

DRAFT FOR DISCUSSION



**NJIT STRATEGIC
ENROLLMENT MANAGEMENT
PLAN: FIRST STAGE**

YEARS 2015 TO 2020



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YEARS 2015 TO 2020

**SEM AT
NJIT**

2015-2020

“Strategic enrollment Management (SEM) is an institution-wide responsibility and the central focus of the institution’s overall strategic plan. SEM focuses on what is best for students and how to ensure their success while addressing all aspects of the institution’s mission.”

- A Practical Guide to Strategic Enrollment Management Planning, (2007)

EXECUTIVE SUMMARY

Scope of Work

The NJIT Strategic Enrollment Management Plan for 2015-2020 has been compiled by examining numerous factors: data at the university; analyzing demographic projections and socioeconomic factors in the United States and the world; considering employment probabilities during the period under investigation; conducting a strengths / weaknesses / opportunities / threats analysis of global pipeline and its likely impact on NJIT enrollment; and taking into consideration the environmental aspects of the region and the likely consequences of all of these issues on the university. The planning committee consisted of Dr. Charles J. Fey, Ms. Kathy Kelly, Co-chairs, and committee members, Dr. Ian Gatley, Dr. Fadi Deek, Dr. Judith Redling, Mr. Steve Eck, Dr. Perry Deess, Dr. Gale Spak, with support and contributions from Mr. Greg Mass. In completing our work, it was not our intention to forecast future enrollment by simply making note of past and current trends. Our task was to consider the most realistic aspects and factors which will frame our enrollment. We will then develop strategies for managing the university's enrollment in order to improve the visibility and standing of our academic programs while ensuring access by highly qualified students to programs that are distinctive and graduates who are sought by industry. Excellence will be synonymous with NJIT in our educational programs, our research endeavors, our service levels and in our attitudes.

Background

Enrollment management has been a critical function at the university for the past two decades, given our desire to strengthen the quality and quantity of students attracted to NJIT at all levels of education. As a result, NJIT is now seen as a competitive institution with strong programs in engineering, architecture, design, science, computing, and management, becoming a first-choice destination for students interested in these fields of education. However, more than ever, a host of local and global factors, including social, economic, and demographic affect our ability to remain competitive in the marketplace, producing more graduates who will assume positions of leadership and skill in their chosen fields, and require careful planning in order to meet our enrollment objectives in support of university priorities.

A Strategic Enrollment Management committee with representatives from admissions, academic affairs, student affairs, communications, facilities and budget has been in place for over a decade, recognizing that such efforts are the responsibility of campus-wide stakeholders. This systematic, purposeful, and integrated approach to articulating recruitment and admission processes, assessing enrollment factors, identifying marketing initiatives, and recommending retention strategies has now been followed by a similar approach to develop a response to the enrollment challenges facing NJIT in second half of this decade.

Our Purpose

Consistent with the university's strategic, academic and facilities plans, the overarching goal in this effort is to ensure a measured, managed and steady expansion in our enrollment. This measured growth is vital for NJIT's visibility and role in support of economic development in

New Jersey and the nation, is strategically planned, will be diverse, and will be well-served. Most importantly, this must be balanced against the need to assure success for our entire student body -- from their initial matriculation at the university into eventual productive employment. Specifically, we aim to:

- expand and manage enrollment at the undergraduate, graduate, and doctoral levels, especially those in areas related to NJIT strategic initiatives and those that will promote multidisciplinary cooperation;
- attract academically prepared and highly motivated students, who will succeed across all disciplinary areas of the university, and implement strategies to maximize their retention and graduation;
- increase students' diversity in all possible ways, including age, racial, ethnic, social, economic, geographic, and cultural, which will strengthen the educational experiences on our campus;
- provide a learning environment supported by progressive pedagogies and effective technologies to enhance students' experience and meet their educational goals; and
- build supportive learning communities and the requisite campus infrastructure necessary for student success.

Our Recommendations

As of now, the committee believes that an enrollment target between **12,000 and 13,000** students, including both on-campus and online, is a realistic goal for NJIT for 2020. The planning committee will continue its work during the spring semester to flesh out the necessary strategies and tactics and further identify all factors relevant to enrollment and then determine the final enrollment projection. The committee is focusing our planning efforts along the institution's natural student groupings: Undergraduates, Graduates and Doctoral students.

In undergraduate education:

Enhance first-year experiences and consider initiating mandatory on-campus housing requirement for first year students beginning in fall 2014. We need to work to reduce the time to degree by allocating appropriate resources to implement the retention, persistence and graduation strategies for all students. We must expand and strengthen effective student support programs such as intensive remediation, timely tutoring, academic advising, degree audit, counseling, career services, and faculty mentoring. NJIT must increase students' transfer from community colleges by creating "credit transfer back" option to allow dual graduation. The removal of unnecessary and unacceptable barriers faced by our students, particularly those under the control of the institution are critical to improving student satisfaction. Finally, we must facilitate students' transition into appropriate majors in the timeliest fashion while supporting those who are undecided or in transition from one major to another.

In graduate education:

Invest in outreach activities, including the use of in-country contract recruiters in select international markets. We need to expand our online programs and course offerings in professional Master's programs that provide career advancement and address economic development needs. While some current opinion may counter this recommendation, we

feel that NJIT should explore offering select programs at satellite locations in New Jersey. NJIT should, explore more flexible course scheduling models with renewed commitment and adequate staffing to accommodate those adult students who do not or will not take advantage of online learning options. As the economy recovers, current projections mention 2018 as the year when the United States will most likely have full recovery, business and industry will most likely return to colleges and universities to fill their training and education needs. NJIT should be prepared to fill this void.

In doctoral education:

NJIT must aggressively maximize the recruitment of high quality doctoral students by placing faculty researchers in the role of “recruiters” and use of NJIT’s website to facilitate direct links between faculty and prospective students. A fully staffed and functioning Graduate School must be directly involved in these processes and utilizing technology to allow for tracking of all phases of application/admissions process. We must make our university funded teaching assistantships competitive with peer research institutions. The university needs to maximize research assistantships from externally funded grants, reducing the use of scarce institutional resources. Lastly, to continue to grow institutional reputation and quality, we must develop and maintain a competitive research infrastructure.

The planning committee wishes to remind the reader that a strategic enrollment management plan that is comprehensive and efficacious is the result of a painstaking process that fully examines many factors that must be properly vetted among constituent groups. A thorough analysis of these factors is required to assure the accuracy of the assumptions and to develop the appropriate conclusions supported by the available data. This process will take the balance of the spring of 2013 to complete. The committee expects to deliver its final report to the President in early summer. We anticipate that the complete plan will offer detailed strategies for realizing NJIT’s educational mission and will allow it to fulfill its unique role as New Jersey’s Science and Technology University.

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Summary

INTRODUCTION

New Jersey Institute of Technology (NJIT) is an institution of higher education, publicly supported by the citizens of New Jersey. As such, it seeks to serve its primary constituents, the citizens of New Jersey and this region, by providing the highest quality post-secondary and graduate education possible. In doing so, various considerations must be taken into account when planning to deliver on this important regional mandate. Primary among those considerations are the recruitment, retention, persistence and graduation of the students it seeks to enroll.

This report serves as the five year Strategic Enrollment Management Plan for NJIT for the years 2015 to 2020. It will look at the most recent enrollment plan and the strategies in place to achieve the goals of that plan. The plan will also report on numerous factors which may impact enrollment during the target years and beyond. These factors include capacities at NJIT for the physical environment, human resources, and fiscal resources; economic forecasts for the region which could influence support and student interest; challenges and opportunities facing the campus and the region and other factors.

This report is not the final plan, but is the preliminary report, perhaps best seen as a roadmap to the fully developed plan which will take through the spring semester to fully detail so that a final document may be considered for adoption by the President and the Board of Trustees in the summer of 2013. It will serve as a companion document to the Academic Plan currently in its final stages of writing. Still needed for consideration and inclusion are the physical capacity plan, the financial plan and a Human Resources plan which will be inclusive of not only faculty needs but also of professional and support staff needed to fully support the Academic Plan and the Strategic Enrollment Management Plan.

Chapter 1

Institutional Mission

New Jersey Institute of Technology – NJIT - is New Jersey's science and technology university, committed to the pursuit of excellence----

- In undergraduate, graduate, and continuing professional education, preparing students for productive careers and amplifying their potential for lifelong personal and professional growth;
- In the conduct of research with emphasis on applied, interdisciplinary efforts encompassing architecture, design, the sciences, including the physical and life sciences, engineering, mathematics, and infrastructure systems, computing information and communications technologies and management;
- In service to both its urban environment and the broader society of the city, state, nation and global community by conducting public policy studies, making educational opportunities widely available, and initiating community-building projects;
- In contributing to economic development through the state's largest business incubator system, workforce development, joint ventures with government and the business community, and through the development of intellectual property;
- NJIT prepares its graduates for positions of leadership as professionals and as citizens; provides educational opportunities for a broadly diverse student body; responds to needs of large and small businesses, state and local governmental agencies, and civic organizations; partners with educational institutions at all levels to accomplish its mission; and advances the uses of sciences, technology, engineering and mathematics (STEM) as a means of improving the quality of life.

This mission serves as the guiding statement for the strategic enrollment management efforts of NJIT. Its first point states that the institution is to prepare students for their career and their life beyond their degree. To adequately accomplish this, the institution must admit students who it believes will succeed at NJIT and who will be exemplary leaders and citizens of New Jersey, the United States and of the world. This plan will examine the market in which NJIT will be recruiting these capable individuals to explore their dreams and to learn about their future fields into which they will be embarking. To understand that market, numerous socio-economic factors will be examined, as will be institutional capacities (physical, human resource, particularly faculty, and financial), academic plans of each college, a SWOT analysis, and assumptions about the environment in which NJIT will be operating from 2015-2020. From these factors, the report will conclude with recommendations and a projection of the enrollment for that period.

Chapter 2

Enrollment Planning Assumptions

Some basic assumptions have been gleaned from our literature reviews, conversations with experts and knowledge of the higher education market among our committee members. Committee members thus have considered numerous factors to arrive at our assumptions. These factors all combine to project probabilities for NJIT in 2015 and beyond.

These assumptions are as follows:

- Global, national and regional demographics will not vary significantly from the most recent models
- Global, national and regional economic conditions will not fluctuate dramatically
- Career and labor market projections will remain somewhat predictive
- It is unlikely that state appropriations will grow during the next decade, given the stubborn recession experienced in New Jersey and the United States since 2008. In fact it is likely that there will be a continued decline in state appropriations for higher education
- Tuition and fees will most likely continue to increase annually, but that may be slowed by the New Jersey state legislature or by Congress should public pressure continue as a result of publicity about the growing increases in the cost of higher education. Tuition has increased of almost 1200% since 1978, according to a Bloomberg (2012) report. Bloomberg reports, in that same article, that the rate of increase in college costs has been "four times faster than the increase in the consumer price index." It also notes that "medical expenses have climbed 601 percent, while the price of food has increased 244 percent over the same period."
- State and federal financial aid programs will not experience significant changes.
- NJIT will successfully reach the 11,000 headcount projections by fall 2015

By understanding and permitting these assumptions to be considered during the planning process, the institution may go about collecting other data that will inform decision making. Of course, the assumptions may be inaccurate or just wrong, and they may not foresee important events that may impact the higher education environment, such as the "Great Recession of 2008"'s impact on funding and political/social support for higher education, thus NJIT must be ever vigilant and continue to revisit these assumptions and modify the plan as circumstances dictate during the coming years.

Chapter 3

Socio-Economic, Demographic, Employment and Retention Factors: Their Impact on NJIT's Enrollment – A Regional, National, and Global View

It is reasonable to expect that the economic health of a nation has direct ramifications on its business, industry, education, and government operations. Higher education is no exception. In fact, both domestic and global changes in the economy have traditionally affected college enrollment scenes in the United States, but often in unpredictable patterns.

There are different dynamics that influence undergraduate enrollment versus graduate enrollment in the U.S. Generally, particularly in science and technology institutions, the majority of undergraduate students are domestic while international students make up the larger component of a graduate cohort. While source countries of graduate students are diverse, China and India have traditionally been the strongest suppliers of applicants. Naturally, socio-economic factors in these countries as well as in the U.S. play a role in students' decisions to seek universities they will attend, majors they will choose, and professional careers they will pursue. There are also equally compelling demographic reasons that must be taken into consideration in higher education enrollment management.

With state support for higher education on a solid downward trend, the need to plan for and deal with these realities becomes more important than ever.

1. Socio-Economic Factors

In the current environment, there are a number of socio-economic factors that need to be taken into consideration and addressed in any enrollment management plan. These include cyclical recessions, affordability, homeland security, competing markets, job outsourcing, and structural recessions.

1.1 Cyclical Recessions

It is expected that regular downturn in the business cycle will have some sort of impact on higher education enrollment. However, the most recent recession that began in the late-2000s, often referred to as the Great Recession, did not cause significant shifts in students' college enrollment; at least not as severe as enrollment managers had feared. Nationally, four-year institutions saw virtually no change in the proportion of students attending full time. On the contrary, the dot-com bubble of 2000-2001 had a more pronounced negative impact on college enrollment, specifically in the computing disciplines. NJIT's own enrollments track both of these trends. For example, from 1985 to 2001, the number of computing sciences students nearly tripled, but between 2002 and 2005, their number had dropped by 50%. In 2012, three years after the official end of the recession, the U.S. economy continues to struggle but NJIT's enrollment is at its highest levels ever, having rebalanced the enrollment losses of the dot-com era and grown by an additional 1000 students. However, enrollment in the computing fields remains far below its peak in 2001. These findings, consistent with the national conditions, suggest that economic boom or bust alone is not a reason for dramatic fluctuation in college enrollment.

1.2 Affordability

Economic recessions in the U.S., which typically reverberate globally, reduce the ability of domestic and foreign students to afford higher education. Steady reductions in state appropriations have caused tuition to rise at public universities as has declining endowment values at private universities. The spiraling cost of college, independent of recessions, has made higher education much less affordable for most Americans and international students. Higher education tuition and fees have risen several times more than the increase in the median income of a U.S. family. Since the early 2000s, colleges and universities across the country have had sustained large, yearly increases in their tuition, with some even going into double-digit percentages. Given this, it is fair to expect the same tuition increases in coming years. However, the number of international students coming to the U.S., which had been on the decline for this and other equally compelling reasons, are now showing signs of recovery.

1.3 Homeland Security

In 2001, the aftermath of 9/11 tightened security procedures and caused many applicants from certain countries, specifically in the Middle East but also elsewhere, to refrain from seeking admissions to U.S. colleges and universities. The implementation of the Student Exchange Visitor Information System (SEVIS) in 2003 by the federal government provided a real-time system for gathering information and tracking foreign students in the U.S. but also severely hampered admissions processes for a while before introducing changes that facilitated a rebound in enrollment numbers. In the meanwhile, and as the cost of U.S. education continued on an upward spike, foreign countries, particularly emerging economies, had been investing heavily in their own higher education systems.

1.4 Competing Markets

The U.S. has been, and remains, the destination of choice for the vast majority of students that study abroad. Despite some recent fluctuation in numbers, it remains a top choice for most of these students. The reason for this is simple: quality of education. In other words, the high return on investment has been a major draw for students. This, though, cannot be taken for granted anymore as many countries have developed national-level plans to strengthen their own higher education systems and to keep their own students at home. These countries, which include traditional U.S. competitors such as those in Europe and emerging ones like China, India, Canada, and Australia, also want to attract international student cohorts into their own colleges and universities. In particular, it is difficult to overstate the rapid and continued growth of Chinese universities. They have invested heavily in infrastructure and human resources in order to attract international faculty and students but also to lure back Chinese scientists who had left the country decades earlier to study and work in the U.S. Similarly, India, already a powerhouse in computing and having its sight on similar status in manufacturing, is also making investments in its higher education enterprise with a favored concentration on the IITs and other ranked science and engineering institutions.

1.5 Job Outsourcing

The perception that fewer job opportunities and lower wages will be the norm in the U.S. in the computing, engineering, science, and technology sectors has resulted in confusion and increased lack of confidence in the value of higher education. While outsourcing to India, China, and other countries with growing populations of well-educated professionals is a source of concern, this trend cannot be seen only as a cause for job shortages; it is actually an indication of an existing shortage in skilled workers. Demand for professionals with higher levels of education, technical knowledge, and specialized skills has been rising and, thus, creating a growing mismatch between the skills of the workforce and the needs of the economy. This must be seen as an opportunity for U.S. higher education institutions.

1.6 Structural Recessions

Time, though not alone, heals cyclical recessions. However, a more serious type of downturn in the business cycle is a disconnection between the supply component and the demand component of an economy. This is referred to as structural recession and typically concerns the knowledge and skills disparity of a marketplace. In fact, for decades, even throughout the recent recession, reports from the Bureau of Labor Statistics of the U.S. Department of Labor routinely confirmed the existence of a substantial shortage of trained professionals with the required level of skills to fill vacant positions in established, evolving, or emergent industries. Such a mismatch between the capacity of a workforce and the needs of industry can only be adequately remedied if educational institutions are able to respond quickly and effectively to the demand.

Government and financial industry officials in the U.S. are now projecting positive, albeit slow, economic growth and improved unemployment rate. Despite this, the global economy presents quite a mixed picture. Although there is some economic improvement in the emerging world, India's growth is slowing and its inflation is high; China's economy is slowing too, but its central government has exercised monetary policy that has allowed for a modest, but sustained growth. There also remains an ongoing recession in Europe particularly in high debt countries, with a somewhat stronger picture in some of the larger European economies despite looming higher taxes which could slow growth. While the U.S. economy has shown signs of strength, including related service sectors and export growth, the end of a massive federal fiscal stimulus program and the slow improvement in unemployment numbers will limit a strong rebound. Thus, it is prudent to assume a steady, but slow, recovery. Moreover, given historical facts, a U.S. recession, as well as a global one, in the coming years is likely.

2. Demographic Factors

Though enrollment demand at NJIT has been projected with relative accuracy over the last decade, fluctuation in student enrollment at colleges and universities will continue for the socio-economic reasons just outlined, and for other unforeseen causes. However, college and university enrollment is also significantly affected by demographic changes in student population as well as demand for higher education and training among the eligible pool. It is projected that growth in U.S. student population will begin to slow and then even dip. Although the situation in New Jersey is not as bleak, this means a smaller number of high school seniors graduating, resulting in stronger competition for these students among four-year colleges.

This is not the case with another college-bound student group, the community college population, which is enjoying a healthy increase despite the dipping in the number of graduating high school students. This growth is a reflection of an emerging trend among U.S. college-age students who are choosing to complete the first part of their higher education closer to home and a growing number of adult students who are also choosing this close to home and less costly higher education option (explained further in section 3.1 of this chapter). The same can be said about the international student population. For the last few years, those numbers are on the rise again, reflecting another global trend of an increasing number of students pursuing their education outside their home countries.

Yet, because of the many different social and economic factors involved, and with the projected demographic declines, it is reasonable to expect only a moderate increase in NJIT's enrollment beyond 2014. This will provide us an opportunity to focus on retaining and graduating students in higher numbers, but also will offer us a chance to work on further strengthening the profile of students attracted to our programs.

3. Identifying Pathways for Sustaining Enrollment Gains at NJIT

A multi-pathway approach for robust student recruiting in the face of an increasingly competitive global environment will enable NJIT to hold on gains it has made in its student enrollment. This will also help provide a cushion against future expected fluctuations, as well as unpredictable events that may negatively influence enrollment.

In addition to the two previously discussed, external sources of students showing promise in terms of increasing enrollment, the international and community college populations, the adult student group can be targeted by NJIT in more meaningful ways to yield increases in our own numbers. Similarly, there are opportunities to target another population of students, both local and remote, for growth via the addition of online programmatic capacity. NJIT was once a leader in such modes of education and there remains a significant expertise and interest among faculty and staff at the university that can be channeled into a plan for reclaiming a prominent presence in this area. Of course, the students we have already recruited and are now enrolled at NJIT can benefit from additional retention strategies (currently being addressed in the Retention Task Force Recommendations Implementation Committee) and many of these students may even opt for pursuing graduate studies at NJIT.

3.1 *The Community College Pipeline*

More than half of traditional-age, first-time students in the U.S. now enroll at two-year colleges. This represents an increase of more than 10% since 2006 (NSC 2011). There are a number of reasons for this change; many of these can be attributed to economic conditions. It is true that in a better economy, students will consider four-year institutions, in and out of state as well public and private ones, for their higher education careers. However, many students end up enrolling in community colleges during a recession to save money. In addition, some of the students who may have made a decision to join the workforce after high school find themselves looking for other alternatives, including enrolling at community colleges, when faced with harsh unemployment realities during a recession. Still, a large number of students make a conscious decision to attend a community college, regardless of the economic situation, for other equally compelling reasons including proximity to their homes, the exclusive focus on teaching and learning at such schools, their work or family obligations, and lack of other options available to them at time of enrollment.

3.2 *The International Student Pipeline*

For the third straight year, the Council of Graduate Schools has reported increases in the first-time enrollment of international students in the U.S. (CGS 2012). Barring any unforeseen circumstances, the flow of international students into the U.S. is expected to continue to rise in the future. Population demographics are one clear reason for this; economic mobility is another. Unlike in the U.S. and Europe, the world population is increasing due to high birth rates in many countries of the eastern hemisphere, but also in places like Brazil and other South American nations. This creates pent up demand for higher education that still cannot be met by existing capacity in many of these places. Furthermore, major economic powers, like China and India, and other emerging ones, like Brazil and some regions of the Middle East, have afforded their middle class a standard of living that includes foreign education. The importance of the English language to international business plays in favor of the U.S.

3.3 *The Adult Learner Pipeline*

Adult learners are a student population that is considerably older than traditional students, generally age 25 or over. Some may be returning to college after an interruption while others may be facing their first college experience. Adult learners may come from all walks of life seeking to improve their job skills or career opportunities. While there are colleges and universities that cater exclusively to the adult learner, NJIT has had a limited experience with such students through its, now dormant, weekend college. However Continuing and Professional Education (CPE) has been very active in pursuit of adult part time students. It has utilized many channels such as online, graduate certificates and off site courses and programs offered at extension sites and corporate sites More recently, there has been a significant growth in the adult student population in higher education that is seeking education in science and technology disciplines, of which the veterans are a notable group. However, unlike the conventional transition from high schools or community colleges, into a four year college environment, such integration of adults requires dedicated efforts and services.

3.4 Reinvesting in Online Learning

Over the past year and a half NJIT and EmbanetCompass (EC) have successfully partnered to enroll new students in the online MS in Civil Engineering along with its two online Graduate Certificates in Construction Management and Project Management. This partnership is expected to generate over 300 registrations and about 125 new students by the end of this spring. The services that EC provides include marketing, recruitment and retention.

In December, 2012 NJIT and EC expanded this relationship by agreeing to add three new degrees effective in fall 2013, along with companion graduate certificates, to the University's totally online graduate offerings. The three new degrees to be offered wholly online are the MBA, the MS in Electrical Engineering and the MS in Computer Science. Additionally, EC will manage the conversion of NJIT's course content to an online format, and will provide 24x7 Help Desk assistance for both faculty and students.

By 2016, the plan also calls for the launch of six new fully online NJIT MS degrees, based on market-driven business analytic research on existing or new NJIT degrees which are industry-ready in that they provide advanced learning which is consistent with what specific industries are likely to need in the future. Extensive analysis has been completed by both EC and NJIT including an in-depth market analysis for each of the three new degrees. These students are predominantly part-time and take on average 1.5 classes each semester.

EC will also share with NJIT what they have learned regarding Best Practices. This includes the use of a scheduling practice, referred to as a scalable course carousel which ensures that each cohort of students has the courses they need to graduate in a timely matter each and every semester.

This initiative holds the potential to bring to NJIT more than 1000 new graduate students, each studying entirely online in the next few years. Thus none of these students will need to use NJIT physical space in Newark, but plans have already been made to ensure that NJIT is equipped with appropriate expanded IT-related infrastructure and faculty and staff personnel who are required both to teach and provide services for such an increase of online-only learners in the overall NJIT student body. Discussions with EC with university administrators indicate that the company expects as much as three times the projected 1000 new graduate students once the program is fully functioning and fully marketed.

3.5 Retention

Recruitment is the entering pipeline for the enrollment picture but it is considered successful when an institution retains the students in numbers that are predictable or even exceeding those predictions. Retaining more students means that fewer new students are needed to fill the student body seats budgeted. Additionally, the institution wishes to graduate as many of its students as possible and in order to do that, more of the students being recruited must persist through the senior year. Many factors may impede a student's progress to the degree, but those that are within the institution's control must be addressed and improved.

3.5.1 Current state

Our first-year to second-year retention is 81% for the entering class of 2010. The projected retention rate should be closer to 90%. The six year graduation rate for the most recent class is 55% with the predicted rate from US News and World Report at 63% given the quality of our admitted students. So the question remains – why are our rates lower than projected and that of our peers?

Some indicators of this outcome may be found in the NSSE data, student satisfaction surveys, benchmarking results taken from the Residence Hall EBI survey and other directly observable environmental conditions that indicate areas for improvement. What are the areas identified for improvement? Customer service contact points across campus need to be improved with procedures and processes becoming more student centered and student friendly. Offices like the Registrar, Bursar and Student Financial Aid Services are undergoing a refocus on customer service. Academic advisement is being centralized and re-focused to empower students with appropriate tools like DegreeWorks being utilized to make advisement more effective and freeing up faculty to provide the profession and discipline specific mentoring that our students need. Learning Communities have proven locally and nationally that they raise student engagement, student satisfaction and student performance. All entering students would benefit from this approach.

Facilities are critical to student perception. Studies and college search experts speak about how important facilities and appearance are in both college selection and students remaining at their colleges. NJIT's facilities are in urgent need of renovation, refurbishment, upgrading and expansion. Additionally, the university's technology infrastructure is challenged and must be brought up to industry standards to provide our students with the best preparation and our faculty with the best resources to move the field forward.

3.5.2 Academic issues

High school preparation varies widely, especially in mathematics. Approximately 40% of the freshmen whose declared major requires Calculus 1 are placed into a mathematics course lower than Calculus 1, resulting in 1 to 2 semesters of math remediation. This prolongs time to graduation and significantly impacts retention. This is one of the factors addressed in the recommendations of the Retention Task Force (see section 5, below).

Other issues which bear analysis and resolution are course repeat patterns, why students in good academic standing leave prior to graduation, and barrier courses (high incidence of W and F grades).

3.5.3 Non-Academic issues

Student engagement is "the single most significant predictor of persistence" (Tinto, as cited in Harper & Quaye, 2009, p. 4). The NJIT Learning Community initiative is expected to positively influence students' sense of engagement. Additional efforts need to extend beyond the first year to continue enhancing student engagement, sense of community, and greater satisfaction with the entire college experience.

3.5.4 Retention Task Force recommendations and implementation plans

Retaining the students we have already recruited, admitted and enrolled is essential to maintaining and growing any institution's enrollment. A Retention Task Force was appointed by the President and chaired by Dr. Ian Gatley, Provost and Dr. Jack Gentul, Dean of Students. Their work resulted in a report issued on May 15, 2011 in which a number of retention initiatives were recommended. In October, 2012, President Bloom appointed Dr. Charles J. Fey and Interim NCE Dean Basil Baltzsis to chair an implementation committee to insure that the recommendations were put into practice.

The recommendations of the Task Force, accepted by President Altenkirch and implementation authorized by President Bloom include "... four recommendations: (1) NJIT examine and improve the placement rate of students into credit-bearing courses and develop an evidence-based plan to reduce substantially the remediation rate for first year students; (2) NJIT create a unified, professional advisement system for undergraduate students; (3) NJIT continue to contribute to the state's economic competitiveness by producing professionals who will graduate in a timely fashion and contribute to workforce development; and (4) NJIT permanently establish a mechanism to examine issues related to retention and graduation under a shared governance structure." (Axe, et al. 2011) The Retention Task Force Recommendation Implementation Committee will review all factors that affect retention, prioritize and recommend short-term tactics that can immediately affect retention; and long-term tactics that and help maintain that effort over the next 10+ years. An analysis done by Institutional Research (see appendix) determined that if NJIT increased retention by 1% per year across all levels, that enrollment could "reach 11,157 without admitting any more students than we did in fall 2012, based solely on a steady increase in retention."

3.6 Labor Market Analysis

According to several labor market economists and workforce development leaders from reputed organizations including the US Bureau of Labor Statistics, The Heldrich Center for Workforce Development, and the New Jersey Technology Council, the most reliable predictor of future employment demand is current employment demand.

3.6.1 NJIT Graduating Class of 2012

Each year NJIT Career Development Services produces an employment and salary report for the graduating class. The report is compiled from multiple sources including the NJIT graduating student satisfaction survey and hiring results information submitted by students and employers who have utilized the career center. Nearly 50 percent of all 2012 BS and MS graduates received job offers at the time of their graduation, which is twice the national average for all college graduates this year, as reported by the National Association of Colleges and Employers (NACE). Future analysis will include determining the percentages of our graduates who have secured employment (in their field of study or have gone on to graduate study) within nine months or one year of graduation.

Computing Science and Information Technology majors were once again atop the most sought after disciplines list this year. This is not surprising given the strong demand for information technology talent from organizations across all industry sectors. Demand for engineering and engineering technology graduates remains strong, particularly for Computer Engineering, Civil Engineering and Construction Management Technology majors.

IT Administration and Security majors were among the best compensated BS graduates this year with an average annual starting salary of \$78,833. Graduate level students from our Engineering Management major readily attained high employment and salaries averaging nearly \$80,000 ranges. Graduate level Professional and Technical Communications majors reported starting salaries of over \$70,000. MBA graduates realized strong employment outcomes and starting salaries averaging nearly \$78,000.

Some NJIT majors experiencing the least demand and associated employment success at this time include Architecture, Biomedical Engineering, Information Systems, Biology, and Mathematics. Later in this section (3.6.3) we report that Biomedical Engineering and Information Systems related majors are actually among fields/majors that are emerging for the future and should actually be growth areas. NJIT should evaluate why this seems to be a “disconnect” for us and determine how to take advantage of these “emerging majors” opportunities for our students.

Architecture demand continues to be adversely impacted by the downturn in the new construction housing market. It should rebound somewhat when the economy recovers and building resumes.

3.6.2 McKinsey and NACE Employment Projections for 2013 College Graduates

A June 2011 report from McKinsey & Co., the global management consulting firm, indicated that in the best case scenario, the U.S. economy will return to full employment no sooner than 2018.

More recently however, employers responding to the Job Outlook 2013 survey indicated that they plan to hire 13 percent more new graduates in 2013 than they did in 2012. The Job Outlook survey is a forecast of employers' intentions to hire new college graduates conducted each year by the National Association of Colleges and Employers (NACE).

3.6.3 Emerging Majors for the Future

According to US News.com, colleges have been responding to developments in technology and business by creating majors that hardly existed five or 10 years ago. Other more established fields are suddenly emerging at the undergraduate level as demand for workers spikes. This is national data which has been derived from US Bureau of Labor Statistics employment projections and information gathered about the direction many of our aspirant schools are taking with regard to majors and occupations.

The results are particularly relevant to future demand within the NJ labor market and the development and or revision of the NJIT academic master plan. US News.com identifies the following nine majors as high growth by higher education institutions and high demand by employers. Of the majors and or disciplines included within the US News.com list, NJIT currently offers full degrees and or research initiatives in 7 of these areas, and covers some courses related to new media and public health. This information serves to validate that we are well positioned for the future and suggests that considerable attention be devoted to enhancing and expanding academic programs within these disciplines. We should be well assured that job growth will be plentiful within these majors and disciplines.

- **Biomedical engineering:** The U.S. Bureau of Labor Statistics names biomedical engineering the fastest growing occupation 2010 and 2020.
- **Computer game design:** Today's game design students will join an industry expected to reach \$82.4 billion globally by 2015, compared to \$55.5 billion in 2010.
- **Environmental studies/sustainability:** Programs in environmental studies are spreading as energy, water, food, and climate will be defining issues of the century.

- **Health informatics/information management:** The need is huge for professionals who can help acquire, manage, and use information to improve health and manage payments. The American Medical Informatics Association projects a need for more than 50,000 workers in the next five to seven years.
- **Homeland security:** This is among the fastest-growing educational disciplines in recent memory. More than 300 programs that have sprouted since 9/11, with 75 leading to undergraduate degrees.
- **Information assurance/cyber security:** Job demand has grown tenfold over the last 10 years for cyber security or information assurance.
- **Nanotechnology:** The industry is poised to grow to \$2.4 trillion worldwide by 2015 and employ 2 million people in the country by 2020.

New media: New media degrees can lead to jobs in filmmaking, television, game design, animation and programming, graphic design, audio and visual arts, social media, E-text and Web publication, advertising, journalism, and media research.

Public health: As of 2009, some 140 institutions offered an undergraduate major, minor, or concentration. The major prepares students for entry-level jobs in government agencies, health corp. nonprofit organizations, and healthcare facilities.

4. Summary

As the committee reviewed the factors analyzed in this chapter, it became apparent that several opportunities are available for the university to exploit to achieve an enrollment higher than the numbers projected for 2015. The obvious low hanging fruit is the increase in enrollment that will result from higher retention and persistence. The golden ring at the end of this particular enrollment ride is a higher graduation rate approaching or even surpassing the number projected for the institution. An institutional commitment to and a dedication to improve and enhance services, offering more programs in expanded modes of delivery and at times that have not often been offered at NJIT will reap the expected rewards. The committee urges a serious consideration of all of the observations contained in this report.

Chapter 4

SWOT Analysis of the Global Pipeline

The United States continues to be a global destination for post-secondary education. In 2011/12, the number of international students in the US was 764,495. This was a 5.7-percent increase over the year before and a 31.1-percent increase over the past ten years. The top five places of origin include China, India, South Korea, Saudi Arabia, and Canada. The top five fields of study include business and management, engineering, math and computer science, social sciences, and physical and life sciences. More than 63-percent of international students receive funding from either personal or family sources while 21.5-percent receive funding from a US college or university. The number of international students enrolled at NJIT has remained largely flat over the past six years. The university currently enrolls 1,523 international students (1,205 graduate and 318 undergraduate). The vast bulk of the international student population originates from China or India.

The following analyzes the strengths, weaknesses, opportunities, and threats for NJIT within the global recruitment market.

1. Strengths

NJIT has long been a destination of choice for many international students. Total international student enrollment at NJIT ranks the university second among New Jersey institutions in educating students from beyond the borders of the United States. The strengths of the university within the global recruitment market include academic programs, location, and brand recognition in primary global markets.

1.1. *Academic Programs*

The availability of STEM majors provides NJIT with a distinct advantage within the global recruitment market. As was previously noted, NJIT offers four of the top five fields of study pursued by international students. The enrollment in these four fields represents 58.2-percent of all US international students. Each of these four fields experienced a healthy gain (4-percent or more) in enrollments over the year before. This trend is expected to continue and suggest international student enrollment at NJIT will benefit from the popularity in STEM majors.

1.2. *Location*

There are nearly 98,000 international students enrolled in New Jersey and New York making this the second most popular destination behind California. NJIT's proximity to New York City as well as the diverse population base in the area contributes to the university's appeal. International students blend into the culture of the region and are generally accepted by society. The students are able to easily find cultural resources to make a smooth transition to the US. The university's location will continue to draw interest from global markets.

1.3. *Brand Recognition*

The primary global markets for NJIT currently are China and India. Brand recognition within these markets is strong. Current international students and alumni from these countries have provided 'word of mouth' marketing for the university without the previous need to invest in global recruitment efforts.

2. Weaknesses

Global recruitment market weaknesses include lack of funding to support global recruitment effort, lack of an ESL program and lack of participation in recruitment activities at the college/departmental level.

2.1. Funding for Global Recruitment

NJIT has maintained international student enrollments with little to no investment in resources to support a global recruitment effort. The university has relied on the 'word of mouth' marketing provided by current international students and alumni. The lack of availability of funding/resources has contributed to a reactive rather than proactive approach to recruitment efforts. The university must commit funding/resources and alternative approaches to global recruitment efforts if there is a serious desire to increase international enrollments efforts.

2.2. ESL Program

The lack of an ESL program limits NJIT's ability to enroll students from certain global markets. This is particularly the case with students from Saudi Arabia. These students receive funding from the Saudi government, but must first complete one year of English language study before moving forward to pursue a post-secondary degree. NJIT currently cannot provide this academic preparation and as a result cannot compete for these students. The university should either consider developing an ESL program or partnering with another institution to provide the one year of English language preparation. NJIT has begun to negotiate with Essex County Community College to provide ESL for NJIT international students with that need English language training.

2.3. Academic Participation in Recruitment

The participation in recruitment activities is limited at the college/departmental level. This is particularly the case at the graduate level. Prospective graduate students are most interested in communicating with faculty and/or academic advisors. The academic departments/colleges must take a more active role in recruiting students.

3. Opportunities

Opportunities abound for NJIT. These include targeting several emerging global markets as well as taking advantage of a rise in interest for undergraduate education among international students.

3.1. Emerging Global Markets

According to the World Education Services, the top four emerging global markets include Saudi Arabia, Brazil, Vietnam, and Turkey. All four markets have distinct opportunities for NJIT.

Saudi Arabia

The majority of students from Saudi Arabia come to the US with full-funding from the Saudi government. The market is expected to continue to grow. Academic level of study is split 50/50 between undergraduate and graduate. Approximately 40-percent of the Saudi students pursue either business/management or engineering. However, this is one group which has more extensive English Language assistance. If NJIT is to pursue this

population, a successful negotiation for ESL programs with a partner institution is very important.

Brazil

The Brazilian government recently launched the *Scientific Mobility* scholarship program to encourage Brazilian students to pursue STEM disciplines. Students receive full funding from Brazil. It is expected that student enrollments from Brazil will expand to nearly 50,000 over the next four years. With a large Portuguese population in the area, Newark should be more comfortable for Portuguese speaking Brazilian students.

Vietnam

Vietnam has a rapidly expanding middle class with the desire to study abroad. Nearly 25-percent of its population is under the age of 25. Interest in study is largely at the undergraduate level. Funding is an obstacle for some Vietnamese students.

Turkey

Turkish students primarily study at the graduate level with approximately 40-percent enrolled in engineering or business/management. The youth population in Turkey account for 30-percent of the total population. Bleak job prospects in Turkey combined with the selectivity of admission to Turkish universities will prompt students to consider studying abroad.

3.2. *Undergraduate Education*

For the first time in 11 years the number of international *undergraduate* students studying in the US is greater than international *graduate* students. NJIT currently enrolls 318 international undergraduate students (56 India, 23 Nigeria, 20 Brazil, 17 China, and 14 South Korea). NJIT does not recruit international undergraduate students in any proactive way. There is an opportunity to increase this enrollment by targeting a few markets (China, Viet Nam, Saudi Arabia, Turkey and Brazil) with a minor investment of resources and the possible use of 3rd party recruiters in those countries.

4. Threats

There are several factors that will threaten the global recruitment market for NJIT. These threats include cost, limited portfolio of global markets, and competition.

4.1. *Cost*

The cost of tuition and fees for an international undergraduate student is still within reach; however, it is a different case for the international graduate student. Graduate tuition costs for international students have reached a point where NJIT may no longer be viewed as an 'affordable' choice. Couple the tuition cost with the cost of living expenses in the New York/New Jersey metropolitan area and the affordability of enrolling at NJIT becomes a tougher sell. International students may seek universities in other parts of the US where tuition and/or living expenses are more affordable. NJIT may need to give serious consideration to an alternative tuition structure to attract more qualified international students.

4.2. *Limited Portfolio of Global Markets*

NJIT's international student enrollment comes from China and India with small numbers of students coming from elsewhere in the world. Relying on only two markets is a gamble. There is a chance that NJIT could lose a significant source of enrollments/revenue should something take place in the world that is beyond the university's control. There is a need for a greater balance of students from around the world. NJIT must diversify its portfolio of countries by developing a portfolio of recruitment tactics. This requires a commitment of resources by the university to recruit internationally.

4.3. Competition

All universities, both within and outside the United States, recognize the value of the international student. Competition is already keen and will continue to grow to recruit and enroll students from across the globe. NJIT must begin to strategize how to compete with the rest of the world. The university must develop tactics which distinguish itself from the competition. The status quo is not acceptable.

5. Summary

One can conclude that NJIT is at a crossroad in the global recruitment market. While the university has long been a top choice for international students, success in the future is largely dependent upon the development of a strategic recruitment plan. Such a plan will provide the university with a pathway to remain competitive in the global market. Without a strategic recruitment plan that specifically speaks to the international student market (in addition to the national and regional markets) the university will be faced with uncertainty and with no direction with which to navigate global markets.

Chapter 5

Recommendations

Considering all of the information gathered by the committee and presented in preceding chapters, the committee has arrived at several recommendations that if implemented, should contribute to NJIT's achieving the enrollment projections that follow. Not any specific recommendation will determine the outcome, and neither will omitting any one lead to the institution failing to achieve the projection, and other recommendations will likely be included in the final plan to be submitted in the summer of 2013. However, the committee contends that the preliminary recommendations are all important to both achieving the projection but to building a strong and robust academically oriented institution.

These recommendations are made to be better positioned to reach our enrollment projection for the five year period of 2015-2020.

Organizational

- Adequately staff the graduate school to handle admissions and administration to minimize delays and optimize efficiencies when working with prospective graduate students
- Locate select programs at satellite locations in New Jersey
- Include non-traditional course scheduling which may include cohort-based rolling start programs
- Re-cast the Enrollment Management Committee into a Strategic Enrollment Planning (SEP) Committee, charged with the implementation of this plan (strategies and tactics, both short-term and long-term); the Retention Implementation Committee should work in partnership with the SEP Committee
- Restructure the Graduate Studies office (implement the previously approved graduate school) to include responsibility and resources for marketing, recruiting and admitting MS and PhD students in all markets
-

Recruitment

- Create and implement a graduate recruitment and marketing plan
- Utilize professional recruiters located in targeted countries around the world for both undergraduate and undergraduate students
- Actively recruit at New Jersey high schools with high achieving students to try to elicit more to remain in New Jersey and to attend NJIT

Facilities and Funding

- Allocate appropriate and adequate resources to implement retention strategies across all levels (undergraduate and graduate)
- Upgrade facilities across campus; establish a cross campus committee to prioritize need
- Upgrade and maintain a state of the art technology infrastructure through annual ongoing "maintenance" allocations and a complete dedication of the technology fee to this purpose
- Provide funding to the appropriate offices in Academic Support and Student Affairs to develop and run campus wide "signature" events to bring the community together, promote campus spirit and pride, and to engender engagement with NJIT and the community beyond

- There is, in effect, no dedicated recreational space on campus. This is an area that must be addressed in order to satisfy the growing recreational and intramural needs of our students.

Programs and Services

- Centralize academic advising and utilize professional advisers with faculty mentors/partners to work with students on non-curricular/registration issues
- Create an ESL cooperative relationship with an academic partner(s) (community college)
- Assign all entering students to a learning community or related cohort to optimize opportunities for engagement
- Expand on-line programs and course offerings whether utilizing in-house systems or third party approaches
- Improve student life by expanding social spaces and social, financial support

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Chapter 6

2015-2020 Enrollment Target Projections

Enrollment to 2015

As stated in the 2007 NJIT Strategic Plan, the enrollment headcount goal for fall 2015 is 11,000. Two models are presented below. Using historical trends, and accounting for several new initiatives, the charts project the growth necessary to achieve this goal. The undergraduate increases are expected to result from retention initiatives, with only modest increases in the new student populations. The graduate increases are predicted based on new initiatives in the online graduate market. Therefore the starting point/baseline for the 2015-2020 plan is 11,000, with approximately 30% graduate students and 70% undergraduate students.

In Model #1 below, increases are experienced by utilizing an online initiatives model with Masters students as the primary group that achieves the 11000 student goal for fall, 2012. A very modest increase in undergraduates, however, is projected.

MODEL #1

NJIT Enrollment History and Projections to Fall 2015

Masters Student Online Initiatives Model

| | Actual | | | | Projected | | |
|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 2009-2010 | 2010-2011 | 2011-2012 | 2012-2013 | 2013-2014 | 2014-2015 | 2015-2016 |
| Total Undergrad | 5,924 | 6,102 | 6,604 | 7,121 | 7,234 | 7,454 | 7,604 |
| Total Grad (MS + PhD) | 2,916 | 2,824 | 2,954 | 2,822 | 3,122 | 3,322 | 3,622 |
| Total Headcount | 8,840 | 8,926 | 9,558 | 9,943 | 10,356 | 10,776 | 11,226 |

Model 1 adds 300 MS students each year per the online MS initiative, with only modest growth in Undergraduates.

The next model (Model #2 below) demonstrates growth in the student body by modestly increasing retention, particularly in the undergraduate population but also among graduate students. This model does not include the increases expected by the online initiative, thus if this model is accurate and the university finds success in the online programs, the enrollment growth will be much stronger than projected.

MODEL #2

NJIT Enrollment History and Projections to Fall 2015

Improved Retention Model

| | Actual | | | | Projected | | |
|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 2009-2010 | 2010-2011 | 2011-2012 | 2012-2013 | 2013-2014 | 2014-2015 | 2015-2016 |
| Total Undergrad | 5,924 | 6,102 | 6,604 | 7,121 | 7,334 | 7,554 | 7,781 |
| Total Grad (MS + PhD) | 2,916 | 2,824 | 2,954 | 2,822 | 2,969 | 3,117 | 3,273 |
| Total Headcount | 8,840 | 8,926 | 9,558 | 9,943 | 10,303 | 10,671 | 11,054 |

Model 2 follows historical growth patterns but with increases gained by improved retention instead of increasing new student enrollment and does not include predicted increases from the online initiative.

The actual numbers will likely be some blend of both models, but we are confident that given the appropriate resources, we can arrive at the 11,000 starting point in fall 2015. The more difficult goal of 37% graduate enrollment seems unlikely in the second model, but quite possible in model 1. Neither model includes any graduate student recruitment changes nor in international student recruitment, both of which will be undertaken, therefore, the goal of 11,000 students is likely to be exceeded and give us an advance “attack” on the 2020 goal.

Enrollment Beyond 2015

Enrollment target projections for beyond 2015 should be more precisely calculated in the upcoming 6-9 months using the data and information gathered in the Strategic Enrollment Planning process. These include the information presented earlier in this report and include considering demographics of the state, nation, and world to arrive at a more precise target. Particular attention needs to be given to the composition of the college-bound population in terms of gender, ethnicity, ability to pay, career interests, etc. We feel that the enrollment prediction (Model 3, page 27) for 2020 is possible if recommendations in this plan are implemented.

If we use the same modeling scenarios as done above, we can extrapolate our enrollment through 2020. The Model 1a below shows the same modeling as Model 1 above:

MODEL #1a

NJIT Enrollment Predictions to fall 2020

Masters Student Online Initiatives Model

| | Predicted | | | | |
|-----------------------|-----------|-----------|-----------|-----------|-----------|
| | 2015-2016 | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 |
| Total Undergrad | 7,604 | 7,756 | 7,911 | 8,069 | 8,190 |
| Total Grad (MS + PhD) | 3,622 | 3,822 | 4,022 | 4,222 | 4,422 |
| Total Headcount | 11,226 | 11,578 | 11,933 | 12,291 | 12,612 |

Model 2a, shown below, demonstrates growth in the student body by modestly increasing Retention as was the case in Model 2 above, particularly in the undergraduate population but also among graduate students. This model also does not include the increases expected by the online initiative, thus if this model is accurate and the university finds success in the online programs, the enrollment growth will be much stronger than projected.

MODEL #1a

NJIT Enrollment Predictions to fall 2020

Improved Retention Model

| | Predicted | | | | |
|-----------------------|-----------|-----------|-----------|-----------|-----------|
| | 2015-2016 | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 |
| Total Undergrad | 7,781 | 8,014 | 8,254 | 8,502 | 8,757 |
| Total Grad (MS + PhD) | 3,273 | 3,371 | 3,438 | 3,507 | 3,577 |
| Total Headcount | 11,054 | 11,385 | 11,692 | 12,009 | 12,334 |

We must recognize the importance of putting resources into place that will permit appropriate levels of recruitment, in the region, nationally and internationally; that permit the appropriate renovation and repair of facilities on campus, academic and social, to permit a competitive stance in this arena; and appropriately increasing and applying academic resources to programs and majors that will be in strong demand during and beyond the timeframe of this plan. We must also develop the learning delivery systems that will address education for the 21st century. Universities that will be the most successful will be deliver education in “different modalities, various localities and to all nationalities” (Fey, 2012). NJIT can be at the forefront if it aggressively moves to hybrid and online programs and courses, looks at locations other than its Newark campus and to recruit and partner in targeted countries around the world.

Once an understanding of how retention, international recruitment, online programs and attention to the doctoral student pipeline and completion issues impact enrollment, a comprehensive model was developed. Model 3 below summarized all of the previous predictions and incorporates them into one chart. This comprehensive look predicts a total headcount of enrollment in the fall 2020 to be 14,248 students.

Model 3

NJIT comprehensive Enrollment Predictions for fall 2020

| CLASSLEV | Enrollment | Anticipated Graduation | Potential Enrollment | Projected Enrollment from Retention | Projected Retention Rates |
|-----------------------|------------|------------------------|----------------------|-------------------------------------|---------------------------|
| 1 (Freshman) | 1656 | 0 | 1656 | 1457 | 0.88 |
| 2 (Sophomore) | 1514 | 0 | 1514 | 1378 | 0.91 |
| 3 (Junior) | 2031 | 81 | 1950 | 1814 | 0.93 |
| 4 (Senior) | 2642 | 1453 | 1189 | 951 | 0.8 |
| 5 (Non-Matriculantes) | 781 | 0 | 781 | 0 | 0 |
| 6 (Graduate Students) | 3492 | 1222 | 2270 | 1839 | 0.81 |
| 6(b) Online Master's | 2000 | 320 | 1680 | 1176 | 0.7 |
| 7 (Non-Matriculantes) | 132 | 0 | 132 | 0 | 0 |
| Total Students | 14248 | 3076 | 11172 | 8615 | |

The enrollment predictions are an attempt to forecast the overall enrollment for NJIT given the many assumptions discussed in this report. The committee feels that this prediction, while a stretch for the institution, is achievable if NJIT is committed to adopting those recommendations contained herein.

Summary

This report has examined factors ranging from socio-economic, markets locally, regionally, nationally and internationally. Utilizing the burgeoning online market is also one of the strategies that promise the most potential enrollment growth. However, international students pose a very attractive market for NJIT to explore and to exploit, in the most positive sense of the word. By taking advantage of the possibilities currently underway with EmbanetCompass where they are committed to bringing 1000 students into nine programs and are projecting as many as “three times that number” when all programs are up and running. Our international student market is ripe for expansion with a real possibility of increasing the population by 500 students among both undergraduate and graduate students. This will be best accomplished by utilizing 3rd party recruiters and some direct attention from the NJIT admissions staff. The pipeline from the community colleges should be fruitful during the decade of the teens leading up to 2020. More and more students are choosing two year institutions to begin their academic careers. NJIT is positioned to take advantage of this pipeline with its STEM orientation. With careful attention and marketing of our programs to the community college students, this population can increase substantially. Additionally, the transfer population has a higher success rate than NJIT’s native student population, thus they would be a boon to NJIT’s commitment to producing the next generation of scientists, engineers, technologists and Mathematicians.

The NJIT enrollment prognosis is bright and the Strategic Enrollment Management Planning committee is confident in its projection of an enrollment of 14,248 students by 2020 given the appropriate attention to the recommendations made herein and in the companion Academic Plan.

References

1. Council of Graduate Schools (2012). *Findings from the 2011 CGS International Graduate Admissions Survey, Phase III: Final Offers of Admissions and Enrollment*. Washington D.C.
2. Fey, C.J. (2012). *Student affairs: Past, present and future*. Division Meeting, University of Akron, Akron, OH
3. Jamrisko, M. & Kolet, I. (August 15, 2012). *Cost of College Degree in U.S. Soars 12 Fold: Chart of the Day*. Bloomberg.com. Retrieved from <http://www.bloomberg.com/news/2012-08-15/cost-of-college-degree-in-u-s-soars-12-fold-chart-of-the-day.html>
4. Institute of International Education (2011). *What International Students Think About U.S. Higher Education: Attitudes and Perceptions of Prospective Students in Africa, Asia, Europe and Latin America*. New York, NY.
5. Institute of International Education. (2012). *Open Doors 2012*. Retrieved from <http://www.iie.org/Research-and-Publications/Open-Doors/Data>
6. McMurtrie, Beth. (2012, November 12). China Continues to Drive Foreign-Student Growth in the United States. *The Chronicle of Higher Education*. Retrieved from <http://chronicle.com/article/China-Continues-to-Drive/135700/>
7. National Student Clearinghouse (2011). *National Postsecondary Enrollment Trends: Before, During, and After the Great Recession*. Herndon, VA.
8. World Education Services. (2012). *Beyond More of the Same: The Top Four Emerging Markets for International Student Recruitment*. Retrieved from <http://www.wes.org/ewenr/12oct/feature.htm>