategically located property allows for future campus expansion exists on the west side of campus. Each will enhance the capabilities of NJIT and accommodate growth.

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	$0	$0

EXPLANATION:

Capital Project Report

9/15/2016

Project Number:	**1050**	***Project Title:***	ELECTRICAL & COMPUTER ENGINEERING FACILITY
Project Type:	Construction-Renovations and Rehabilitation	***Department:***	NEW JERSEY INSTITUTE OF TECHNOLOGY
		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	**6**	***Facility Name:***	NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	No	***Project Location:***	NEW JERSEY INSTITUTE OF TECHNO

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

(000's)

FUND TYPE	**FY-**2018	**FY-** 2019	**FY-** 2020	**FY-** 2021 - 2024	**TOTAL PROJECT COST**
General	$0	$0	$6,900	$0	$6,900
TOTALS	**$0**	**$0**	**$6,900**	**$0**	**$6,900**

PROJECT DESCRIPTION AND JUSTIFICATION

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

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
No	$700	$0

EXPLANATION:

Increase in operating costs and maintenance.

Capital Project Report

9/15/2016

Project Number:	27	**Project Title:**	MULTIPURPOSE BUILDING
Project Type:	Construction-Other	**Department:**	NEW JERSEY INSTITUTE OF TECHNOLOGY
		Organization:	NJIT - NEW JERSEY INSTITUTE OF TECHNOLOGY
Department Priority:	7	**Facility Name:**	NEW JERSEY INSTITUTE OF TECHNOLOGY
New Project:	No	**Project Location:**	NEWARK

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

(000's)

FUND TYPE	FY-2018	FY- 2019	FY- 2020	FY- 2021 - 2024	TOTAL PROJECT COST
General	$0	$0	$0	$138,020	$138,020
TOTALS	**$0**	**$0**	**$0**	**$138,020**	**$138,020**

PROJECT DESCRIPTION AND JUSTIFICATION

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

PROJECT ANNUAL OPERATING IMPACT (000's)

IMPACT	INCREASE	DECREASE
Yes	$1,714	$0

EXPLANATION:

Additional operating and maintenance costs.