

PERIODIC REVIEW REPORT
TO THE
MIDDLE STATES COMMISSION
ON HIGHER EDUCATION

**RUTGERS, THE STATE UNIVERSITY
OF NEW JERSEY**

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Periodic Review Report
to the
Middle States Commission on Higher Education

Rutgers, The State University of New Jersey

June 1, 2003

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EXECUTIVE SUMMARY

Rutgers, The State University of New Jersey has undertaken the MSA Periodic Review Report at a time of potentially great change. With a new president, major economic pressures from state budget deficits, and a possible restructuring of New Jersey's public research institutions, the university faces significant challenges and opportunities. The university has continued the academic progress documented in the 1998 Middle States review, has made significant progress since that review, and has responded proactively to the recommendations of the MSA review teams.

Rutgers' accomplishments since the 1998 MSA review are clearly delineated in the Periodic Review Report. Five years ago, in introducing the university's decennial report, we noted that American higher education was in the midst of dynamic forces that are forging dramatic change. Those challenges are even more salient now as the university addresses long-term public underfunding, challenges to affirmative action, the ongoing revolution in technology, increased societal expectations coupled with declining resources, an increasingly diverse student body, and the need, now more than ever, to prepare students for lifelong learning and civic engagement.

This Periodic Review Report, building on the 1998 self-study, focuses on the same critical components of Rutgers' response to issues of major importance in the current debate on higher education in this country, including the nature of undergraduate education, the future of graduate/professional education and research, the challenge of constantly evolving information systems/information technology, and the importance of organizational quality and communications. The first two themes directly address the mission of the modern research university; the latter two are essential complements to these, making teaching and research productive. In addition, this report documents developments at each of the three regional campuses. Rutgers, as a large and extremely complex institution, is moving toward a new level of excellence and accomplishment. The university's 2003 Periodic Review Report documents recent developments on the path to that goal. At the same time, the report identifies existing impediments that must be overcome for Rutgers to achieve its potential as a preeminent institution of higher learning.

Chapter I provides a brief overview of the significant changes the university is currently undergoing. A new president is bringing fresh ideas and a clear vision for academic excellence and administrative efficiency. A gubernatorial proposal to restructure the public research institutions could fundamentally alter the structure of Rutgers University. And severe cuts in public funding could undermine academic programs and profoundly affect affordability and access. Noteworthy positive developments since the MSA visit are discussed in Chapter II, including faculty awards, sponsored research, private giving, diversity, strategic planning, program development, academic incentive programs, physical master planning, and the relationship with the state. On measures of visibility, reputation, faculty accomplishments, diversity, federal and corporate funding, and innovative programs to enhance undergraduate, graduate, and professional programs, the university has made significant strides since the last review. Chapter III addresses the special topics that were the focus of the MSA visit: undergraduate education, graduate and professional education, information systems and technology, and organizational development and leadership. In each case, the accomplishments are described in the context of the work that remains; the report makes clear that the university could and should improve in all of these areas and identifies specific steps being undertaken to address deficiencies. Chapter IV provides an overview of the context of assessment at the university, another area clearly identified in the 1998 report as requiring improvement. Here, advances in technology, coupled with a concerted university-wide effort to enhance assessment and accountability, are paying off with better mechanisms for assessment within the university and in comparison with other AAU institutions. Chapter V describes service activities and Chapter VI

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focuses on governance and communications. Chapter VII addresses specific concerns raised in the self-study and the MSA team evaluation by reporting on significant developments on each campus. The URL addresses for supplementary materials, such as college catalogs and the university's latest financial report, are listed at the end of the report.

The university-wide Periodic Review Report Oversight Committee, responsible for preparing the MSA Periodic Review Report, was chaired by Professor Barry V. Qualls, Dean of Humanities, Faculty of Arts and Sciences-New Brunswick. To assure broad involvement in the PRR process, the Oversight Committee membership included faculty and administrators from all three campuses and representatives of the four special topics areas identified in the 1998 self-study (Undergraduate Education, Graduate/Professional Education, Information Systems/Information Technology, and Quality and Communications Improvement) as well as the University Senate.

The Oversight Committee was charged with providing a report to the Middle States Commission that demonstrates how Rutgers University meets the standards by which the Commission reaffirms accredited status, as outlined in *Characteristics of Excellence in Higher Education*. By directly addressing the recommendations of the 1998 report, this Periodic Review Report responds to the results of the entire review process. Materials were collected from those administrative offices responsible for each of the areas for which the evaluation team made recommendations or suggestions. The Committee reviewed these materials, as well as the university's self-study documents and the team evaluation report. In Spring 2003 a draft report was developed. Following further reviews, the Oversight Committee completed its report in May 2003.

The preparation of this Periodic Review Report provided opportunities for constructive discussion involving diverse groups within the Rutgers community about recent institutional developments and current institutional issues. A draft of the report was posted on the university's public website for input by the entire university community and comments were solicited from the University Senate Executive Committee and from other members of the University Senate. In addition, the governing boards reviewed the report and were asked to provide input. This important experience in the institutional accreditation cycle is useful for the university in evaluating progress since its last self-study and is helpful with long term planning.

The report documents significant developments. Faculty have garnered important recognition, such as induction as Fellows in the American Academy of Sciences and Fulbright Fellowships, as well as prestigious awards from professional associations for career achievements. Sponsored research is providing increasing resources for research programs. Last year's record total of over \$242 million was more than \$95 million above the total just five years ago. The university is in the midst of a \$500 million capital campaign, scheduled to end in June 30, 2004. As of March 1, 2003, more than \$470 million had been raised. Until FY2002, each successive year of the campaign netted significantly more resources, reaching a record of \$123.3 million in FY2001. This pattern did not continue last year, because Rutgers, in line with other higher education institutions, experienced the effects of the U.S. economic slowdown and reduction in private donations.

Rutgers continues to foster an environment that highly values diversity in its student body and its faculty. Among AAU public institutions, the university ranked second in the percentage of African-American students enrolled, eighth in the percentage of Asians enrolled, and eleventh in percentage of Latino students enrolled. Rutgers also ranked third in the percentage of women enrolled. Among AAU public institutions, Rutgers was fourth highest in percentage of African-American faculty, twelfth highest for

minorities overall, and seventh highest in percentage of women faculty. Despite this track record of accomplishment, the university acknowledges it can and will do more to nurture, foster, and promote diversity in all areas of its mission.

At the time of the 1998 MSA self-study process, the university's strategic plan, *A New Vision for Excellence*, had been in effect for three years, following Board of Governors approval in 1995. Since its inception, the plan has focused university attention on its basic values: excellence in teaching and learning, research and discovery, and public service and community engagement; the importance of diversity, access, and affordability; responsiveness to emerging needs; interdisciplinary cooperation; international perspectives; intercampus collaborations; partnerships with government, business, and other schools; and the integration of information technology into academic endeavors. The plan identified 12 areas of particular strength as the basis for academic growth to foster excellence and advance Rutgers to stand with the best of the nation's comprehensive public research universities. It tied these academic strengths to fiscal resources and leveraged outside funding through an internal reallocation program that supported scores of innovative projects. The \$26 million of Rutgers resources devoted to these projects over a seven-year period is associated with more than \$365 million in external support, a return on investment of over 14 to 1.

In the area of program development, over the last five years a total of 27 new degrees were approved, including 12 at the graduate level. In addition, approximately 19 new centers and institutes for research and outreach were established.

During the same time period, a wide range of incentive programs, funded mainly by the state and through internal reallocations, fostered innovation in instruction and research throughout the university. Some of these programs were designed to leverage significant new external resources, primarily from federal funding agencies. Others, supported by state funds, have been critical for the university's development, but are now in jeopardy with the proposed state budget cuts for FY2004.

An extensive physical master planning process is also under way. Campus plans, intended to serve as tools for decision-making and the allocation of resources, are being developed in concert with the academic and research goals outlined in the university Strategic Plan. The plans will also provide data and frame major policy issues regarding the university's organization and future enrollment levels for consideration by the university administration and governing boards.

In the area of undergraduate education, the university has developed and implemented a range of curriculum development programs, including university-wide offerings, undergraduate research and scholarship programs, courses designed to enhance science education, information literacy and instructional technology programs, and programs to enhance multicultural understanding. These programs are illustrative of the myriad opportunities Rutgers is providing to its undergraduates. Some of these programs are designed to support the University-wide Learning Goals, goals which define the skills and knowledge that all Rutgers University students will acquire to support their development as responsible citizens and productive contributors to society, in their workplaces and in their intellectual, cultural and social endeavors. Areas addressed by the goals include critical thinking, oral and written communication, mathematical reasoning and analysis, scientific inquiry, information and computer literacy, historical understanding, multicultural and international understanding, literary and artistic expression, understanding the bases of individual and social behavior, understanding the physical and biological world, citizenship education, and ethical awareness. Providing more opportunities for undergraduate research has been another important thrust. Other innovative undergraduate programs

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focus on science education, information literacy, and bringing the benefits of technology into the classroom. And many new programs provide students with opportunities to develop positive awareness of multicultural issues.

In the area of graduate education, in addition to innovations in programs, resources have been reallocated to address concerns of the Middle States review. The university recognizes that a key element in attracting excellent faculty members to the university is the continued ability to recruit excellent graduate students to work with them. Since 1998, significant resources in the form of financial support and selective tuition remissions have been made available to recruit and retain the best graduate students, especially in programs that are of the highest strategic priority. To compete with peer institutions, resources have been shifted so that deans now have the flexibility to tailor unit-specific strategies for increasing graduate student support with maximum effectiveness. University funds have also been allocated to the graduate units for increasing the stipends of existing graduate fellowships and graduate assistantships in priority programs, for creating new fellowships or assistantships, and for providing tuition support to graduate students. A portion of the funding is also being used as matching support for academic year tuition remissions in new grant proposals or existing external awards that had been renewed. The objective has been to increase external funding of graduate students by leveraging university resources for new external grants or renewal of existing grants. The university is cognizant, however, that further improvements in support of graduate students are needed to ensure Rutgers' competitive position.

The enhancement of graduate/professional education depends, in part, on understanding the context of U.S. higher education. The university understands that comparative data are very useful to graduate program directors and deans and has made significant progress in benchmarking key indicators.

The Rutgers University Libraries have undergone significant change since the 1998 Middle States review. The rapid development and expansion of networked electronic resources and the reinvestment in library collections over the five years since the MSA report have made this transformation possible. While the Libraries' continued substantial reliance on one-time funding is problematic, significant progress has been made in base funding and especially non-state funding. The utilization of the increased funding has been guided by the Libraries' five year plan, *A Bridge to the Future: The Rutgers Digital Library Initiative*, completed in March 1999, the development of which was recommended by the MSA team. *A Bridge to the Future* complements the university's Strategic Plan.

The university is also moving ahead with technology initiatives. Since the MSA review, a university-wide *Information Technology Coordinating Committee* (ITCC) has been formed. This group is charged with providing advice and counsel to the President's Cabinet on a variety of IT matters, including user needs, resource efficiencies, IT support, best practices and standards, information protection and security, integrated planning, and enhancement of computing and telecommunications environments. The diverse membership of the committee brings together a cross section of administrative, academic and technology planners who offer varying views and perspectives for consideration, but the resultant recommendations will be those that best support and advance the university's goals. The ITCC is also formally linked to campus-based computing committees.

The Reinvest in Rutgers program, a centralized resource distributed to projects on all three campuses, has also played a positive role in supporting technology development in the service of instruction. With Reinvest resources, the university implemented an Instructional Technology Initiative to foster instructional improvements and encourage the innovative use of web-based technologies across all of its

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campuses. The program uses internal funds to support pilot projects that promote the infusion of technology into teaching and learning and the restructuring of core courses. Examples include a virtual biology laboratory, enhanced techniques for teaching literature in a foreign language, and emerging visualization technologies.

In the time since the Middle States review, the Teaching Excellence Centers on each of Rutgers' three regional campuses have also enhanced instruction through the innovative use of technology and through expanded seminars and workshops for faculty on the improvement of teaching, evaluation and assessment, and the use of instructional technologies. Workshop topics focus on instruction-related technology tools, including the use of email for teaching, how to conduct online discussion groups, web page design for instruction, the use of Photoshop, and the development of courseware products for online instruction.

The technology initiatives are supported by planning begun in the late 1990s to identify ongoing support mechanisms for RUNet 2000, the university's ambitious voice, video, and data enhancement program. The Board of Governors approved ongoing support for operation and maintenance of the RUNet 2000 infrastructure, including staff lines for the Rutgers University Computing Services telecommunications support and network security.

Since the MSA review, the Center for Organizational Development and Leadership (ODL), formerly Quality and Communications Improvement, has successfully broadened its efforts on all campuses to engage and serve faculty, staff, students, and external groups. Through a needs assessment, ODL involved the academic community in helping to shape the agenda to be addressed by the Center and its programs. Based on this information, the Center has focused attention on facilitating conversations between faculty and administration on institutional change, creating a forum for the discussion of leadership theory and practice, and assessing and promoting organizational change. Since the report of the Middle States team, the Center established a five-year plan for identifying and collecting critical success measures. The approach began with a clarification of the mission and core program areas and the identification of measures to assess its effectiveness.

The area of outcomes assessment has been a central focus of academic administrative efforts to enhance scholarship and instruction at Rutgers in the years since the Middle States review. Assessment programs have been central to the research design of grants to improve undergraduate education, initiatives to enhance undergraduate science education specifically, programs to stimulate effective use of technology in undergraduate instruction, and programs to enhance multicultural understanding. Assessment has also played an important role in faculty support initiatives and in program evaluation.

Similarly, assessment has played an increasingly important role in graduate/professional programs, and in university-wide testing and placement, general education assessment, data and analytical support, and academic support. The Office of Institutional Research and Academic Planning has strengthened its collection and use of data about graduate programs in a variety of ways, including development of a data warehouse to support data marts that provide accessible and reliable data about graduate education at Rutgers. However, since graduate programs are not directly tied to budgetary lines, the gathering of data about students and especially faculty is not a straightforward process. An ongoing effort in the development of the data warehouse has been to relate students and faculty accurately to specific programs. In addition, surveys, administered at key points in students' academic careers will provide longitudinal data to assist planning efforts.

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The state's economic competitiveness and quality of life are dependent on an educated citizenry and a technically trained workforce that advances New Jersey's place in the education and development of high-tech entrepreneurs, industries, and companies. The New Jersey economy is driven by knowledge, information, and technology. Rutgers is playing a pivotal role in helping New Jersey address the challenges of the future. By facilitating industrial support of faculty research and commercialization of technology developed at Rutgers, the university promotes economic development of the State.

Rutgers has an impressive record of technology transfer. It has increased its annual U.S. patent applications six-fold from 21 in FY 1991 to 129 in FY 2001. U.S. patents issued to Rutgers faculty more than tripled from 10 in FY 1991 to 35 in FY 2001. Rutgers faculty have created 48 spin-off companies, including 35 in New Jersey. Annual licensing income increased from \$1.7 million in FY 1991 to \$4.8 million in FY 2001.

Rutgers faculty and staff work in every area of New Jersey, serving teachers all over the state, agriculture in the southern part of the state, and businesses in the central and northern part of the state. For example, Rutgers-Newark plays a leadership role in many local and regional consortiums and foundations, including the Regional Business Partnership, the Newark Foundation, University Heights Science Park and its affiliated Science Academy, and the Council for Higher Education in Newark. Programs also bring the university together with the business community and local ethnic communities, such as the Portuguese immigrant community in Newark. Individual schools have a range of programs to serve community needs, such as law and nursing clinics, programs for teachers, and programs for high school students.

Rutgers is committed to the enhancement of shared governance structures and mechanisms as well as improved inter- and intra-campus communications. The university's governing boards and the University Senate continue to play key roles in the university's governance. Each campus also has multiple institutions to guarantee faculty and student voice in key decisions affecting the university. President McCormick's newly reconfigured administrative structure, with two executive vice presidential positions – one for academic affairs and one for administrative affairs – is designed in part to make administrative systems more comprehensible to the university community. At the same time, the President is committed to integrating faculty more closely into the academic administration of Rutgers. These changes will further enhance the university's goals in shared governance.

The reconfigured administrative structure, which will enable the university to operate at a high level of efficiency, is consistent with the President's key values for his administration. These include transparency and openness in communications; service to students, faculty, and academic programs; devolution of authority from central administration to the university's campuses and units, whenever and wherever local decision-making can improve quality; teamwork and collaboration; and clarity of responsibilities and functions.

Rutgers is moving ahead to gain greater visibility and to provide the public with more information about the university's contributions to the state. In Spring 2002, the University Relations Committee of the Board of Governors approved a constituency research project, whose goal is greater understanding of how New Jersey citizens view their state university. With the baseline data, Rutgers will be in a better position to plan effectively to promote the Rutgers story, and to build pride in and increase the appreciation and support of Rutgers in New Jersey.

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The university is accredited by the Middle States Commission as one university with three principal campuses in Camden, Newark, and New Brunswick. The same high academic standards are applied on all three campuses. Since the decennial MSA review, the strategic planning process has fostered more collaboration among faculty and, as a result, has enhanced the quality of research and instruction throughout the university.

In Camden, academic initiatives are energizing the campus and providing rich intellectual opportunities for students and faculty, including centers for Children and Childhood Studies, State Constitutional Studies, Policy Research and Public Service, Humanities, and Public Affairs, as well as collaborative work in Hybrid Materials Research and Information Processing in Complex Biological Systems. Reorganization of academic departments, development of joint degree programs, participation in graduate and professional programs in Newark and New Brunswick, and enhanced access to library materials have addressed many of the concerns of the 1998 MSA team. Plans for increased enrollment, updated equipment, and improved communications systems will contribute to enrichment of the lives of students and faculty at Rutgers-Camden.

Since the MSA review, Rutgers-Newark has developed innovative academic programs and increased enrollment. Total undergraduate, graduate and professional enrollment at Rutgers-Newark reached 10,346 in Fall 2002. In addition, the student profile for full-time regular admitted students has significantly improved while the commitment to diversity has been maintained. New centers for Metropolitan Studies; Information Management, Integration and Connectivity; and the Study of Terrorism and new joint academic programs with New Jersey Institute of Technology and the University of Medicine and Dentistry of New Jersey are enriching the intellectual life of the campus. Facilities improvements, programs to enhance diversity, and accomplishments in each of Rutgers-Newark's schools are enhancing educational opportunities. Improvements in the library system, communications, student services, and business administration are having positive effects on quality of life and on academic opportunities.

New Brunswick has also seen considerable academic development and improvements in academic and administrative services. New centers have been established in Environmental Prediction, Transportation, State Health Policy, Neighborhood and Brownfields Redevelopment, Children and Families, Urban Restoration Ecology, Early Education Research, Equine Science, Food Policy, and Advanced Energy Systems.

Rutgers is now experiencing strong enrollment pressures. As with public research universities in other states, the response to these pressures over the next few years is intimately tied to developments occurring within the state and to policy decisions being made at the state level. In 1998, the year of the MSA site visit, there were 65,106 high school graduates in New Jersey. This year, 83,970 are expected to graduate. This number will continue to grow over the next several years, reaching an anticipated peak of 97,270 projected for 2009, a growth of almost 42% in eleven years.

New Jersey has one of the highest rates of growth in the number of high school graduates, as well as one of the highest college-going rates among the states (66%). Projections based on present college attendance patterns show that the cumulative effects of increased first-year students will result in significant enrollment pressures at colleges and universities throughout the state.

Rutgers' ability to address these enrollment pressures depends, in part, on critical statewide events. In March 2002, New Jersey Governor James E. McGreevey created the Commission on Health Science,

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Education, and Training, and charged it with designing a framework to improve the quality of medical education, ensure educational excellence, and increase institutions' competitiveness. In October 2002 the Commission, chaired by P. Roy Vagelos, a member of Rutgers' Board Governors, presented its report to the Governor, recommending that Rutgers University, New Jersey Institute of Technology, and the University of Medicine and Dentistry of New Jersey be restructured into a single research university system with three distinct and autonomous university campuses in Newark, New Brunswick/Piscataway, and Camden. That same month the Governor accepted the Commission's report and recommendations.

A comprehensive process of review is under way. In December 2002 Governor McGreevey created the Review, Planning and Implementation Steering Committee to plan for the implementation of the public university restructuring. The Committee is also chaired by Dr. Vagelos. Other members from Rutgers include President McCormick, Board of Governors Chair Gene O'Hara, Board of Trustees Chair Leslie E. Goodman, and Professor of Political Science and Director of the John J. Heldrich Center for Workforce Development Carl E. Van Horn. Chair O'Hara and Chair Goodman are Rutgers alumni. Professor Van Horn is cochair of the steering committee's executive advisory committee, which will represent groups and organizations that are stakeholders in the current university structure. All three of the steering committee's university-based regional committees are co-chaired by Rutgers representatives. Newark Provost Steven Diner cochairs the Newark university committee, Camden Provost Roger Dennis cochairs the Camden/Stratford university committee, and University Vice President for Academic Affairs Joseph Seneca cochairs the New Brunswick/Piscataway university committee. Given the current state budget shortfalls, resources for the planned restructuring are not anticipated in the near future, but restructuring discussions continue.

The state is also engaged in a long-range planning effort that seeks to provide a clear vision for higher education in New Jersey and provide a long-term state plan to achieve that vision. Rutgers is represented in this process and fully supports its goals to develop a "capacity to serve a growing and diverse population." However, the state's long-range plans will be severely constrained by the budget cuts. In this environment, Rutgers must remain flexible in developing and modifying enrollment and budget projections.

The New Brunswick campus is now at capacity, so there can be no increases in enrollment in the next five years unless there are significant new state resources to accommodate more students. The university is planning some incremental growth in Camden and Newark. Planning for all campuses must remain fluid because of potential changes associated with the Governor's proposed restructuring and the state's long-range planning.

Over the last decade the university has made considerable progress in bringing together the varied resources of its faculty and students to build a stronger institution. The standards that unify the institution as The State University of New Jersey remain strong and are broadly supported. The issues raised in the university's self-study prior to the 1998 Middle States visit, and the issues raised by the MSA team, focus on quality in scholarship and instruction, assessment, governance, technology, and communications. These issues are central to the university's understanding of itself and to its ongoing commitment to its public mission. It is also critical to note, however, that as a public institution, the university's accomplishments can be seriously undercut with inadequate public support. The university actively continues to seek increased resources from the Governor, the Legislature, and other state officials and to make its case for public support for the furtherance of its mission.

I. GENERAL OVERVIEW

RUTGERS IN TRANSITION

Not since its reorganization in the early 1980s has the university community confronted such a “a momentous juncture in its history,” as new President Richard L. McCormick noted in his address to the New Jersey Legislature in December 2002. The state’s and nation’s economic uncertainties have forced on the university budget cuts of enormous consequences, forcing tuition increases that affect access, raising concerns about sustaining the university’s present strengths, and forestalling programs that have been envisioned for many years. See <http://www.rutgers.edu/statebudgetcuts/>. In addition, this year, as a result of the report by the Governor’s task force on Health Science, Education, and Training (<http://www.state.nj.us/health/hset/hset.pdf>) the university is potentially facing fundamental alterations in its structure, creating a public research university system comprised of three regional higher education institutions. This would involve uniting local Rutgers University campuses with adjacent medical and associated health-science schools of the University of Medicine and Dentistry of New Jersey and in Newark, with the New Jersey Institute of Technology. See <http://www.rutgers.edu/restructure>.

Nevertheless, the university has made significant strides since the 1998 Middle States Review, and has responded proactively to the recommendations of the MSA review teams. In the following pages, Rutgers’ progress over the last five years is clearly delineated. It is important, however, to begin with a brief description of two recent events that will profoundly shape the university in the near future, the appointment of a new president and the potential restructuring of public higher education in New Jersey.

APPOINTMENT OF A NEW PRESIDENT

In April 2002 the university launched a comprehensive presidential search for a successor to Dr. Francis Lawrence, who had announced in February his intention to step down and return to the faculty. In the months that followed, the university solicited input from the Rutgers community and the public at large, and the search committee considered hundreds of nominations. The search culminated on October 25, 2002 with the appointment by the Board of Governors and the Board of Trustees of Dr. Richard L. McCormick as the nineteenth president of Rutgers, effective December 1, 2002. Dr. Norman Samuels, former provost of the Rutgers-Newark campus, had served as acting president from October 3, 2002, and now continues as executive vice president of the university.

President McCormick, who had been serving as president of the University of Washington since 1995, embodies the qualities that Rutgers sought in its next leader: an individual of national stature and vast experience and accomplishment who is ready to engage Rutgers' community of students, faculty, staff and alumni—and to engage the state.

President McCormick began his career as an assistant professor of History at Rutgers–New Brunswick. He rose through the ranks to become professor of History (1985), Chair of the Department of History (1987–1989), and Dean of the Faculty of Arts and Sciences on the New Brunswick campus (1989–1992). In 1992 he moved to the University of North Carolina at Chapel Hill, where he served as Executive Vice Chancellor, Provost and Vice Chancellor for Academic Affairs. In 1995 he became President of the University of Washington.

President McCormick is actively involved in the work of a number of national and international education organizations including the Association of American Universities, the Business-Higher Education Forum, and the Council of Presidents of the Association of Governing Boards of Universities and Colleges.

Among his key priorities at Rutgers will be maintaining and enhancing Rutgers' academic quality and providing even greater service to the citizens of New Jersey.

Since becoming president of Rutgers, Dr. McCormick has received hundreds of letters and emails and has met with many groups of students, faculty, and staff to discuss ways of making the university a better place in which to learn and explore new ideas. These exchanges have strengthened his commitment to the core missions of teaching and research, to the quality of our students' education, and to the collective goal of academic excellence. He has also determined that Rutgers can achieve greater stature through a reorganized administrative structure that better supports its basic missions, empowers administrators to become even more effective and efficient leaders, and inspires a shared vision and organizational culture that is based upon a set of common values.

President McCormick has articulated five key values to guide his administration and has set in motion mechanisms to institutionalize his vision:

- The first is **transparency and openness**. A public university cannot be run in secret. For the university community to engage in meaningful discussions on important issues, everyone must have access to the facts. My administrative colleagues and I will continue to communicate broadly, often via email and websites, so that all members of the Rutgers community can obtain information about the most important issues we are facing. Openness and communication are especially important in times of financial constraint when everyone who wants to do so should be able to learn the facts about the budget. (For budget information please consult: www.rutgers.edu/statebudgetcuts.)
- The second value is **service**. The administration exists to build the academic excellence of Rutgers by serving students, faculty, and academic programs. The administration must serve our students so their experiences of learning and living at Rutgers are as full and intellectually rich as they can be. The administrative structure of the university must also support the faculty and staff so they, in turn, can provide outstanding instruction, research and public service. An orientation toward efficient, cost-effective service will be a hallmark of my administration.
- A third value is the **devolution of authority** from Old Queen's to the university's campuses and units, whenever and wherever local decision-making can improve the quality of our work. Responsibility should lie in the places where it can be most efficiently and effectively exercised. That includes our campuses in Camden and Newark, as well as appropriate units and offices in New Brunswick/Piscataway. Along with authority comes the accountability that extends from each individual member of the Rutgers community to the highest levels of the administration.
- The fourth value is **teamwork and collaboration**. We need to tear down any walls that separate us at Rutgers and replace them with bridges that link our departments and services. My administration will model the collegiality and cooperation that I hope will permeate every part of the university.
- Fifth and finally, my administration will place a high value on **clarity of responsibilities and functions**. Everyone in the Rutgers community should be easily able to learn which offices and people are entrusted with which duties and where to go to get the services that are needed. For a start, please consult:

www.president.rutgers.edu/structure.html for a basic organization chart and information about the central administration.

Consistent with these values, President McCormick has reconfigured the administration to establish two executive vice presidential positions – one for academic affairs and one for administrative affairs – each with clear lines of authority. His goal is to realign functions and resources in a manner that will enable the university to operate at the highest levels of efficiency in support of the excellence to which we aspire.

- The Executive Vice President for Academic Affairs will be the university's chief academic and budget officer and will be the clear number two position within the administration. The new Executive Vice President will have leadership responsibility for undergraduate and graduate education, research, academic labor relations, student services, admissions and financial aid, libraries, institutional research and planning, and continuing education. Responsibility for budgetary allocation will be moved to this position because the majority of the university's resources must be used to support its academic programs. The deans of the faculties and schools on the New Brunswick/Piscataway campus will report to the Executive Vice President for Academic Affairs. The deans of the undergraduate colleges in New Brunswick (Rutgers, Douglass, Livingston, and University College) will continue to report to the Executive Dean of the Faculty of Arts and Sciences. There will be no New Brunswick Provost. The Provosts of the Camden and Newark campuses will continue to serve as the chief academic and budget officers for their campuses and will report directly to the president. The administrative structures of the Camden and Newark campuses will remain as they are now, subject to decisions by the campus provosts. The Executive Vice President for Academic Affairs, working with the Camden and Newark Provosts, will provide leadership for cross-campus academic initiatives and programs. A national search for the new Vice President is under way.
- The second new position, the Executive Vice President for Administrative Affairs, will be the university's chief business administrative officer with responsibilities for finance, human resources, facilities management, capital projects, information technology, and business services. Effective April 1, 2003, this position will be filled by Ms. Karen Kavanagh, most recently the Vice President for Human Resources at the University of Washington.

Later this year, another position will be established, Vice President for University Relations. This area will be responsible for such programs as media relations, government relations, and community affairs.

PROPOSED RESTRUCTURING OF NEW JERSEY'S PUBLIC RESEARCH UNIVERSITIES

In March 2002, New Jersey Governor James E. McGreevey created the Commission on Health Science, Education, and Training, and charged it with designing a framework to improve the quality of medical education, ensure educational excellence, and increase institutions' competitiveness. In October 2002 the Commission, chaired by P. Roy Vagelos, a member of Rutgers' Board Governors, presented its report to the Governor, recommending that Rutgers University, New Jersey Institute of Technology, and the University of Medicine and Dentistry of New Jersey be restructured into a single research university system with three distinct and autonomous university campuses in Newark, New Brunswick/Piscataway, and Camden. That same month the Governor accepted the Commission's report and recommendations.

The Rutgers Board of Governors appointed a study group to review the Commission's report. Widespread discussion is in progress among the governing boards, faculty, students, staff, and alumni. The impact of the proposed restructuring on accreditation is one important consideration currently under

review among the constituencies of the Rutgers University community. This consideration is being undertaken in the context of the policy of the Middle States Commission on Higher Education that states:

Substantive change significantly alters the mission, goals, or objectives of an institution; alters the legal status, form of control, or ownership; . . . establishes instruction at a new degree or credential level; . . . establishes instruction constituting at least 50% of a degree program at a new geographic location; relocates the primary campus or existing branch campus; or otherwise affects significantly the institution's ability to support and to continue the support of existing and proposed programs.

In December 2002 Governor McGreevey created the Review, Planning and Implementation Steering Committee to plan for the implementation of the public university restructuring. The Steering Committee is chaired by Roy Vagelos; other members from Rutgers include President Richard L. McCormick, Board of Governors Chair Eugene O'Hara, Board of Trustees Chair Leslie E. Goodman, and Professor of Political Science and Director of the John J. Heldrich Center for Workforce Development Carl E. Van Horn.

Given the current state budget shortfalls, resources for the planned restructuring are not anticipated in the near future, but restructuring discussions continue. See <http://www.rutgers.edu/restructure>. For example, in New Brunswick, preliminary planning about enhancing the already existing strong relationships between life science programs at Rutgers and UMDNJ's programs at Robert Wood Johnson Medical School is under way. Similarly, enhancements of collaborations between Rutgers-Newark, New Jersey Institute of Technology and UMDNJ's New Jersey Medical School are being discussed, especially in life science areas such as neuroscience, neural imaging, computational biology, spectrometry, and nursing, as well as in areas such as business and homeland security. As restructuring continues, the university will keep the Middle States Commission on Higher Education fully apprised of planned changes.

IMPACT OF THE STATE BUDGET CRISIS

As a public university, Rutgers depends heavily on state support. But New Jersey currently ranks 32nd among the 50 states in state tax funds for operating expenses of higher education per capita and 41st in state tax funds for operating expenses of higher education per \$1,000 personal income. In response to a current state fiscal crisis, the State is proposing additional, severe cuts in appropriations. Rutgers, along with the state's other public colleges and universities, already received a 6.7% midyear cut in state funding in FY2002 that was made permanent in FY2003.

The New Jersey Commission on Higher Education calls for the state to fund two-thirds of the educational costs at New Jersey's state colleges and universities and for students to fund one-third of those costs. But the state share of educational costs for Rutgers, not including auxiliary services or grant-funded programs, fell from 64% in FY92 to 54% in FY02, while the student share increased from 36% to 46% over that same period. Proposed cuts will further this decline in state support.

The fiscal crisis is worsening:

- Under the Governor's FY04 budget proposal, the final payment of state funding to Rutgers in the current fiscal year will be reduced, cutting by \$13.8 million or 4.5% the state's FY03 appropriation to its flagship public university.
- Additional cuts will be made for FY04, resulting in a total FY04 operating appropriation reduction for Rutgers of \$39.4 million, or 11.9%. The proposed FY04 operating appropriation is actually less than the university received five years ago.

The impact on basic operations is significant:

- No state funding will be provided for FY04 salary increases at Rutgers or the other public colleges and universities. Because all union contracts expire June 30, 2003, the impact of unfunded employee salary increases is undetermined at this time.
- Funding for the state's Tuition Aid Grant (TAG) program will be increased by \$5.8 million to cover the projected growth in the number of recipients. However, the value of most individual awards will not change to reflect tuition increases in the coming year. But institutions will be required to fund an increase for their neediest TAG recipients. This unfunded state mandate will cost the university approximately \$2.8 million next year.

Critically important academic programs are in serious jeopardy; for example:

- Funding for the Outstanding Scholars Recruitment Program for high achieving students will be reduced. The estimated loss to the university is \$2 million next year; almost \$7 million over four years.
- Funding for cutting-edge research under the state's Commission on Science and Technology will be eliminated. Rutgers currently receives six grants worth \$2.9 million under this program.
- State-funded scholarly chairs will be eliminated. Rutgers presently has four such positions valued at a total of \$340,000.
- The state's incentive endowment fund that matches private gifts will be eliminated. Rutgers currently receives \$721,000 in matching funds under this program.
- Other state grant programs in arts, history, etc., will be eliminated or greatly reduced. Rutgers now receives over \$400,000 in funding from these programs.

The total impact of all of the previous and proposed cuts and mandated expenditures on Rutgers from now through FY2004 amount to more than twice the combined budget of all of the university's libraries. As a result, significant and difficult decisions will be required to offset these state budget reductions and to protect the quality of a Rutgers education. The decrease could mean cuts in university programs and services, enrollment caps or reduction, and significant tuition increases. All these possibilities are currently being considered as the university fights for restoration of the cuts.

BUDGET AND ENROLLMENT PROJECTIONS

Rutgers is now experiencing strong enrollment pressures. As with public research universities in other states, the response to these pressures over the next few years is intimately tied to developments occurring within the state and to policy decisions being made at the state level. In 1998, the year of the last MSA site visit, there were 65,106 high school graduates in New Jersey. This year, 83,970 are expected to graduate. This number will continue to grow over the next several years, reaching an anticipated peak of 97,270 projected for 2009, a growth of almost 42% in eleven years.

New Jersey has one of the highest rates of growth in the number of high school graduates, as well as one of the highest college-going rates among the states (66%). Projections based on present college attendance patterns show that the cumulative effects of increased first-year students will result in significant enrollment pressures at colleges and universities throughout the state.

The New Brunswick campus is now at capacity, so there can be no increases in enrollment in the next five years unless there are significant new state resources to accommodate more students. The university is

planning some incremental growth in Camden and Newark. Planning for all campuses must remain fluid because of potential changes associated with the state's restructuring and the state's long-range planning.

Rutgers' ability to address enrollment pressures depends, in part, on two critical statewide events: the Governor's plan for restructuring higher education, discussed above, and the state's higher education long-range planning process. The state's planning effort seeks to provide a clear vision for higher education in New Jersey and provide a long-term state plan to achieve that vision. A main objective of the long-range planning effort is to develop a "capacity to serve a growing and diverse population." An interim report of the Higher Education Long-Range Planning Committee in New Jersey outlined the significant goals in this effort:

- Support targeted increases in the capacity of New Jersey's higher education system to serve a growing and diverse population, using multiple strategies including facility preservation and expansion; increased use of technology; employment of human resources commensurate with the delivery of high-quality education; and enhanced coordination, collaboration, and efficiency.
- Establish state policy that supports the provision of opportunity to all New Jersey residents who can benefit from undergraduate and graduate education, reflecting a commitment to social justice and to segments of the community that are now underserved or underrepresented, and recognizing regional differences and differences in institutional missions.
- Actively promote and support the development and appropriate expansion of a diverse world-class faculty and staff to meet the demand for higher education by a growing and diverse population in New Jersey.
- Stem the tide of out-migration of students, especially those in high-demand disciplines and those who desire to attend college in New Jersey.
- Encourage and support specific state and campus initiatives to better reflect the state's ethnic, cultural, and racial backgrounds within all components of the campus community and to build on that diversity to promote social and ethical responsibility and understanding as well as the development of responsible citizens.

Rutgers fully supports the vision articulated in the state planning process. However, the state's long-range plans will be severely compromised by the previous and projected budget cuts. In this financial environment, Rutgers must remain flexible in developing and modifying enrollment and budget projections.

PREPARING THE MSA PERIODIC REVIEW REPORT

The university-wide Periodic Review Report Oversight Committee, responsible for preparing the MSA periodic review report, was chaired by Professor Barry V. Qualls, Dean of Humanities, Faculty of Arts and Sciences-New Brunswick. To assure broad involvement in the PRR process, the Oversight Committee membership included faculty and administrators from all three campuses and representatives of the four special topics areas identified in the 1998 self study (Undergraduate Education, Graduate/Professional Education, Information Systems/Information Technology, and Quality and Communications Improvement) as well as the University Senate. In addition to the chair, the following faculty and administrators served on the Periodic Review Report Oversight Committee: Joseph Barone, Professor and Chair, Department of Pharmacy Practice and Administration, Ernest Mario School of Pharmacy; Susan Forman, Vice President for Undergraduate Education; Janice Friedland, Executive

Assistant for Academic Affairs, Provost's Office, Newark Campus; Marianne Gaunt, University Librarian; Felix James, Associate Provost, Camden Campus; Roberta Leslie, Executive Associate, Office of the University Vice President for Academic Affairs; Joan Morrell, Professor, Center for Molecular and Behavioral Neuroscience; and Brent Ruben, Professor of Communication and Organizational Psychology, and Executive Director, Center for Organizational Development and Leadership.

Professor Qualls, who had chaired the Middle States Steering Committee for the 1998 MSA reaccreditation process, and Committee members are well-versed in the issues raised by faculty and administrators in the development of the 1998 self studies, as well as in the recommendations made by the MSA review team in its reaccreditation report.

President Lawrence charged the Oversight Committee to draft an analysis of the institution since its last evaluation, and to respond to the series of academic and administrative recommendations contained in the 1998 comprehensive reaccreditation review of the university by the Middle States Commission on Higher Education. The President charged the Committee to gather and interpret information regarding the university's implementation of the recommendations and to provide a report to the Commission that demonstrates how Rutgers University meets the standards by which the Commission reaffirms accredited status, as outlined in *Characteristics of Excellence in Higher Education*. The visiting team's evaluation reflected the university's own study, and the team's recommendations built on and brought forward recommendations from that self-study. By directly addressing the team's recommendations, this Periodic Review Report responds to the results of the entire review process.

The fact-finding process began with memoranda sent to those administrative offices responsible for each of the areas for which the evaluation team made recommendations or suggestions. The respective offices then submitted responses to the Oversight Committee. Where necessary, additional information was sought for the fact-finding process. Professor Qualls and Committee members reviewed materials, including the university's self-study documents and the team evaluation report. In Spring 2003 a draft report was developed. Following further reviews, the Oversight Committee completed its report in April 2003.

The preparation of this Periodic Review Report provided opportunities for constructive discussion involving diverse groups within the Rutgers community about recent institutional developments and current institutional issues. The Report was prepared for review by university advisory and governing bodies. The Report was posted on the university's website and comments were invited from members of the University Senate Executive Committee and from other members of the University Senate. The University Senate has a large membership including elected faculty, student and alumni representatives and administrators from the various faculties, colleges, schools, and units on the Camden, Newark, and New Brunswick campuses. In addition, members of the Rutgers Boards of Governors and Trustees were invited to provide comments.

This important experience in the institutional accreditation cycle has been useful for the university in evaluating progress since its last self-study and is helpful with long term planning. Submission of the Periodic Review Report to the Middle States Commission on Higher Education and to the designated external reviewers serves as the halfway point between the institution's decennial self-study submitted in 1998 and its next self-study evaluation peer review team visit scheduled for 2008.

ORGANIZATION OF THE REPORT

The university's report responds to the issues raised by the Middle States review team in 1998, which appear in italics in boxes throughout the text, as well as the issues raised in Rutgers' self-study prepared

for the accreditation review. Noteworthy developments since the MSA visit are discussed in Chapter II, including faculty awards, sponsored research, private giving, diversity, strategic planning, program development, academic incentive programs, physical master planning, and the relationship with the state. Chapter III addresses the special topics that were the focus of the MSA visit: undergraduate education, graduate and professional education, information systems and technology, and organizational effectiveness. Chapter IV provides an overview of the context of assessment at the university. Chapter V focuses on service and Chapter VI on governance and communications. The final chapter addresses the significant campus issues raised in the self-study and the MSA report.

II. SIGNIFICANT DEVELOPMENTS

Rutgers, The State University of New Jersey, has grown in size and quality since the 1998 Middle States review. This chapter provides data on growth in sponsored research and private support over time, examples of faculty achievements, the impact of strategic planning, academic program development, incentive programs, physical master planning, relations with the state, and state allocations. This chapter also provides AAU comparison data on enrollment diversity. More detailed information on undergraduate and graduate education is provided in Chapter III, Special Topics. In addition to the tables and figures presented in this Report, further data concerning university enrollment and fiscal trends are available in the 2002-2003 Rutgers *Fact Book*. For enrollment trend data, see <http://oirap.rutgers.edu/instchar/factpdf/enroll02.pdf>. For fiscal trend data see <http://oirap.rutgers.edu/instchar/factpdf/financ02.pdf>.

FACULTY AWARDS

Faculty awards are important indicators of the university's growth and development. The following selected list provides some examples from the last year:

- Four Rutgers professors were elevated to the rank of fellow by the American Association for the Advancement of Science (AAAS):
 - George F. Farris, professor of organization management and director of the Technology Management Research Center at the Rutgers Business School-Newark and New Brunswick
 - David H. Guston, associate professor at the Edward J. Bloustein School of Planning and Public Policy and member of the graduate faculty of the department of political science
 - Joachim Messing, University Professor of Molecular Biology and director of the Waksman Institute of Microbiology
 - Gerben J. Zylstra, professor in the biochemistry and microbiology department at Cook College and acting director of the Biotechnology Center for Agriculture and the Environment.

- Four professors on the New Brunswick campus received Fulbright Scholar grants for the 2002-03 academic year:
 - César Augusto Braga-Pinto, assistant professor in the department of Spanish and Portuguese
 - Angus Kress Gillespie, professor of American studies
 - Julia Ritter, assistant professor of dance
 - Stanley J. Vitello, professor in the department of educational psychology at the Graduate School of Education.

- Two scholars from the Camden Campus received Fulbright grants, and are traveling abroad during the 2002-2003 academic year:
 - Andrew Lees, professor of history, is lecturing and researching “Social Perceptions and Social Thought in Germany and the West” at Humboldt University
 - Richard Hyland, professor at the School of Law-Camden, is teaching and studying “Comparative Commercial Law-Common Law, Civil Law and the Vienna Sales Convention” at Tsinghua University in Beijing.

- Board of Governors Professor Yogesh Jaluria, member of the department of mechanical and aerospace engineering, received the 2002 Max Jakob Memorial Award from the American Society of Mechanical Engineers (ASME) and the American Institute of Chemical Engineers (AIChE).
- Noteworthy Newark faculty achievements include:
 - Suzanne B. Goldberg, assistant professor of law and director of the Women's Rights Litigation Clinic at the School of Law-Newark, received the annual Scholarly Papers Competition sponsored by the Association of American Law Schools (AALS)
 - Rachel Hadas, professor of English, received the O.B. Hardison, Jr. Poetry Prize, awarded annually by the Folger Shakespeare Library
 - Marc Holzer, chair of the department of public administration, and president of the American Society for Public Administration, received the 2000 Charles H. Levine Memorial Award for Excellence in Public Administration from the American Society for Public Administration.

SPONSORED RESEARCH

Sponsored research funding exceeded \$242 million in fiscal year 2002, a record for the university. Funding includes \$17 million in corporate support for research and development. Federal research and development funding continues to grow as indicated in the table below. See Chapter V, Service to the State, for a discussion of income from increased numbers of licenses and options from industrial applications of scientific research.

TABLE 1

Funded Research and Sponsored Programs (in \$ dollars)
Fiscal Years 1990 - 2002

FISCAL YEAR	FEDERAL	STATE OF NEW JERSEY	CORPORATIONS	FOUNDATIONS /OTHER	TOTAL
1990	46,059,810	22,876,757	10,508,923	13,364,888	92,810,378
1991	51,125,055	17,415,776	11,436,833	15,980,157	95,957,821
1992	70,826,955	17,377,134	13,175,844	14,842,059	116,221,992
1993	77,972,156	16,855,807	15,532,047	19,868,215	130,228,225
1994	93,395,283	24,446,601	11,119,324	20,450,561	149,411,769
1995	91,531,132	18,611,497	12,473,404	18,857,528	141,473,561
1996	90,948,104	22,484,031	13,604,043	21,009,114	148,045,292
1997	94,231,794	17,915,255	17,503,584	24,957,434	154,608,067
1998	87,286,310	18,220,812	16,067,966	25,280,407	146,855,495
1999	97,170,003	17,054,683	17,524,935	34,122,952	165,872,573
2000	107,358,807	27,686,126	14,450,367	36,313,196	185,808,496
2001	123,025,352	37,705,434	16,674,427	44,957,067	222,362,280
2002	132,931,685	36,482,578	17,020,349	55,935,089	242,369,701

Source: Office of Research and Sponsored Programs

Office of Institutional Research

TABLE 2

**PUBLIC AAU INSTITUTIONS
RESEARCH & DEVELOPMENT EXPENDITURES BY SOURCE
FISCAL YEAR 2000**

Rank	PUBLIC AAU INSTITUTIONS	R&D EXPENDITURES (in thousands \$)					
		FEDERAL	STATE AND LOCAL	PRIVATE/ INDEP.	INSTITUTIONAL	OTHER	TOTAL
1	University of Wisconsin	278,629	40,189	16,127	161,132	58,284	554,361
2	University of Michigan	364,033	4,561	35,515	108,532	38,915	551,556
3	University of California-Los Angeles	274,162	17,864	33,427	118,456	86,917	530,826
4	University of Washington	389,622	9,984	57,405	63,123	9,208	529,342
5	University of California-San Diego	326,037	23,691	34,541	87,632	46,658	518,559
6	University of California-Berkeley	208,338	65,354	27,851	168,025	48,946	518,514
7	Pennsylvania State University	226,074	18,739	64,393	112,161	6,208	427,575
8	Texas A&M University	163,960	114,793	33,788	102,540	7,923	423,004
9	University of Minnesota	229,958	52,342	26,392	70,330	32,358	411,380
10	University of Illinois	193,490	45,850	12,693	104,241	16,750	373,024
11	University of California-Davis	141,740	31,063	17,891	144,073	30,022	364,789
12	Ohio State University	132,219	61,978	57,075	79,583	30,544	361,399
13	University of Colorado	300,394	2,370	9,291	27,928	13,545	353,528
14	University of Arizona	187,161	8,971	22,412	112,290	14,256	345,090
15	University of Florida	120,374	67,505	34,879	81,678	9,256	313,692
16	University of Pittsburgh	228,155	2,593	14,676	28,037	21,348	294,809
17	University of Texas	178,889	19,201	24,740	37,883	12,098	272,811
18	University of North Carolina	194,794	15,247	6,835	52,196	0	269,072
19	University of Maryland	136,605	48,902	1,028	53,919	11,975	252,429
20	University of Iowa	140,764	6,163	17,262	54,967	17,788	236,944
21	Purdue University	92,010	31,155	29,997	81,150	224	234,536
22	Indiana University	107,577	3,002	5,384	91,578	20,196	227,737
23	Michigan State University	97,112	41,739	11,230	70,185	7,468	227,734
24	Rutgers, The State University of New Jersey	79,711	25,762	8,843	86,261	24,691	225,268
25	State University of New York - Buffalo	96,410	6,692	5,590	48,502	30,498	187,692
26	Iowa State University	59,976	49,627	15,075	47,272	3,608	175,558
27	University of Virginia	119,243	6,272	17,266	16,498	15,243	174,522
28	State University of New York - Stony Brook	96,641	4,355	7,567	48,191	6,553	163,307
29	University of Missouri	65,420	17,361	4,007	62,769	9,304	158,861
30	University of California-Irvine	88,274	5,259	18,615	27,168	19,121	158,437
31	University of Kansas	68,950	5,486	15,712	46,754	11,768	148,670
32	University of Nebraska	37,831	4,640	5,991	80,439	7,122	136,023
33	University of California-Santa Barbara	80,754	2,375	5,499	18,973	10,553	118,154
34	University of Oregon	30,793	410	237	2,852	1,642	35,934

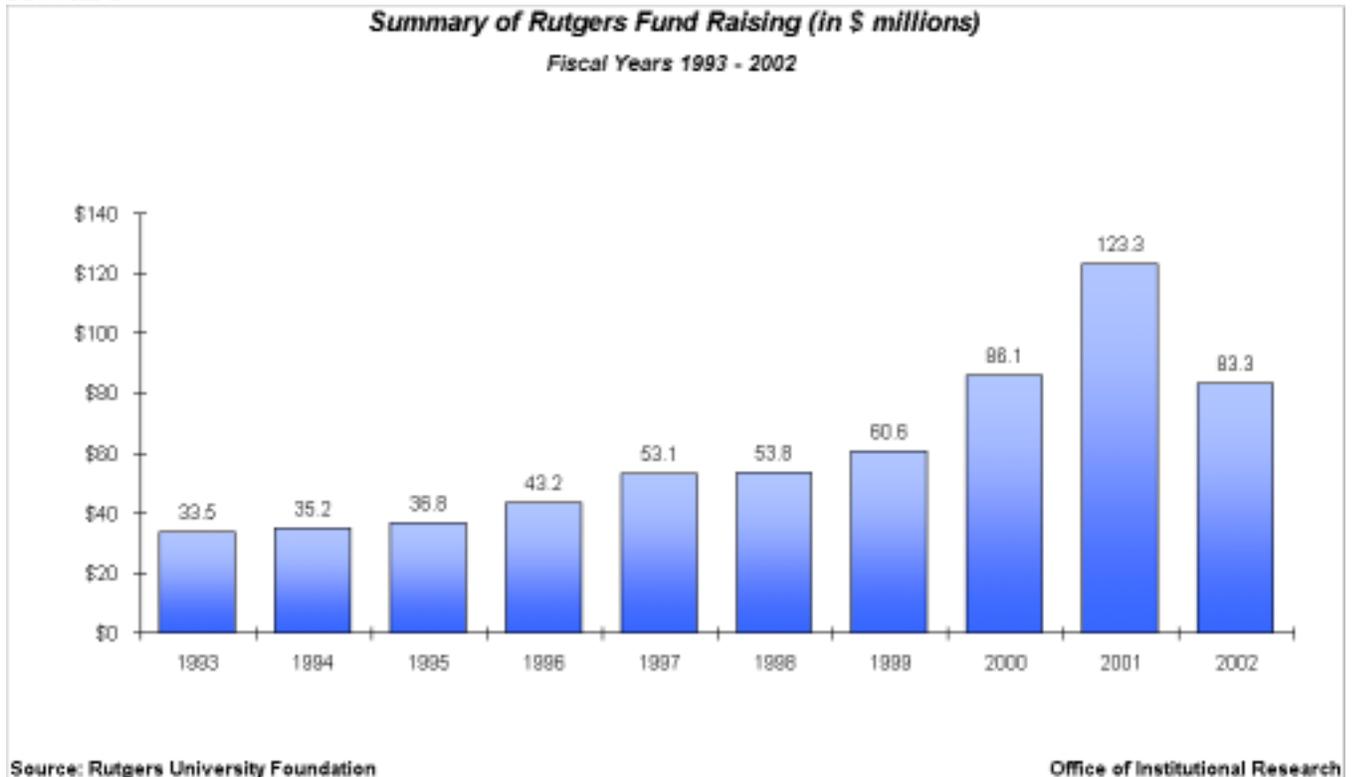
SOURCE: NATIONAL SCIENCE FOUNDATION Database System.

Office of Institutional Research
January 2003

PRIVATE SUPPORT FOR UNIVERSITY PROGRAMS

Fundraising also has been a major area of success. Yearly giving to the university through the Rutgers University Foundation has increased steadily through the 1990s to reach a record high in 2001. In 2002, Rutgers, like other higher education institutions, was affected by the general slowing of the U.S. economy and reduced private giving. The Rutgers Campaign, “Creating the Future Today,” is only the second major fundraising campaign in the university’s history. As of March 1, 2003, with over one year left in the six-year campaign which will end on June 30, 2004, \$473.4 million had been raised, almost 95% of the campaign’s \$500 million goal. While Rutgers was raising funds at a rate of \$27.2 million annually in 1990, by 2001 that number had grown to \$123 million.

FIGURE 1



DIVERSITY

In recent years the university made significant strides in increasing access and support for women and minorities. In the latest figures available, Fall 2001, Rutgers ranked sixth among AAU public universities in percentage of total minority student enrollment and first in percentage of underrepresented minority students enrolled. The university ranked second in the percentage of African-American students enrolled, eighth in the percentage of Asians enrolled, and eleventh in percentage of Latino students enrolled. Rutgers also ranked third in the percentage of women enrolled. Among AAU public institutions for academic year 2001-2002, Rutgers ranked seventh in the percentage of baccalaureate degrees granted to minorities and fourth in the percentage granted to women. It ranked eighth in percentage of doctoral degrees granted to minority students and sixth in the percentage granted to women. Furthermore, the university's Newark campus has been ranked as the most diverse in the United States in each of the five years since *U.S. News* created that ratings category.

Among AAU public institutions, Rutgers is fourth highest in percentage of African-American faculty, twelfth highest for minorities overall, and seventh highest in percentage of women faculty. The administration also grew in diversity and now includes four women and one minority individual among the university's vice presidents. The decanal ranks are more diverse as well, with seven women and five minority deans. Rutgers also instituted a Human Dignity Awards program, under the aegis of the Committee to Advance Our Common Purposes, to honor individuals and groups who demonstrate extraordinary achievement and commitment in promoting the value and importance of diversity at Rutgers and in society.

TABLE 3

Enrollment by Gender and Race/Ethnicity - Ranking of Rutgers ***Fall 2001***

Percent Female Enrollment Rutgers ranked <i>third</i> among AAU public institutions
Percent Total Minority Enrollment Rutgers ranked <i>sixth</i> among AAU public institutions
Percent Total Underrepresented Minority Enrollment Rutgers ranked <i>first</i> among AAU public institutions
Percent African American Enrollment Rutgers ranked <i>second</i> among AAU public institutions
Percent Asian Enrollment Rutgers ranked <i>eighth</i> among AAU public institutions
Percent Latino Enrollment Rutgers ranked <i>eleventh</i> among AAU public institutions

Source: IPEDS Fall 2001 Enrollment Survey

Office of Institutional Research

TABLE 4

Full-Time Faculty by Gender and Race/Ethnicity - Ranking of Rutgers
Fall 2001

<p>Percent Female Faculty Rutgers ranked <i>seventh</i> among AAU public institutions</p> <p>Percent Total Minority Faculty Rutgers ranked <i>twelfth</i> among AAU public institutions</p> <p>Percent Total Underrepresented Minority Faculty Rutgers ranked <i>eighth</i> among AAU public institutions</p> <p>Percent African American Faculty Rutgers ranked <i>fourth</i> among AAU public institutions</p> <p>Percent Asian Faculty Rutgers ranked <i>twelfth</i> among AAU public institutions</p> <p>Percent Latino Faculty Rutgers ranked <i>eleventh</i> among AAU public institutions</p>
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Source: IPEDS Fall 2001 Staff Survey

Office of Institutional Research

Despite the relative standing nationally, there are still challenges. A standing committee of the Rutgers University Senate, the Equal Opportunity Committee, has examined the status of Hispanic/Latino faculty and administrators throughout the university. The committee learned that for Fall 2002, there were 49 Hispanic/Latino full time faculty members at Rutgers, or 1.89% of the total full time faculty at the university. The committee proposed specific recommendations that were adopted by resolution of the Rutgers University Senate in February 2003. See <http://senate.rutgers.edu/hispanic.html>. The Senate recommended that the university develop a five-year plan to recruit and retain Hispanic/Latino faculty, administrators, staff, and students, and that an upcoming academic year be designated with the recruitment and retention of Hispanic/Latino faculty members as its primary goal. It also was recommended that notwithstanding the university's current financial constraints, a high level administrator be charged with supervising the development and implementation of this plan and be given the necessary funding and support. The Senate further called upon administration, faculty, and staff to actively address the impact of these issues on the recruitment and retention of undergraduate and graduate students of the Hispanic/Latino community when dealing with student advising and student life. Following this action by the Senate, the recommendations have been referred to the university administration for review.

STRATEGIC PLANNING

At the time of the 1998 MSA self-study process, the university's strategic plan, *A New Vision for Excellence*, had been in effect for three years, since the Board of Governor's approval in 1995. Since its inception, the plan has focused university attention on its basic values: excellence in teaching and learning, research and discovery, and public service and community engagement; the importance of

diversity, access, and affordability; responsiveness to emerging needs; interdisciplinary cooperation; international perspectives; intercampus collaborations; partnerships with government, business, and other schools; and the integration of information technology into academic endeavors.

The plan identified 12 areas of particular strength as the basis for academic growth to foster excellence and advance Rutgers to stand with the best of the nation's comprehensive public research universities. It tied these academic strengths to fiscal resources and leveraged outside funding through a Strategic Resource and Opportunity Analysis (SROA) program that supported scores of innovative projects. The \$26 million in Rutgers resources devoted to these projects over a seven-year period is associated with more than \$365 million in external support, a return on investment of over 14 to 1.

Rutgers faculty working in the academic growth areas identified in the plan have received major awards from funding agencies to support their research. For example:

- In the area of public policy and the law, Professor Joel Cantor was awarded \$4.6 million from the Robert Wood Johnson Foundation for the establishment of a State Health Policy Center.
- In the life sciences, the National Institutes of Health awarded \$4.3 million to Professor Gaetano Montelione for research involving the structural genomics of eukaryotic organisms and \$2.5 million to Professor Jay Tischfield in support of genetic studies. The National Science Foundation awarded \$1.6 million to Professor Helen Berman for the Macromolecular Structure Database. The State of New Jersey awarded Professor Gerben Zylstra \$1.1 million to support the University-Industry Partnership to Enhance Biotechnology Education for a High-Tech Workforce.
- In environmental studies, the National Science Foundation awarded \$4 million to Professor Paul Falkowski of the Institute of Marine and Coastal Sciences to study biocomplexity in the contemporary ocean, and \$1.4 million to Professor Richard Lutz, also with the Institute of Marine and Coastal Sciences.
- In engineering, Professor Michael Muller was awarded \$3.3 million by the U.S. Department of Energy for field management of the Industrial Assessment Center-Eastern Territory and Professor Nenad Gucunski was awarded \$1.7 million by the New Jersey Department of Transportation for civil and environmental engineering research.
- In education, Professor William Firestone received \$12.3 million from the National Science Foundation to direct a Math Science Partnership grant and Dr. Debra Palmer Keenan was awarded \$1.9 million by the New Jersey Department of Human Services to support New Jersey food stamp nutrition education.

Another hallmark of the plan was the implementation of RUNet, a university-wide communications infrastructure project to support instruction, research, and outreach programming. Under the initial phase of the project, 97% of residential students university-wide have direct connections to the network and nearly 90% have access to RU-TV from their rooms; 93% of faculty have direct connections from their buildings; and more than 660 classes with more than 16,000 students use WebCT, Blackboard, and eCollege, three online course systems. RUNet has produced significant changes in the daily activities of the university. Students prepare online course assignments, participate in online discussions, and take care of routine tasks such as paying term bills, registering for courses, and checking the status of their financial aid online. Faculty are using streaming audio and video to supplement their teaching and are using technology to enhance intra- and interuniversity collaborative efforts.

PROGRAM DEVELOPMENT

Since the 1998 MSA review, there has been considerable development of academic programs. The following new degree programs have been approved in the past five academic years:

1997-1998

B.A.	Criminal Justice	Camden
B.A.	Jewish Studies	New Brunswick
B.S.	Geoscience Engineering (with NJIT)	Newark
B.S.	Marine Sciences	New Brunswick
M.A.	Jazz History and Research	Newark
M.S.	Health Care Management (with UMDNJ)	Newark
M.S. & Ph.D.	Environmental Science (with NJIT)	Newark

1998-1999

B.A.	Cell Biology and Neuroscience	New Brunswick
B.A.	Genetics and Microbiology	New Brunswick
B.A.	History/French	New Brunswick
B.S.	Biomedical Engineering	New Brunswick
B.S.	Evolutionary Anthropology	New Brunswick
B.F.A.	Visual Arts	Newark
M.P.H.	Public Health (with UMDNJ and NJIT)	Newark
Ph.D.	Education	New Brunswick

1999-2000

B.A.	Information Technology and Informatics	New Brunswick
B.S.	Allied Health Technologies (with UMDNJ)	Newark
Ph.D.	Global Affairs	Newark

2000-2001

B.H.M.	Bachelor of Hospitality Management	Camden
B.S.	Human-Computer Interaction (with NJIT)	Newark
M.Q.F.	Master of Quantitative Finance	Newark and New Brunswick
M.S.	Computational Biology (with NJIT)	Newark
Ph.D.	Urban Systems (with UMDNJ and NJIT)	Newark

2001-2002

B.S.	Astrophysics	New Brunswick
M.A.	Criminal Justice	Camden
M.S. & Ph.D.	Medicinal Chemistry	New Brunswick
Ph.D.	Women's and Gender Studies	New Brunswick

The following major new centers and institutes have been established in the last five years:

Center for Advanced Energy Systems	New Brunswick
Center for Children and Childhood Studies	Camden
Center for Children and Families	New Brunswick
Joseph C. Cornwall Center for Metropolitan Studies	Newark
Center for Early Education Research	New Brunswick

Equine Science Center of Excellence	New Brunswick
Center for Environmental Prediction	New Brunswick
Food Policy Institute	New Brunswick
John J. Heldrich Center for Workforce Development	New Brunswick
Center for Information Management, Integration and Connectivity	Newark
W. M. Keck Center for Collaborative Neuroscience	New Brunswick
Mid-Atlantic Regional Center for the Humanities	Camden
National Center for Neighborhood and Brownfields Redevelopment	New Brunswick
Walter Rand Institute for Public Affairs	Camden
William G. Rohrer Center for Management and Entrepreneurship	Camden
Center for State Constitutional Studies	Camden
Center for State Health Policy	New Brunswick
Center for the Study of Terrorism	Newark
Center for Urban Restoration Ecology	New Brunswick
Alan M. Voorhees Transportation Center	New Brunswick

Everyone at Rutgers is obliged to work through the issues... and find ways to make the system work better. For this to happen, there must be incentives provided to insure that both the one-university and campus/college concepts flourish. The team ...suggest(s) that, by working through this and many other issues in an open and constructive manner, progress can and must be made.

INCENTIVE PROGRAMS

Through its university-wide incentive programs and targeted campus initiatives, Rutgers continues to build its academic quality. Specific programs are highlighted below.

REINVEST IN RUTGERS

The Reinvest in Rutgers Program continues to demonstrate its effectiveness in building academic programs through reallocations of university resources for activities that advance core priorities of a unit in the context of the university's Strategic Plan. Reinvest funds have been instrumental in ensuring excellence in teaching at all levels of instruction and enhancing the research capacity of the university through its continuing ability to attract outstanding faculty, especially at the junior faculty rank, to build interdisciplinary programs, and to respond to emerging training and research opportunities in the targeted areas of engineering, information sciences, and life sciences.

Reinvest resources have also supported the university's multicultural blueprint. These funds are earmarked for the appointment of new minority faculty in under-represented disciplines and for supplementing unit resources for purposes that foster achievement of the university's diversity agenda, including recruitment and retention efforts in support of undergraduate and graduate minority students. A wide range of programs and activities university-wide have been supported by these funds. The *Committee to Advance Our Common Purposes* continues to play a vital leadership role in coordinating and promoting activities of cultural understanding and diversity. Allocations have supported faculty, staff, and students in building cross-cultural alliances, stimulating the development of innovative improved multicultural understanding, and building a greater sense of community.

In September 2002, \$3 million was allocated for the continuation of the Reinvest in Rutgers Program for a sixth year, bringing the total reinvestment to \$40.7 million.

STRATEGIC RESOURCE AND OPPORTUNITY ANALYSIS PROGRAM (SROA)

SROA continues to offer a strong pillar of support to the university's Strategic Plan by fostering innovative programs in targeted areas. The SROA funds are awarded through a peer-review process to support new academic initiatives across the university. In 2001, \$4 million supported fifty-one projects, including 22 new initiatives. A majority of these proposals requested funds for computer equipment, information technicians, or web enhancements. Many of these projects are cross-disciplinary or intercampus, such as the Image DataBase, a university-wide collaboration that uses special software to provide access to collections of digital art images for teaching or student study. In response to unforeseen midyear budget cuts, only \$2 million could be allocated and only 25 initiatives could be funded for this academic year.

GRANT SUPPORTED ACTIVITY

The Office of the University Vice President for Academic Affairs has made a concerted effort to increase the amount of coordination among different units and faculties in seeking large, multi-unit grant proposals to federal and state funding agencies. The University Director of Math and Science Partnerships has played a large role in coordinating the submission of grants to state and federal agencies related to teacher training and capacity building. Most recently Rutgers has been awarded \$12.3 million from the National Science Foundation to direct a Math Science Partnership grant. The grant focuses on reforming math and science instruction at 12 urban school districts throughout the state, and includes higher education partners Rowan and Kean Universities.

In addition, the Office of the UVPAA has worked with the State through the Commission on Higher Education and the New Jersey Commission on Science and Technology to define programs and secure funds to advance research in targeted areas, to enhance grant matching, to provide support for facilities and equipment, to improve teacher quality and capacity, and to foster workforce development and technology transfer. The university has been very successful in competing for resources under these recently developed programs. For example, the university has benefited from a number of grants from the New Jersey Commission on Higher Education:

High-Tech Workforce Excellence Grant Program

- **Tissue Engineering: A New Frontier in Materials, Biology, and Medicine.** Highly trained tissue engineers are in great demand by New Jersey's pharmaceutical and medical technology industries. The grant of \$1,335,250 supported the development of an interdisciplinary undergraduate training program that built upon the university's strong programs in engineering, biotechnology and biomaterials.
- **University-Industry Partnership to Enhance Biotechnology Education for a High-Tech Workforce.** This grant of \$1,335,250 was used to develop a facility for education, research, and training in high throughput screening, the automated research equipment that is prevalent in the pharmaceutical and biotechnology industries. New lab courses utilizing state-of-the-art equipment as well as corporate internships prepare undergraduate students for careers in the emerging high-tech biotechnology field of high throughput screening.
- **New Directions for the High-Tech Computer Science Workforce** Through e-learning and traditional classroom teaching, this project funded with a grant of \$1,640,000, expands instruction in key computer science areas, including computer vision, animation, and graphics such as modeling for medical imaging.
- **Nanomaterials Science and Engineering: An Enabling Paradigm Shift for Photonics, Energy, Electronics and Biology** With funding of \$2,500,000, this project contributes to the development

of a state-of-the-art, interdisciplinary undergraduate curriculum in nanomaterials science and engineering.

Teacher Effectiveness Grant

This grant of \$496,000, plus permanent base budget adjustments, is providing permanent support of seven new faculty lines for the university (one in Newark, one in Camden, five in New Brunswick) in the areas of math, science, and foreign language teacher education, and support for significant strengthening of the teacher education curricula in these areas through collaborative efforts between the teacher education programs and the arts and sciences faculty.

Teacher Quality and Capacity Grant

The Urban Science Education Collaborative for Teacher Effectiveness grant of \$499,979 supports a model science classroom at the Professional Development School in New Brunswick and pre-service and in-service professional development programs in science for teachers throughout the state.

New Jersey Commission on Higher Education Research Capacity Grants

This state program helps New Jersey's research universities enhance their research capacity, compete nationally for top-notch faculty, and effectively garner federal grants and contracts. These capacity-building funds are used to purchase state-of-the-art equipment, launch new research in biomedical and other high-tech areas with commercial and health care implications, and address New Jersey industry needs in the areas of pharmaceuticals, biotechnology, medical devices, and information technology. The grants aim to augment the state's prominence as a hub for high-tech industry and thus ensure its role as a leader in innovation and progress. In FY 2002 Rutgers was awarded \$2,327,623 for the following seven projects:

- Enhancement of Food Sciences Program (\$150,000);
- Building Interdisciplinary Research in Biotechnology (\$150,000);
- Building Interdisciplinary Research Capacity in Large-Scale, Wireless Sensor Networks (\$400,000);
- Initiatives at the Interfaces of Biological, Mathematical and Physical Sciences (\$1,077,623);
- Infrastructure Improvements to Support a Molecular and Cellular Pharmaceutical Sciences Initiative (\$300,000);
- Information Processing in Complex Biological Systems (\$50,000); and
- Cellular and Molecular Biodynamics: Imaging Project (\$200,000).

In FY 2001 Rutgers was awarded \$2,608,321 for the following seven projects:

- Enhancement of Animal Sciences Program by Promoting Animal Biotechnology Research (\$300,000);
- Developing the Collaboratory for Structural Bioinformatics at Rutgers University (\$150,000);
- Physics Based Simulation Technology Center (\$700,000);
- Building Interdisciplinary Research Capacity in the Life Sciences at Rutgers (\$450,000);
- Infrastructure Improvements to Support a Molecular and Cellular Pharmaceutical Sciences Initiative (\$608,321);
- Hybrid Materials Research Initiative (\$100,000); and
- Cellular and Molecular Biodynamics (\$300,000).

New Jersey Commission on Higher Education Matching Grant Program

This is a second CHE program designed to enhance the research capacity of New Jersey's research universities. Grant proposals to federal funding agencies in the areas of biomedical and other high technology research may submit requests for state funds in an amount equal to the institutional commitment to these grants, thereby increasing the competitiveness of these grant proposals. The full impact of these grants is not yet known, as many proposals are still outstanding.

The university has also benefited from grants from the New Jersey Commission on Science and Technology. For example:

New Jersey Commission on Science and Technology Awards

Rutgers was awarded \$7.78 million in fiscal year 2003 through the NJCST Research and Development Excellence Program. The grants support multidisciplinary, multi-university projects in nanotechnology, food technology and wireless sensor technology over five years. Projects include:

- Nanotechnology for Photonic Materials and Devices at the School of Engineering (\$2,460,000);
- Foods Fortified with Stable Omega-3 Fatty Acids: Health Benefits in Ulcerative Colitis at the Center for Advanced Technology (CAFT) at Cook College (\$2,500,000);
- An interdisciplinary center for collaborative research on multimodal, integrated wireless sensor-on-silicon technology at Rutgers' Wireless Information Network Laboratory (WINLAB) (\$2,800,000); and
- A matching grant to the Center for Discrete Mathematics and Theoretical Computer Science (DIMACS) (\$100,000).

In fiscal year 2002 NJCST awarded research excellence grants to Rutgers totaling \$4.55 million for projects involving plastics and food technology:

- The School of Engineering received \$2,350,000 to establish a research center dedicated to developing advanced materials based on immiscible polymer blends (IMPBs).
- The Center for Advanced Food Technology at Cook College received \$2,200,000 for research on processing conditions that could enhance the anti-inflammatory factors in foods, herbs and spices.
- The New Jersey Center for Biomaterials at Rutgers received \$150,000 to develop models for better academic-industrial partnerships with specific projects involving radioopaque, gene delivery, hydroxy acid, and polyurethane.

While the state-funded grants described above have had a significant impact on the university's growth and development, the programs they have supported are seriously threatened by state budget reductions. Each of these grant programs is in jeopardy and continuing support is either nonexistent or very unstable. The university is working hard with government officials to restore these programs.

UNIVERSITY PHYSICAL MASTER PLAN

The Office of University Planning and Development is in the process of updating the physical master plans for the Newark, New Brunswick/Piscataway, and Camden campuses. The architecture/planning firm of Ayers Saint Gross from Baltimore is working with the university to produce a series of reports, guidelines and maps showing locations on each campus where long-term physical growth could occur.

The work of Ayers Saint Gross builds upon an institution-wide space utilization study that was completed in July 2001 by the firm of Paulien and Associates. The report measured results against national normative standards and benchmarked against figures from select peer universities. Among other things, the study found that Rutgers was deficient in a number of areas, including the amount of research, laboratory and student life space that is available. The ongoing master planning process is addressing these problems, as well as planning for facilities to accommodate areas of growth.

The campus master plans are being developed with the oversight of the President's Cabinet, which is assisted by a University Master Plan Committee, composed of faculty, staff and students, and includes representation from all of the campuses. Several open forums were held to allow neighboring institutions, public officials from the surrounding host communities, the general public, and the wider university community to provide input and feedback.

The master plans, intended to serve as a tool for decision-making and the allocation of resources, are being developed in concert with the academic and research goals outlined in the University Strategic Plan. The plans will also provide data and frame major policy issues regarding the organization and future enrollment size of the university for consideration by the university administration and governing boards.

The university is also addressing serious transportation issues on the New Brunswick/Piscataway campus. The Route 18 highway corridor serves as the primary link between the New Brunswick/Piscataway campuses. As a major stakeholder in the development of Route 18, the Physical Planning Office has been engaged in extensive meetings and discussions with the NJ Department of Transportation and local municipal officials. NJDOT began work in 2002 on an \$80 million, 1.5-mile extension of the highway into Piscataway, connecting and serving the Busch and Livingston Campuses. Improvements include major overpasses and interchanges that will eliminate traffic signals and bottlenecks that currently impede traffic flow. When the project is completed in late 2004, another phase of Route 18 work will begin across the river in New Brunswick. This project will widen the existing roadway to eight lanes and eliminate traffic lights, creating improved access to the Cook/Douglass and College Avenue Campuses. Other highway improvements impacting the University in the future include the reconstruction of the Route 1/College Farm Road interchange in North Brunswick. Upon completion of highway improvements the efficiency of the intercampus bus system will be greatly enhanced.

Additional transportation initiatives being examined by the Physical Planning Office include the study and promotion of alternative modes of transportation. The office has been actively involved in the development of bikeways and pedestrian linkages between the campuses. To date, over \$750,000 in state and federal grant funds have been obtained to extend existing pathway systems and to purchase bike racks.

The long-range development plan for each of the campuses is to be completed by the fall of 2003. Ongoing work will include a more in-depth analysis of parking and transportation issues, creation of a utilities master plan, development of a signage and way-finding package, and the development of architectural design standards.

RUTGERS AND THE STATE OF NEW JERSEY

As a public institution, Rutgers' ability to serve the citizens of the state is closely tied to its state appropriations. New Jersey's prosperity and competitiveness require resources in support of higher education and other resources to address priorities and meet state goals. Rutgers' leadership in human and economic development hinges on several state priorities, including capacity to meet student needs and state workforce demands; access to high-quality, timely educational opportunities for all segments of the population; and a commitment to excellence in education and research and development. The convergence of demographic trends, the knowledge-based economy, and growing workforce demands will require increased state investment in New Jersey's system of public and private colleges and universities over the next several years.

But state assistance has not kept pace with the needs of higher education, as the table below indicates. Higher education appropriations have declined since fiscal year 1989 as a percentage of total state appropriations from 8.66% to 6.01%. During the same period, appropriations for Rutgers declined from 2.18% to just 1.42% of total state appropriations. Not only are state appropriations insufficient, critically important academic programs, such as the Outstanding Scholars Recruitment Program, the high technology grants from the state's Commission on Science and Technology, state-funded visiting scholarly chairs, state matching funds for external grants, and other state-funded grant programs are all in serious jeopardy. These cuts threaten to seriously undermine Rutgers' recent achievements in scholarship and instruction.

TABLE 5

New Jersey State Appropriations (in \$ thousands)
Higher Education and Rutgers, Current Dollars, Fiscal Years 1989 - 2003

FISCAL YEAR	TOTAL STATE	TOTAL HIGHER EDUCATION	% of STATE	TOTAL RUTGERS *	% of STATE
1989	11,860,452	1,026,899	8.66	259,008	2.18
1990	12,150,627	1,034,027	8.51	261,117	2.15
1991	12,562,308	924,771	7.36	236,080	1.88
1992	15,143,526	967,133	6.39	257,162	1.70
1993	14,651,711	950,520	6.49	246,842	1.68
1994	14,963,742	1,004,499	6.71	260,591	1.74
1995	15,365,404	1,066,294	6.94	278,054	1.81
1996	16,230,524	1,123,846	6.92	285,730	1.76
1997	16,304,466	1,100,657	6.75	282,568	1.73
1998	17,189,368	1,129,185	6.57	294,900	1.72
1999	18,498,999	1,202,652	6.50	302,828	1.64
2000	19,920,688	1,278,659	6.42	321,966	1.62
2001	21,279,359	1,347,682	6.33	337,118	1.58
2002	23,319,589	1,514,998	6.50	356,570	1.53
2003	23,401,742	1,406,862	6.01	331,581	1.42

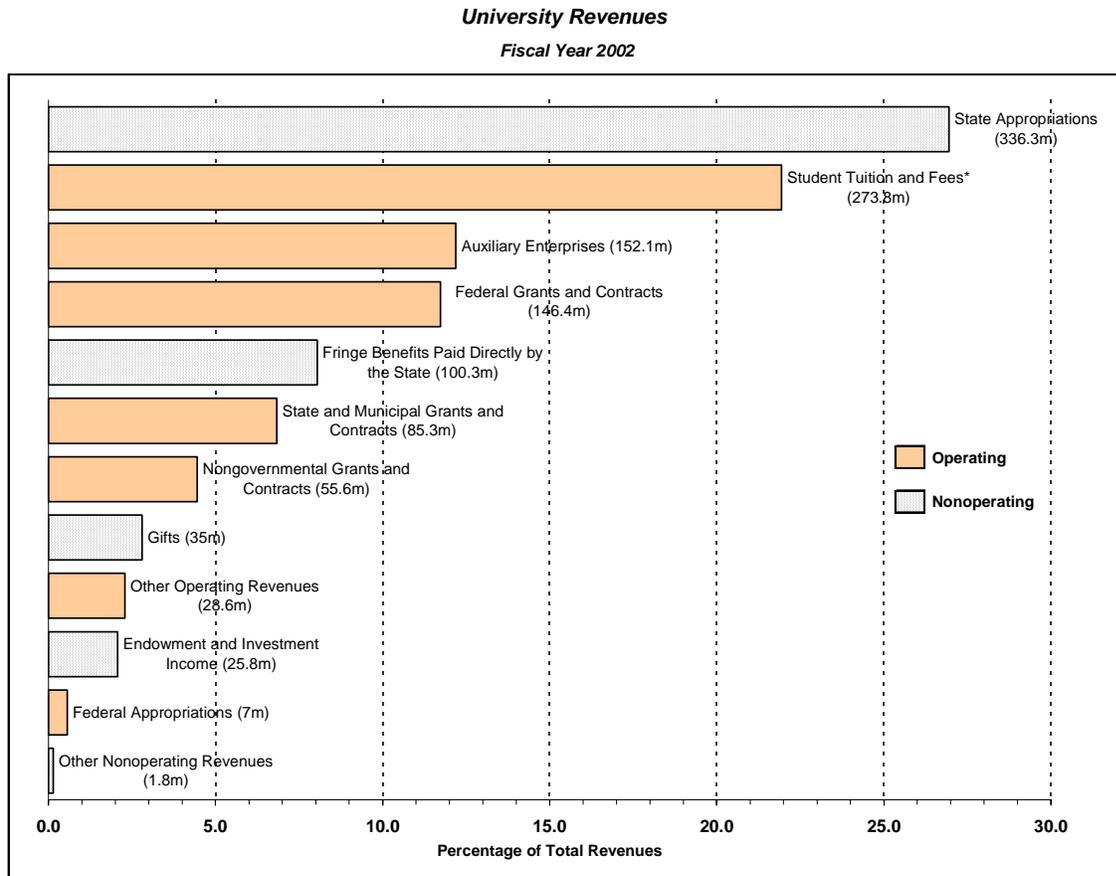
* Represents appropriations for general university and agricultural experiment station operations only.

Source: Fiscal Years 1989 - 2001 appropriations expended,
 Fiscal Year 2002 adjusted, and 2003 initial appropriations
 per Governor's Annual Budget Message

Office of Institutional Research

As the following chart indicates, state support provides a significant component of the university's yearly revenues.

FIGURE 2



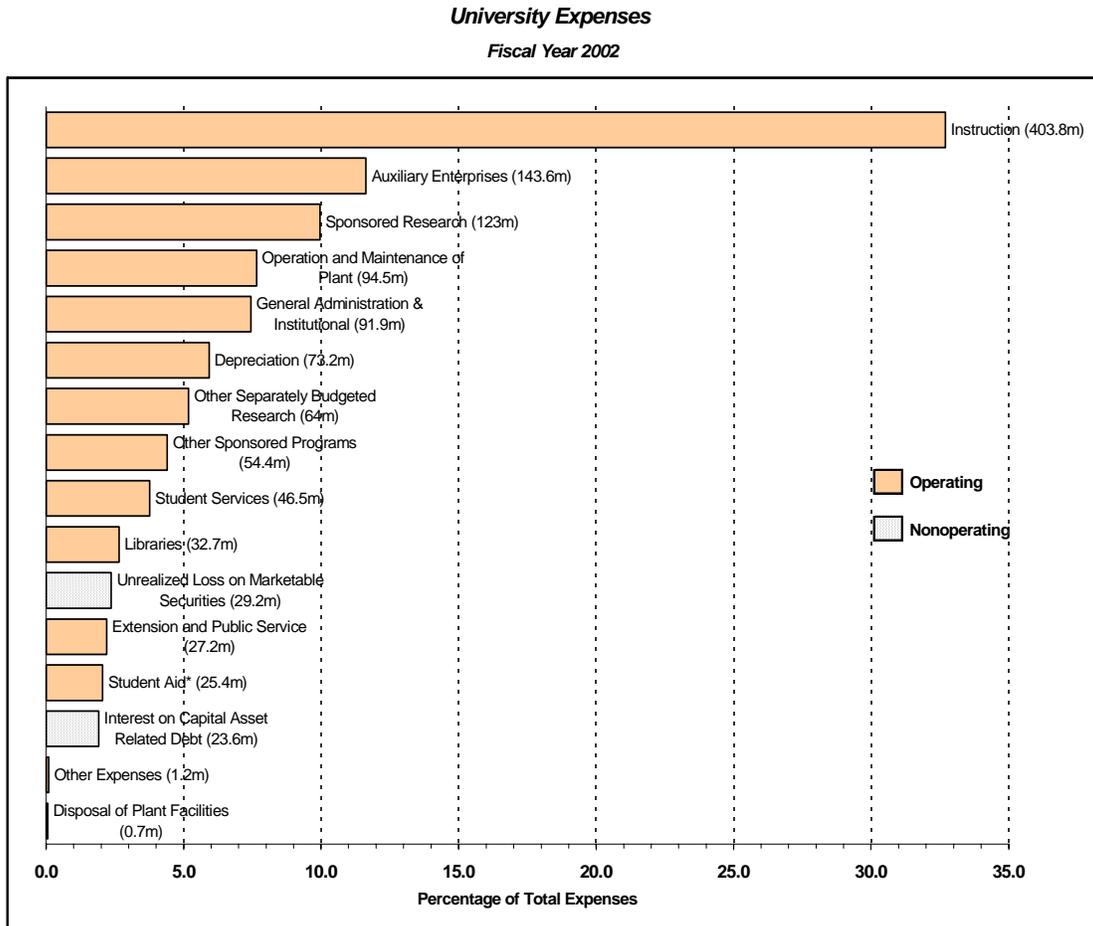
Rutgers works in concert with the other higher education institutions in the New Jersey Presidents' Council, an advisory body of the state's public institutions and the private institutions that receive state aid. The Council is responsible for making recommendations to the New Jersey Commission on Higher Education concerning new programs, regional alliances, budget and student aid levels, licensure, and the statewide higher education master plan.

Recognizing the importance of the state budget process, the Commission and the Council have worked together to submit Joint Budget Policy statements for the last two years. These joint statements have stressed the importance of fully funding the institutions and providing adequate financial assistance to provide access for students.

Long-range planning is another mechanism for securing adequate state support. The university is participating in a statewide process of long-range planning, spearheaded by the Commission on Higher Education. This is especially critical in view of the state's pattern of under-funding its State University. In so doing, Rutgers will continue to develop the relationship between planning and budgeting that is demonstrated in its priority setting and resource allocation on the Camden, Newark, and New Brunswick campuses.

As the following chart indicates, instruction-related expenses are the largest category of costs. At \$403.8 million, these expenses account for 32.7% of the total of \$1,234.9 million annual expenses for the university.

FIGURE 3



* Net of scholarship allowances.

III. SPECIAL TOPICS: A. Undergraduate Education

The quality of Rutgers' incoming undergraduates has always been high and the demand for a Rutgers education has never been greater, with a record-setting 42,152 applications received in the past academic year. In 2002, mean SAT scores for regularly admitted students in New Brunswick were 1209 and were 1179 for all university students. At 51,480, the Fall 2002 enrollment was the largest in Rutgers history. Beginning in 1997, the New Jersey Outstanding Scholars Recruitment Program, a merit scholarship initiative, has helped more than 3,600 outstanding students enroll at Rutgers. These students have a mean combined SAT score of 1380 and a mean percentile rank-in-class of 94. Unfortunately, this very successful program for outstanding students is now targeted by the state for cutbacks.

In a wide variety of ongoing and new initiatives, Rutgers is offering programs designed to make the undergraduate experience successful. Many curricular enhancements and active learning opportunities for students have been developed since the Middle States Review in 1998. Much of this has been achieved through the provision of faculty development incentives as vehicles for supporting faculty in their efforts to improve the curriculum and teaching.

CURRICULUM DEVELOPMENT PROGRAMS

UNIVERSITY PROGRAMS

The Office of the University Vice President for Undergraduate Education (<http://undergrad.rutgers.edu/>) works closely with faculty to improve curricula, enhance teaching, and stimulate active learning opportunities. Each year the Office awards approximately \$140,000 in grants to faculty members for these efforts through Rutgers Dialogues Grants, Undergraduate Curriculum Seed Grants, and Teaching and Curriculum Evaluation Grants.

Curriculum priorities and efforts to achieve more active learning opportunities for undergraduates can only be achieved by working with the faculty at all stages of the process. There must be ongoing support for faculty instructional development and appropriate incentives. There must be ongoing formative and summative assessments. In an era when needs will undoubtedly exceed resources, activities that yield the greatest return for investments in student learning must receive highest priority.

- The *Curriculum Seed Grant Program* provides support to faculty members as they prepare grant proposals to private foundations or public agencies. Priority is given to projects that have high potential for significantly improving the curriculum, for long-term institutional adoption, and for attracting external funding.
- The *Teaching and Curriculum Evaluation Grant* program supports initiatives focusing on development and implementation of teaching evaluation procedures that supplement the university-wide student ratings; and/or development and implementation of curriculum evaluation plans. Priority is given to projects with multiple investigators and with high potential for impact in a department, school, or college.
- Rutgers Dialogues Grants provide support for initiatives that focus on meeting the University-wide Learning Goals. The goals define the skills and knowledge that all Rutgers University students will acquire to support their

development as responsible citizens and productive contributors to society, in their workplaces and in their intellectual, cultural and social endeavors. Areas addressed by the goals include critical thinking, oral and written communication, mathematical reasoning and analysis, scientific inquiry, information and computer literacy, historical understanding, multicultural and international understanding, literary and artistic expression, understanding the bases of individual

and social behavior, understanding the physical and biological world, citizenship education, and ethical awareness. Although proposals may be submitted related to any of these goals, priority areas have been designated for each funding cycle. For the past five years these priorities have been:

- 2001-2002 – globalization and global change across the disciplines; scientific and scholarly inquiry skills across the curriculum
- 2000-2001 – improving student understanding of intercultural interaction; scientific and scholarly inquiry skills across the curriculum
- 1999-2000 – improving scientific competence in all students
- 1998-1999 – internationalizing the curriculum
- 1997-1998 – promoting information and computer literacy across the curriculum.

Many science and mathematics courses have incorporated active learning strategies through the support of *Rutgers Dialogues Grants* and *Undergraduate Curriculum Seed Grants*. For example:

- Through the Rutgers Calculus Reform Project in New Brunswick, class size in introductory calculus courses has been reduced and recitation sessions are lengthened and reoriented toward group problem solving, with greater emphasis on conceptual understanding, written expression and use of computer and calculator technology. Peer mentors, who attend recitations and facilitate work on group problems, are another key element of the reform.
- In the revised capstone design course at the School of Engineering, Design of Mechanical Systems, multidisciplinary student teams work on design projects drawing from their respective areas of expertise to see projects through, from the conceptual phase to final implementation and testing.
- In the Ernest Mario School of Pharmacy, a laboratory component has been developed for Introduction to Pharmaceutics, a required course in the Pharmaceutics curriculum focusing on the physical chemistry of drugs and drug formulation.
- In Newark a comprehensive program in Astronomy has been developed for undergraduates in a joint effort with New Jersey Institute of Technology. Special imaging equipment has been acquired that allows students to make accurate astronomical observations in the urban setting.
- In addition, in Newark, newly acquired compact electrochemical instrumentation now makes it possible for students in Analytical Chemistry to analyze environmental samples.

There have also been significant changes in humanities curricula. For example:

- In Newark, the Faculty of Arts and Sciences revised the writing requirements for undergraduates. After completing the basic courses in English Composition, undergraduates must now take two courses designated as “writing intensive” with at least one of them within the major. As a result of campus visits from nationally recognized experts in writing-across-the-curriculum, and development of a library of materials as well as a website, 58 writing intensive courses in 24 fields of study were offered in Spring 2002.
- In Camden, a new course, Introduction to Literary Study, has been developed and will be required of all English majors on that campus. It is a methods course concerned with the creation of literary works and knowledge. In addition to traditional methods of literary study, such as exploration, bibliography and critical writing, students study the actual practice of full-time faculty in the English Department who write, edit, review and critique literary texts. In this way, students learn how practicing scholars and writers create literary materials.
- In New Brunswick, the Writing Program has expanded and enhanced its offerings in a number of ways. The Writing Program now offers a range of courses that build on Basic Composition and

Expository Writing, such as Research in the Disciplines, Business Writing, Writing for Biology, Writing for Engineers, Scientific and Technical Writing, Grant Writing, and Web Authoring. A Writing Program website (<http://wp.rutgers.edu/>) now provides opportunities for web-enhanced instruction for those involved in writing courses. In addition, the new *Dialogues@RU: A Journal of Undergraduate Research* provides a publication outlet for student essays from 100, 200 and 300 level classes throughout the university.

FOSTERING UNDERGRADUATE RESEARCH AND SCHOLARSHIP

Undergraduate research takes place across the curriculum at Rutgers, with students from all majors participating. Participation in undergraduate research has a variety of advantages for students, for their future employers, and for the larger society. Through an undergraduate research experience, students have an opportunity to apply the knowledge they have gained in courses to situations that require critical thinking, problem solving, communication skills, and technical skills. Learning becomes “hands-on” and active as students experience how to create the new knowledge that will improve our lives and advance society. Skills are developed that can be used to assess and solve problems in a variety of contexts and that will provide a basis for professional success, effective citizenship, and leadership in a range of societal roles.

The *Rutgers Undergraduate Research Fellows* program is designed to encourage and support faculty efforts to involve students in undergraduate research. The program, which provides funding each year for approximately 60 research projects in which faculty members and students collaborate, is supported by university funds as well as corporate donations made in large part by members of the Rutgers Undergraduate Education Advisory Council. Through this Council, co-chaired by the Vice President for Undergraduate Education and a leader from a major New Jersey corporation, business and industry leaders provide input regarding issues related to the curriculum and student preparation for careers, and provide financial support for relevant undergraduate programs.

Over the last five years numerous projects and curriculum revisions have also been implemented to provide additional opportunities for students to develop an understanding of research and scholarship. See <http://urru.rutgers.edu/> for descriptions of the goals of undergraduate research and opportunities available in different academic departments. Each April, Rutgers celebrates Rutgers Undergraduate Research Weeks with about 60 events across the university that celebrate the creative, scholarly and scientific activities of our undergraduates, <http://undergrad.rutgers.edu/RschWks01.htm/>. This series of poster sessions, paper presentations, seminars and celebratory dinners culminates with a conference at which the Rutgers Undergraduate Research Fellows present their results and a banquet attended by faculty, administrators, and the family and friends of the undergraduate researchers.

With Volume Four now complete, the Rutgers Scholar is an electronic bulletin of undergraduate research (<http://rutgersscholar.rutgers.edu>). It celebrates and disseminates the work of Rutgers undergraduates who have made the transition from student to scholar by carrying out significant research projects in close collaboration with Rutgers faculty members. The authors of articles published in the Rutgers Scholar have put the state-of-the-art research tools available at Rutgers to work in advancing the frontiers of knowledge in a wide variety of fields. With further elaboration, much of the work presented in the Rutgers Scholar has made its way into the flagship journals of the disciplines.

Rutgers Dialogues Grants have supported course development and revision to improve student understanding of scientific, scholarly and creative processes. For example:

- In New Brunswick, a new laboratory course has been designed to accompany the large lecture course, Infant and Child Development. The course provides students with a rigorous hands-on

immersion in current methods in developmental psychology research. Students work with data collected by prominent researchers in a variety of laboratory and field settings, and also collect new data through direct observation and interviews with preschool children. They gain a thorough understanding of the scientific process through direct experience with all phases of developmental research, from the formulation of research questions and hypotheses, through the process of data collection, coding and analysis, to the writing of a research report.

- In the course Women and Social Change Rutgers-New Brunswick students and students at a university in another country serve as research partners on a common topic related to gender.
- The Linguistic Anthropology curriculum in New Brunswick is being redesigned to incorporate more hands-on research opportunities for students. The content of a number of courses in this program are being revised to incorporate instruction in linguistic and cultural research methods.
- In Newark, a new course Field Ecology: Understanding Environmental Heterogeneity has become the centerpiece of a requirement in field biology for biology majors. The course provides hands-on training with state-of-the-art as well as classical instrumental techniques for environmental measurement, and includes analysis and comparison of environmental data samples from representative plant communities of New Jersey.
- A new course Urban Plant Ecology uses the city of Newark as a regional laboratory to illustrate the influence of the environment on plants. Student teams gather micrometeorological and plant physiological and ecological data, and students are responsible for data analysis, reduction and presentation.
- In Newark a laboratory course in animal behavior has been created for psychology students for training in systematic behavioral observation and discussing the ethics of animal research. Small groups of students formulate a research question, carry out an experiment, and present their results to the department in a poster session.

Another program is *Rutgers Award for Programmatic Excellence in Undergraduate Education*. Annually, based on an internal peer review process, the Office of the Vice President for Undergraduate Education awards an academic department or program a one-time \$10,000 budget addition. This internally funded award recognizes sustained excellence in the delivery of undergraduate education or excellence in curriculum development or teaching improvement.

The university-funded Teaching Excellence Centers (<http://teachx.rutgers.edu/>) have been an invaluable source of workshops for faculty members on encouraging active learning in the classroom and on using new instructional technologies. Numerous courses have been redesigned as a result of their efforts.

IMPROVING UNDERGRADUATE SCIENCE EDUCATION

A \$200,000 grant from the National Science Foundation obtained through the Office of the Vice President for Undergraduate Education has provided support for senior faculty members in chemistry, life sciences, physics and mathematics to create new introductory courses in those core areas for non-science majors and to provide enhanced research opportunities for undergraduate science majors. To contribute to the development of scientific literacy in the general student population, the core courses comprehensively address factors that have been found to promote science interest and learning in undergraduates. Four new courses have been developed for non-science majors:

- The Impact of Chemistry places basic introductory chemistry firmly within its political, economic, social, and ethical context. Chemical principles are developed alongside current issues as a means to help students better understand larger debates within our society.
- Great Ideas that Changed Physics and the World educates students in the principles of physics so that they can make sound judgments about technical questions that they will encounter in their

lives. The experimental nature of physics is communicated by having students see for themselves the operation of fundamental scientific principles.

- Moving Bodies, the Biology of Movement provides non-science majors with the means to obtain practical knowledge of fundamental biological processes and of the scientific method. The course gives students the basic knowledge they need to react critically to the health and medical issues that confront us on an almost daily basis.
- The Mathematics of Communications: Keeping Secrets was developed to provide an interesting and socially relevant mathematics course for liberal arts majors. Its subject, cryptography, has wide appeal and a large number of real-world applications, from credit cards to medical records to intellectual property.

These courses use group work, case studies and extended discussions, which are not typically used in introductory science courses and which encourage active learning. An evaluation of these courses indicates significant changes in student knowledge, high student satisfaction with the courses, and changes in previously negative student attitudes towards science. In addition, this project is continuing to promote research experiences by providing research preparation workshops for science majors. See Chapter IV – The Context of Outcomes Assessment for a more detailed discussion of assessment of this project.

INFORMATION LITERACY AND INSTRUCTIONAL TECHNOLOGY

Much work has been done to increase students' information and computer literacy. The Instructional Technology Initiative, a \$1.5 million internally funded program, has transformed undergraduate teaching and learning in large classes in New Brunswick through innovative uses of technology. Major innovations were made in courses in geography, communications, life sciences, Spanish and Portuguese, and engineering. These projects were designed to change instructional practices and outcomes in a wide variety of departments in humanities, social sciences, natural sciences, and engineering. Approximately 9,000 students participate in these courses each year.

The projects funded by the Instructional Technology Initiative vary in purpose, including increased participation (Communication, Educational Psychology); provision of practice of skills (Music, Biology, Spanish, and Digiclass); development of new skills (Mechanical Engineering, Genetics, Spanish, Digiclass); provision of experiences that would otherwise not be possible (Mechanical Engineering, Educational Psychology, Genetics); and increased access to the content of the courses (all projects). Digiclass is a web-based application that provides students with effective out-of-class communication, grammar practice, and authentic cultural contact, and assists instructors with course management. These initiatives are unique in their broad scope and in the systematic evaluation of student outcomes.

With the assistance of a \$500,000 grant from the Mellon Foundation, the New Brunswick Teaching Excellence Center has been able to study the teaching effectiveness, learning outcomes, and cost effectiveness of these initiatives. This is discussed fully in Chapter IV – The Context of Outcomes Assessment.

In this area again Rutgers Dialogues Grants have supported individual faculty curriculum development initiatives. For example:

- The Department of Music, Mason Gross School of the Arts, transformed its music technology classes from lecture and demonstration courses to a hands-on, project based curriculum.
- Exercises for the course Quantitative Methods in Psychology, taken by about 1000 New Brunswick students per year, have been made available to students online.

- In Camden two courses have been developed that provide students with a critical view of what the computer has meant for the history of art and the practice of photography.
- In Camden a website has been created by the Department of Sociology, Anthropology and Criminal Justice to support department courses across its entire curriculum.
- In Newark web and other computer-based materials have become part of what had been a traditional, lecture-format, introductory survey course in U.S. history.
- The Department of Mathematics in Newark has consolidated all existing departmental course materials on its website, <http://rutgers-newark.rutgers.edu/academics/brochures/math.pdf>.

The Teaching Excellence Centers support faculty members in efforts to use new technology to improve instruction through a variety of training sessions. These sessions address use of state-of-the-art software and the development of innovative websites for courses. Workshops and seminars are offered throughout the academic year covering topics on faculty development, instructional technologies, and computer support. The TECs offer a number of consultation services for faculty interested in improving their classroom performance. This includes a video-taping service, one-on-one consultations with TEC staff, development of Teaching Portfolios for individual faculty and consultations with departments on designing comprehensive systems of assessment and evaluation, including peer review. Through the efforts of the TECs, numerous academic courses have been redesigned.

In addition, with \$500,000 from the state-funded Equipment Leasing Fund, many instructional equipment upgrades have been made. These include the purchase of laptop computers and portable projectors for departments; a technology enhanced classroom for Art History; a number of classrooms enhanced with wireless connection to the Internet; and a number of classrooms enhanced with the installation of wireless personal response systems.

Information literacy remains a high priority for the university, especially the University Libraries. In collaboration with the schools and departments, Teaching Excellence Centers, Office of Continuous Education and Outreach, and with support from the Office of the Vice President for Undergraduate Education's Dialogues grants, the Libraries have offered a variety of programs for graduate and undergraduate students. All e-College course management system programs for continuous education have a library research methodology module incorporated. For example, all first year students at Douglass College now take several classes on how to find, evaluate and use information for their research in the "Shaping a Life" course. Numerous specialized classes are customized for undergraduate and graduate classes based on the needs of the instructor; and based on feedback from a university-wide library advisory committee, the Libraries are developing online information literacy tutorials that can be incorporated in Blackboard, WebCT or e-College course management systems by the faculty.

MULTICULTURAL UNDERSTANDING

There has also been considerable curriculum revision and expansion related to increasing students' multicultural and international understanding. Some of these programs focus on traditional area studies:

- The program in Middle Eastern Studies has developed courses in Middle Eastern Literature that use the comparative study of literary traditions to develop a sense of commonalities as well as diversity, and to promote the understanding of literature as a force for political, cultural, and social change.
- A group of faculty members, with the support of Rutgers Dialogues Grants, have created numerous courses that address the historical, political, economic, social and cultural foundations and legacies of the Asia/Pacific region.

- With the support of a Dialogues grant, new undergraduate major and minor programs in European Studies are being developed so that students will gain a multidisciplinary understanding of “the New Europe.”
- At the graduate level, the master’s and doctoral degrees developed by the Graduate School – Newark, and operated under the auspices of the Center for Global Change and Governance, are providing an academic home for intercultural studies. Forums and conferences sponsored by the Center, as well as the presence of a body of graduate students on campus, has an important impact on undergraduate education.

Co-curricular programs to support multicultural student learning have also been bolstered by the development of a number of new centers and institutes that focus on cultural issues. These centers present lectures, panel discussions, film series and cultural performances that have enriched our students’ course-based learning. Examples include:

- Asian American Cultural Center (New Brunswick)
- Center for the Study of Jewish Life (New Brunswick)
- Institute on Ethnicity, Culture and the Modern Experience (Newark).

In September 2002, Rutgers received a grant of \$225,000 from the Bildner Family Foundation to support faculty and staff in addressing intercultural interaction in the undergraduate experience. Acknowledging that many students use multicultural courses as a way of learning about their own culture, but not other cultures, the grant is supporting efforts to engage students in a wider conversation about pluralism and multiculturalism. As noted in 2000 by a university-wide task force on multicultural issues, “The outcomes of tasks, problems and opportunities that we, our students, and our society face require not only knowledge that many cultures exist, but knowledge of how cultures interact with each other, and how this interaction can occur in a positive, productive manner.” The Bildner grant will support the revision of 36 courses over the next three years to focus on these issues of intercultural interaction. Each of the three campuses has its own plan for enhancing intercultural experiences.

- In New Brunswick, intercultural interaction will be introduced into the basic Composition course, required by all undergraduate college, with an approximate enrollment of 4500 per year. Using multicultural materials, students learn to think and write critically about what they are reading and relate this to events that are likely to shape their future. In addition, transcultural faculty fellows will bring multicultural issues into selected, large enrollment classes, linking the materials to issues addressed in the Composition course.
- In Camden, the World Masterpieces course, taught by English Department faculty, is required for all students and has the largest enrollment on the campus. Here too, intercultural themes will be explored and faculty will be encouraged to develop related courses. Further, the Department of Fine Arts will use multimedia technology to explore intercultural interaction.
- In Newark, new courses and revised existing courses will incorporate the use of ethnic life histories as a means of engaging students in intercultural issues. As in New Brunswick, transcultural faculty fellows will bring intercultural themes into course development in a wide range of disciplines. The Institute on Ethnicity, Culture, and the Modern Experience will play an important role in these developments.

In each of these campus-based multicultural initiatives, strong support by the deans of the campus faculties of arts and sciences is critical for the program’s success. And on each of the campuses, mechanisms are in place for students to share their work and for faculty to interact with one another. See Chapter IV-The Context of Outcomes Assessment for a discussion of the evaluation of these programs.

Recognizing that global programs and international experiences enhance multicultural awareness, Rutgers has developed a range of programs to provide students with opportunities for studying abroad and working with students outside of the U.S. Examples include:

- Global Interactive Courses (GIC), which bring high technology into classroom courses, not only to bridge geographical space between students and teachers, but to capitalize upon diverse viewpoints. GICs are designed to promote and enhance cultural understanding among undergraduates from Rutgers with their peers at institutions around the world. Programs have involved Rutgers students and students in the Republic of Korea and Japan. Work with students in Russia, Brazil, and England is planned.
- Undergraduate Study Abroad programs, which provide summer-long, semester-long, and year-long programs worldwide. In recent years, these programs have significantly expanded well beyond arts and sciences to disciplines in almost every area. From engineering to meteorology, Rutgers students have options abroad. Most exciting, Rutgers has developed its first Study Abroad program fully integrated as a requirement for a Rutgers four-year undergraduate degree: theater arts students study at Shakespeare's Globe Theatre in London.
- South African Large Telescope Project (SALT), which brings Rutgers together with the South African government and other international partners to build the largest telescope in the southern hemisphere in rural South Africa. As one of the initial partners of SALT, Rutgers faculty are helping to craft a world-class scientific instrument and to provide students with a unique research experience.
- Argentina Reads initiative, which involves the National Academy of Argentina, La Plata National University, and Rutgers Graduate School of Education to promote literacy in Argentina.
- An Undergraduate Research Program with the University of São Paulo (USP), Brazil, which links Cook College, the School of Engineering, Douglass College, USP, and Ohio State University and provides undergraduate research opportunities abroad.
- Center for Human Origins, which provides Rutgers anthropologists with unparalleled access to research sites in East Africa. Rutgers has teamed up with the National Museum of Kenya to co-administer the Koobi Fora Field School in northeastern Kenya. This association has given Rutgers faculty, graduate students, and undergraduates access to some of the world's great paleoanthropology sites.
- Center for Global Women's Leadership, which is a key player in the worldwide movement to define and achieve women's rights. The center has held regional and thematic conferences in Turkey and Nigeria, and is now planning others in Asia and Central America.
- Humphrey Fellows Program, sponsored by the U.S. government, which brings mid-level professionals from around the world to the United States for a year of graduate study and professional development. The Edward J. Bloustein School of Planning and Public Policy at Rutgers is one of twelve schools in the United States that hosts Humphrey Fellows—a distinction earned through periodic national competition. Each year, planning and development professionals from more than a dozen countries study and share ideas at the Bloustein School.
- Camden's International Studies courses, which provide students with short-term opportunities to study abroad. These courses combine class work with one- to two-week immersion experiences.

STUDENT RETENTION AND ACADEMIC SUPPORT PROGRAMS

The record of success in the area of undergraduate student retention and graduation can and should be continued. The University Student Retention Committee should provide suggestions that will help maintain and improve this area.

Since the Middle States Review and as a result of a subsequent New Brunswick Faculty Council recommendation, the effectiveness and efficiency of academic support programs is being examined in terms of campus-wide effort. The New Brunswick Task Force on Academic Support was created and is currently studying a number of issues related to the effectiveness of academic support programs in ensuring student academic success. The University Student Retention Committee agreed with the importance of campus-based evaluations of academic support programs. The New Brunswick Task Force on Academic Support has provided input on the structure and process for a comprehensive external review of academic support programs on the New Brunswick campus. It has also been charged with developing recommendations on specific issues:

- What information from recent research and practice literature should be considered in the delivery of campus academic support services?
- What best practices at peer institutions should be considered in the delivery of academic support services?
- How should new technologies be used?
- What mechanisms should be created to ensure coordination among support services and between support services and academic departments?
- How well do current New Brunswick academic support services meet existing student needs?

In April 2002 a five member external review team visited the New Brunswick campus to conduct an integrated external review of New Brunswick's ten major academic support programs. The purpose of the review was to obtain external peer expert opinion about the strengths and weaknesses of academic support programs, individually and as a campus-wide support system, and to provide direction for future program development. The process parallels the external review process for academic departments. This New Brunswick external review will serve as a model for future efforts on the Newark and Camden campuses.

Review team members were provided with a set of thirteen questions to guide their review. They were asked to focus particular attention on the following three questions:

- Comment on the quality of the services that are delivered to students.
- Comment on the ease with which Rutgers – New Brunswick students can access appropriate academic support services. How can program accessibility be improved?
- Comment on the contributions of these individual academic support programs to a campus-wide retention effort. How can the campus-wide effort be improved?

In their summary of major issues and recommendations the review team stated: “Throughout the review process, team members became increasingly impressed with the quality of various academic support services and the enthusiasm and commitment of the staff. In some cases (e.g., the Writing Centers), Rutgers programs are not only well regarded on campus, but at the national level as well... Rutgers’ faculty and staff can also take pride in other AAU rankings.... Although no direct cause and effect relationship has been established, the review team believes that academic support programs have contributed in meaningful ways to these outstanding achievements.”

The team also made a number of recommendations to assist in realizing “the full potential of these units” which are being addressed. The recommendations include development of a more extensive assessment program, increasing communication and collaboration among academic support programs and between academic programs and the colleges, focusing more attention on the transfer student experience, and improving services for students with learning disabilities.

A comprehensive discussion concerning assessment of undergraduate education is detailed in Chapter IV – The Context of Outcomes Assessment.

To supplement the preceding discussion concerning undergraduate education, the following data tables are presented to show how Rutgers compares with other AAU institutions on some important measures: retention rates by race/ethnicity, graduation rates by race/ethnicity and gender, bachelor degrees conferred by race/ethnicity, and undergraduate tuition and fees.

TABLE 6

**PUBLIC AAU INSTITUTIONS
1-YEAR RETENTION - 2000 COHORT**

PUBLIC AAU INSTITUTIONS	AFRICAN AMERICAN		AMERICAN INDIAN		ASIAN		LATINO		WHITE		RESIDENT ALIEN		UNKNOWN		TOTAL	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
University of Arizona	113	74.3	83	60.2	257	86.0	475	72.0	3,669	79.5	96	74.0	76	75.0	4,769	78.4
University of California - Berkeley	148	94.6	20	95.0	1,469	97.0	319	93.4	1,345	95.7	92	92.4	341	95.0	3,734	95.8
University of California - Davis	112	83.0	29	86.2	1,459	91.8	425	88.2	2,091	92.5	52	90.4	139	95.0	4,307	91.6
University of California - Irvine	72	88.9	18	94.4	1,881	94.3	394	86.8	1,017	90.1	31	93.5	223	95.5	3,636	92.2
University of California - Los Angeles	155	98.1	16	100.0	1,565	97.8	524	94.7	1,586	96.7	79	96.2	264	96.6	4,189	96.9
University of California - San Diego	93	87.1	26	92.3	529	91.5	496	91.9	1,905	91.9	25	68.0	350	88.9	3,424	91.2
University of California - Santa Barbara	28	96.4	13	92.3	1,133	97.5	307	95.4	1,327	95.0	24	95.8	287	96.5	3,119	96.1
University of Colorado	84	76.2	28	71.4	294	84.0	271	79.0	4,139	82.5	24	70.8	212	79.2	5,052	82.1
University of Florida	783	-	77	-	518	-	830	-	4,612	-	16	-	72	-	6,908	-
University of Illinois	477	87.8	12	91.7	832	95.0	408	86.0	4,251	93.5	119	58.8	75	84.0	6,174	92.0
Indiana University	299	82.6	11	81.8	230	89.6	128	87.5	5,885	86.9	161	87.6	102	81.4	6,816	86.8
Iowa State University	104	85.6	10	40.0	113	92.0	103	82.5	3,703	83.6	86	94.2	169	78.7	4,289	83.7
University of Iowa	98	71.4	18	66.7	127	84.3	83	79.5	3,198	82.0	29	75.9	137	83.2	3,690	81.7
University of Kansas	106	71.7	35	80.0	163	78.5	94	70.2	3,557	78.5	67	82.1	106	75.5	4,128	78.1
University of Maryland	476	87.4	12	75.0	565	93.6	190	91.1	2,471	91.8	63	85.7	170	88.8	3,947	91.2
* University of Michigan	470	90.2	39	84.6	735	96.5	277	89.9	3,326	95.5	164	96.3	392	94.9	5,403	94.8
Michigan State University	560	83.6	38	81.6	375	88.3	157	83.4	5,142	91.1	102	82.4	42	92.9	6,416	89.9
University of Minnesota	217	81.1	31	61.3	517	81.2	88	70.5	3,853	84.2	51	84.3	108	80.6	4,865	83.3
University of Missouri	225	77.3	21	66.7	122	88.5	62	77.4	3,602	84.4	23	87.0	119	84.9	4,174	84.0
University of Nebraska	76	77.6	18	66.7	83	81.9	66	68.2	3,130	80.1	56	80.4	176	75.0	3,605	79.5
State University of New York - Buffalo	230	85.7	14	57.1	300	88.0	139	83.5	2,134	84.6	87	88.5	153	79.1	3,057	84.7
State University of New York - Stony Brook	233	92.3	3	66.7	646	90.2	190	85.8	812	80.0	85	74.1	340	82.9	2,309	84.8
* University of North Carolina	406	95.8	27	100.0	203	96.1	57	94.7	2,682	94.9	32	84.4	1	100.0	3,408	95.0
Ohio State University	553	77.6	36	75.0	338	89.3	156	76.9	4,589	87.4	139	77.0	26	92.3	5,837	86.0
University of Oregon	50	78.0	21	85.7	201	81.6	77	75.3	2,043	82.4	86	91.9	167	81.4	2,645	82.3
Pennsylvania State University	266	86.5	9	88.9	300	92.7	245	86.9	4,666	93.8	137	80.3	-	-	5,623	92.7
University of Pittsburgh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Purdue University	191	85.9	15	86.7	297	89.6	102	82.4	5,474	87.3	248	94.0	-	-	6,327	87.5
Rutgers, The State University of New Jersey	472	87.5	14	78.6	1,106	91.8	454	83.9	2,884	86.8	99	72.7	258	86.4	5,287	87.3
Texas A&M University	173	82.7	33	84.8	250	91.6	666	81.1	5,368	89.2	42	92.9	120	88.3	6,652	88.3
University of Texas	287	92.7	32	81.3	1,311	95.7	982	88.6	4,730	91.6	214	93.9	3	66.7	7,559	92.0
University of Virginia	281	95.4	10	90.0	348	96.8	99	92.9	2,013	96.4	137	93.4	39	94.9	2,927	96.0
University of Washington	117	94.0	48	81.3	1,241	93.4	119	89.1	2,639	89.6	120	93.3	490	89.8	4,774	90.7
* University of Wisconsin	127	85.0	30	73.3	255	85.5	125	81.6	4,990	91.1	122	86.9	68	89.7	5,717	90.3
AAU Mean	245	85.4	26	79.3	599	90.4	276	84.1	3,298	88.4	88	85.0	169	86.4	4,690	88.3

* Includes Part-Time Students

Source: AAUDE Graduation-Retention Survey

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Office of Institutional Research

January 2003

TABLE 7

**PUBLIC AAU INSTITUTIONS - SIX-YEAR GRADUATION RATES BY RACE/ETHNICITY AND GENDER
FIRST-YEAR UNDERGRADUATE STUDENTS, FULL-TIME FALL 1995 COHORT***

PUBLIC AAU INSTITUTIONS**	AFRICAN AMER.			AMER. INDIAN			ASIAN			LATINO			WHITE			TOTAL***		
	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
University of Arizona	42	30	37	29	18	25	62	55	59	48	38	44	63	55	59	59	51	55
University of California - Berkeley	73	58	68	72	72	72	91	86	88	80	64	73	87	80	83	86	79	82
University of California - Irvine	81	56	75	50	80	62	78	66	72	72	63	68	80	70	75	77	66	72
University of California - Los Angeles	78	66	73	69	64	67	89	84	87	78	72	76	88	81	85	85	79	82
University of California - Santa Barbara	56	47	53	73	9	52	73	64	69	66	66	66	71	69	70	70	66	68
University of Colorado	54	48	51	38	38	38	62	57	59	53	43	48	70	66	68	68	63	65
University of Florida	65	50	59	100	50	70	69	67	68	66	64	65	76	69	73	73	67	70
University of Illinois	64	51	59	56	17	40	84	79	81	72	54	63	84	78	81	82	76	79
Indiana University	42	38	41	20	33	23	71	72	71	45	42	44	72	69	71	70	67	69
University of Iowa	43	37	41	-	-	67	54	67	60	64	38	52	68	65	67	66	63	65
Iowa State University	43	44	44	67	40	50	66	63	64	36	35	36	67	63	65	66	62	64
University of Kansas	40	38	39	57	38	45	59	60	59	38	54	47	60	54	57	59	54	56
University of Maryland	55	39	49	13	33	21	75	61	67	58	56	57	75	63	68	70	59	65
University of Michigan	74	56	68	63	88	73	92	84	88	78	69	74	88	85	87	85	81	83
Michigan State University	54	50	52	35	62	49	65	63	64	57	48	53	72	70	71	69	68	69
University of Minnesota	35	24	31	25	26	26	47	43	45	49	39	44	54	52	53	52	49	50
University of Missouri	57	50	54	50	40	47	72	57	65	33	48	41	68	64	66	67	62	65
University of Nebraska	39	20	27	33	29	30	48	47	47	48	37	43	57	53	55	55	51	53
State University of New York - Buffalo	51	47	49	63	50	58	63	60	61	44	37	40	57	56	56	57	55	56
State University of New York - Stony Brook	64	59	62	-	-	-	58	60	59	49	43	46	50	47	48	54	50	52
University of North Carolina	67	57	64	37	64	47	79	81	80	86	100	90	83	80	82	80	78	79
Ohio State University	49	32	43	73	27	50	71	56	64	54	44	49	60	54	57	60	52	56
University of Oregon	61	50	55	60	38	50	66	57	62	57	50	54	61	54	58	62	55	59
Pennsylvania State University	88	76	84	-	-	75	91	92	92	94	78	86	94	91	93	93	90	91
University of Pittsburgh	48	36	43	-	-	67	67	68	67	44	56	50	69	60	65	65	57	62
Purdue University	55	49	52	40	44	42	74	65	69	67	51	58	64	61	62	64	61	62
Rutgers, The State University of New Jersey	64	55	60	60	67	65	80	72	77	66	56	62	78	72	75	76	69	73
University of Texas	66	46	58	76	50	70	82	67	74	67	56	61	76	68	72	75	65	70
Texas A&M University	68	63	66	50	88	63	75	72	74	68	56	61	81	73	77	78	70	74
University of Virginia	86	79	84	-	-	67	95	91	93	96	94	95	95	92	94	94	91	92
University of Washington	57	55	56	65	52	59	75	62	69	66	57	62	70	66	68	74	66	70
University of Wisconsin	45	41	44	59	38	50	77	71	75	61	51	56	79	77	78	78	74	76
AAU Mean	58	48	54	53	46	52	72	67	70	61	55	58	72	67	70	71	66	68

* Includes all students who graduated through August 2001.

** Data not available for University of California - San Diego and University of California - Davis.

Source: NCAA 2002 Division I Graduation-Rates Report
IPEDS Graduation Rate Survey was used for Rutgers

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TABLE 8

**PUBLIC AAU INSTITUTIONS
BACHELOR DEGREES CONFERRED
ACADEMIC YEAR 2001-2002**

PUBLIC AAU INSTITUTIONS*	AFRICAN AMERICAN	AMERICAN INDIAN	ASIAN	LATINO	WHITE	NON-RESIDENT ALIEN	UNKNOWN	TOTAL
University of Arizona	107	89	274	688	3,501	314	8	4,981
University of California - Berkeley	258	36	2,308	590	1,923	324	759	6,198
University of California - Davis	116	48	1,522	440	2,145	80	381	4,732
University of California - Irvine	65	17	1,896	394	848	115	295	3,630
University of California - Los Angeles	267	38	2,432	977	2,503	238	439	6,894
University of California - San Diego	57	25	1,288	374	1,661	37	480	3,922
University of California - Santa Barbara	104	44	542	575	2,684	63	464	4,476
University of Colorado	76	41	258	269	3,890	52	189	4,775
University of Florida	462	18	494	800	5,845	128	28	7,775
University of Illinois	393	12	891	317	4,881	116	110	6,720
Indiana University	206	14	178	115	4,955	211	32	5,711
Iowa State University	85	11	107	46	3,572	187	155	4,163
University of Iowa	75	15	110	77	3,328	56	122	3,783
University of Kansas	74	24	98	77	2,810	95	64	3,242
University of Maryland	640	12	700	279	3,448	142	230	5,451
University of Michigan	375	19	687	223	3,893	244	279	5,720
Michigan State University	490	33	264	159	5,876	197	54	7,073
University of Minnesota	166	23	341	104	4,415	159	114	5,322
University of Missouri	212	21	116	63	3,200	50	99	3,761
University of Nebraska	43	16	42	35	2,569	76	116	2,897
State University of New York - Buffalo	227	17	312	77	2,213	204	113	3,163
University of North Carolina	355	23	143	47	2,948	37	7	3,560
Ohio State University	431	23	389	122	5,957	345	83	7,350
University of Oregon	41	27	154	84	2,152	239	206	2,903
Pennsylvania State University	278	5	415	225	7,709	100	0	8,732
University of Pittsburgh	276	8	119	26	2,909	33	99	3,470
Purdue University	160	23	184	133	4,773	380	202	5,855
Rutgers, The State University of New Jersey	702	14	1,279	566	4,257	222	499	7,539
Texas A&M University	151	33	223	645	6,387	122	137	7,698
University of Texas	203	25	1,070	1,009	5,295	230	34	7,866
University of Virginia	298	9	324	56	2,306	104	116	3,213
University of Washington	177	88	1,294	271	3,855	176	654	6,515
University of Wisconsin	80	19	224	108	5,206	229	0	5,866
AAU Mean	232	26	627	302	3,755	161	199	5,302

* Data not available for State University of New York - Stony Brook

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Source: IPEDS FY 2001-2002 Completions Survey

TABLE 9

**In-State Undergraduate Tuition and
Required Fees (in \$ dollars)
Academic Year 2002/2003**

PUBLIC AAU INSTITUTIONS	2002/2003
University of Arizona	2,593
University of California - Berkeley	3,695
University of California - Davis	4,114
University of California - Irvine	4,058
University of California - Los Angeles	3,661
University of California - San Diego	3,950
University of California - Santa Barbara	3,847
University of Colorado	3,566
University of Florida	2,581
University of Illinois	6,704
Indiana University	5,315
University of Iowa	4,191
Iowa State University	4,110
University of Kansas	3,484
University of Maryland	5,670
University of Michigan	7,960
Michigan State University	6,412
University of Minnesota	6,280
University of Missouri	5,552
University of Nebraska	4,125
State University of New York - Buffalo	4,850
State University of New York - Stony Brook	4,358
University of North Carolina	3,856
Ohio State University	5,217
University of Oregon	4,359
Pennsylvania State University	8,585
University of Pittsburgh	8,528
Purdue University	5,580
Rutgers, The State University of New Jersey	7,308
University of Texas	3,950
Texas A&M University	4,748
University of Virginia	4,780
University of Washington	4,636
University of Wisconsin	4,426
AAU Mean	4,913

**Source: "Academic Year Tuition and
Required Fees, AAU Public Universities,"
Annual Rep. compiled by Univ. of Missouri System,
Sept. 2002**

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TABLE 10

**Out-of-State Undergraduate Tuition and
Required Fees (in \$ dollars)
Academic Year 2002/2003**

PUBLIC AAU INSTITUTIONS	2002/2003
University of Arizona	11,113
University of California - Berkeley	15,753
University of California - Davis	16,224
University of California - Irvine	16,766
University of California - Los Angeles	15,871
University of California - San Diego	16,329
University of California - Santa Barbara	16,484
University of Colorado	18,919
University of Florida	16,030
University of Illinois	16,094
Indiana University	14,390
University of Iowa	14,271
Iowa State University	13,296
University of Kansas	9,888
University of Maryland	12,302
University of Michigan	24,517
Michigan State University	13,572
University of Minnesota	14,220
University of Missouri	14,856
University of Nebraska	10,290
State University of New York - Buffalo	9,469
State University of New York - Stony Brook	8,942
University of North Carolina	15,692
Ohio State University	17,214
University of Oregon	13,254
Pennsylvania State University	18,702
University of Pittsburgh	21,872
Purdue University	16,260
Rutgers, The State University of New Jersey	13,022
University of Texas	9,527
Texas A&M University	10,221
University of Virginia	18,751
University of Washington	15,845
University of Wisconsin	22,150
AAU Mean	15,062

**Source: "Academic Year Tuition and
Required Fees, AAU Public Universities,"
Annual Rep. compiled by Univ. of Missouri System,
Sept. 2002**

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III. SPECIAL TOPICS: B. Graduate/Professional Education and Research

A key element in attracting excellent faculty members to the university is the continued ability to recruit excellent graduate students to work with them. Since 1998, significant resources in the form of financial support and selective tuition remissions have been made available to recruit and retain the best graduate students, especially in programs that are of the highest strategic priority. To compete with peer institutions, resources have been shifted so that deans now have the flexibility to tailor unit-specific strategies for increasing graduate student support with maximum effectiveness.

Both the total number of assistantships and fellowships and the amount of the stipends need to be increased.

The university provided special allocations to degree-granting graduate schools in Newark and New Brunswick, based on the unit's overall share of grant- and contract-supported graduate students in recent years and on the academic priorities specified in the university Strategic Plan. These graduate student support funds are being used to recruit and retain excellent students, in many cases from under-represented groups in areas of greatest competition, by offering specially

constructed grant packages, and to support students in ways that provide them enhanced opportunities, such as presenting papers at conferences. The funds are specifically targeted to provide tuition remissions for students in those units that have successfully supported graduate and professional students on external grants and contracts, and to provide incentives for faculty to include graduate student support on future grant proposals.

University funds have also been allocated to the graduate units for increasing the stipends of existing graduate fellowships and graduate assistantships in priority programs, for creating new fellowships or assistantships, and for providing tuition support to graduate students. A portion of the funding is also being used as matching support for academic year tuition remissions in new grant proposals or existing external awards that had been renewed. The objective has been to increase external funding of graduate students by leveraging university resources for new external grants or renewal of existing grants. Providing tuition remissions to be leveraged on a matching basis in new grant proposals in areas that are the highest strategic priorities (engineering, computer science, life sciences) has offered a strong incentive to include student support in faculty grants, which, in turn, has been an effective method of supporting and retaining superior students. These tuition remissions helped to support students working on grants from such diverse sources as the National Science Foundation, the U.S. Department of Transportation, the U.S. Department of Agriculture, and St. Barnabas Healthcare, the Hudson River Foundation, and the American Association of Microbiology.

Additional funds were provided to deans for increasing the regular base salaries of students appointed to state-funded teaching assistant and graduate assistant positions. This salary supplement is derived from the Competitiveness Pool provision of the university contract with the AAUP. These funds have given deans a flexibility in funding that permits them to make more substantial offers to recruit and retain students, thus bringing their stipends closer to those offered by peer institutions in targeted fields.

Reports from the deans on the priority and competitiveness funds and the tuition remissions indicate that the program is working. Enhancements in stipends and multi-year support packages have been instrumental in attracting top students to choose Rutgers over other excellent peer graduate programs, resulting in the recruitment of a highly select and diverse set of students. The University Vice President for Academic Affairs continues to consult with and work with the deans to provide the maximum flexibility in tailoring these resources to the needs of their graduate programs to ensure that they are able to attract the best graduate students in the country.

Allocations of significant resources to the Graduate School-New Brunswick and the Graduate School-Newark are key to the fulfillment of the university's plan to assume its place among the top tier of research universities in the nation. Graduate programs on the New Brunswick and Newark campuses attract first rate-students from around the world. These programs must be able to offer students a competitive support package and to provide them with the academic training they need to succeed in the classrooms and labs and to carry out their responsibilities as students, as TAs, and as future faculty members. To further this aim at the Graduate School-New Brunswick, a permanent adjustment increasing the fellowship budget was provided in fiscal year 2002, with an additional increase in fiscal year 2003. These funds provided a significant additional step in the university's commitment to graduate education at New Brunswick. Similar commitments will be necessary for the Graduate School-Newark, in order to give the school the flexibility to make competitive offers to attract and retain the best and brightest students, and to underscore the statewide mission of the university.

The university has also provided funding to assist in the initial stages of a program to provide health insurance for students with competitive fellowships. Approximately 30 students who hold nationally competitive external fellowships receive superior health care coverage through the Graduate School-New Brunswick. Over 400 other fellowship recipients are eligible to purchase more limited student health insurance. The University Senate studied this issue and endorsed recommendations that address the inequity between the level of health care coverage offered to these highly qualified graduate fellowship awardees and those graduate students who serve as teaching assistants or graduate assistants and thereby receive comprehensive coverage as university employees. See <http://senate.rutgers.edu/s0110.html>.

Additional graduate student support to the Graduate School-New Brunswick has been provided from private resources. The demands on these programs are great, however, and seeking additional private sources of funding for graduate student stipends remains a priority in fund-raising efforts.

In view of the heavy undergraduate teaching responsibilities given to teaching assistants and part-time lecturers, it is important that Rutgers take steps to insure that both groups receive adequate support and mentoring.

University funding supports Teaching Assistant training initiatives. In Fall 2000, the Acting Dean of the Graduate School-New Brunswick formed an Ad Hoc Committee on TA/Part Time Lecturer Instruction to offer recommendations on cost-effective ways to improve such instruction in New Brunswick. Concurrently, during the 2000-2001 academic year, the University Senate and the New Brunswick Faculty Council each examined and prepared reports on the training and support of TAs. The Ad Hoc Committee's report was submitted in May 2001. Many of the Committee's conclusions corresponded to those contained in the reports on this issue by the New Brunswick Faculty Council and the University Senate. Taken together, these

initiatives offered a comprehensive response to the goal of improving the quality of classroom instruction at the university.

Several specific recommendations were endorsed and funded.

- The first of these was a recommendation that each academic department, program, or area should name a coordinator, in most cases a full-time faculty member, who would be responsible for the supervision of TAs. Discipline-specific training and appropriate evaluation are the responsibility of the discipline where the instruction is offered, with oversight provided by the decanal units. In some cases, the appointment of head TAs to coordinate multi-sectioned courses and supervise other TAs is appropriate, and funds to provide additional compensation for head TAs and/or research support for faculty coordinators were allocated.
- A second set of recommendations concerned the selection, testing, and training of international TAs. The recommendation that the Program in American Language Studies enhance the instruction of TAs by increasing the number of weekly hours of instruction in English offers a

way for TAs to gain a higher level of fluency in English more quickly. Funds in support of this intensified instruction were allocated.

- Third, a recommendation to assess and monitor the language skills of international TAs was also accepted as a crucial element for improving classroom instruction. Funds were allocated to cover the costs of videotaping, use of “smart classrooms,” and assessment of performance. Also included were funds to pay undergraduate students to participate in the TA review process.

The data on graduate students needs to be expanded and made readily available to graduate programs and the unit deans. The team suggests this process be implemented.

The Office of Institutional Research and Academic Planning has worked closely with the Graduate School – New Brunswick and other graduate/professional schools around the university and nationally to address this concern. Please see Chapter IV, The Context of Outcomes Assessment for a discussion of this issue.

Comparative data are very useful to graduate program directors and deans. The following data tables show how Rutgers compares with other AAU institutions on the important measures of graduate degrees conferred by race/ethnicity and graduate tuition and fees.

TABLE 11

**PUBLIC AAU INSTITUTIONS
MASTER'S DEGREES CONFERRED
ACADEMIC YEAR 2001-2002**

PUBLIC AAU INSTITUTIONS*	AFRICAN AMERICAN	AMERICAN INDIAN	ASIAN	LATINO	WHITE	NON-RESIDENT ALIEN	UNKNOWN	TOTAL
University of Arizona	32	32	58	107	751	303	1	1,284
University of California - Berkeley	50	14	278	104	828	402	63	1,739
University of California - Davis	8	9	74	27	372	123	73	686
University of California - Irvine	10	1	95	34	208	149	198	695
University of California - Los Angeles	79	8	459	182	888	344	146	2,106
University of California - San Diego	9	4	69	26	258	101	28	495
University of California - Santa Barbara	14	2	31	49	244	87	83	510
University of Colorado	6	5	37	45	683	125	102	1,003
University of Florida	118	4	108	177	1,834	425	20	2,686
University of Illinois	91	3	108	68	1,230	830	107	2,437
Indiana University	72	4	62	38	968	447	29	1,620
Iowa State University	15	3	10	12	506	239	17	802
University of Iowa	27	5	26	24	913	257	28	1,280
University of Kansas	31	16	28	26	870	204	77	1,252
University of Maryland	136	6	91	30	961	400	56	1,680
University of Michigan	160	10	256	89	1,655	694	80	2,944
Michigan State University	118	11	74	37	1,223	391	25	1,879
University of Minnesota	54	10	101	39	1,716	423	116	2,459
University of Missouri	31	3	11	12	725	176	33	991
University of Nebraska	9	4	10	8	505	150	15	701
State University of New York - Buffalo	39	3	48	21	802	342	130	1,385
University of North Carolina	86	6	75	30	1,260	177	4	1,638
Ohio State University	129	7	78	31	1,683	471	58	2,457
University of Oregon	7	3	21	21	558	138	53	801
Pennsylvania State University	49	3	35	20	687	313	0	1,107
University of Pittsburgh	99	3	73	18	1,331	299	50	1,873
Purdue University	40	3	46	34	652	534	31	1,340
Rutgers, The State University of New Jersey	170	2	155	96	1,168	425	178	2,194
Texas A&M University	24	2	32	76	924	564	16	1,638
University of Texas	54	5	156	169	1,510	670	48	2,612
University of Virginia	85	3	57	23	1,006	206	107	1,487
University of Washington	37	18	214	39	1,474	319	205	2,306
University of Wisconsin	33	9	56	43	1,294	383	0	1,818
AAU Mean	58	7	92	53	960	337	66	1,573

* Data not available for State University of New York - Stony Brook

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Source: IPEDS FY 2001-2002 Completions Survey

TABLE 12

**PUBLIC AAU INSTITUTIONS
DOCTORATE DEGREES CONFERRED
ACADEMIC YEAR 2001-2002**

PUBLIC AAU INSTITUTIONS*	AFRICAN AMERICAN	AMERICAN INDIAN	ASIAN	LATINO	WHITE	NON-RESIDENT ALIEN	UNKNOWN	TOTAL
University of Arizona	6	3	6	15	216	124	0	370
University of California - Berkeley	27	3	102	42	429	173	29	805
University of California - Davis	5	1	29	9	178	78	46	346
University of California - Irvine	1	0	23	9	88	29	25	175
University of California - Los Angeles	26	4	100	33	286	126	18	593
University of California - San Diego	11	1	36	18	138	59	15	278
University of California - Santa Barbara	2	2	17	11	101	48	18	199
University of Colorado	5	0	6	4	187	39	17	258
University of Florida	14	3	19	20	391	151	9	607
University of Illinois	16	2	32	15	267	258	12	602
Indiana University	7	1	9	9	209	106	6	347
Iowa State University	7	0	1	2	90	128	11	239
University of Iowa	10	1	14	4	188	100	3	320
University of Kansas	6	2	6	5	121	35	29	204
University of Maryland	24	2	19	7	213	155	10	430
University of Michigan	41	4	42	17	285	211	10	610
Michigan State University	28	0	13	14	240	131	2	428
University of Minnesota	3	2	21	11	331	185	7	560
University of Missouri	16	2	5	7	144	72	6	252
University of Nebraska	2	0	5	1	142	57	6	213
State University of New York - Buffalo	2	3	6	5	101	100	14	231
University of North Carolina	25	1	9	7	276	72	0	390
Ohio State University	32	1	17	12	290	255	10	617
University of Oregon	0	2	5	5	99	20	6	137
Pennsylvania State University	26	0	13	14	277	189	0	519
University of Pittsburgh	13	0	7	8	187	117	4	336
Purdue University	11	0	11	6	176	189	16	409
Rutgers, The State University of New Jersey	15	2	25	10	169	141	42	404
Texas A&M University	15	0	13	29	235	205	7	504
University of Texas	16	0	24	36	362	198	3	639
University of Virginia	21	0	7	7	180	39	67	321
University of Washington	11	5	24	13	271	112	16	452
University of Wisconsin	11	1	21	20	384	213	0	650
AAU Mean	14	1	21	13	220	125	14	407

* Data not available for State University of New York - Stony Brook

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Source: IPEDS FY 2001-2002 Completions Survey

TABLE 13

**PUBLIC AAU INSTITUTIONS
FIRST PROFESSIONAL DEGREES CONFERRED
ACADEMIC YEAR 2001-2002**

PUBLIC AAU INSTITUTIONS*	AFRICAN AMERICAN	AMERICAN INDIAN	ASIAN	LATINO	WHITE	NON-RESIDENT ALIEN	UNKNOWN	TOTAL
University of Arizona	9	10	25	33	193	7	28	305
University of California - Berkeley	8	2	69	22	179	5	62	347
University of California - Davis	11	3	60	28	216	4	42	364
University of California - Irvine	2	0	0	2	46	0	44	94
University of California - Los Angeles	21	2	158	39	238	5	76	539
University of California - San Diego	0	0	33	4	23	0	1	61
University of California - Santa Barbara	0	0	0	0	0	0	0	0
University of Colorado	9	2	5	10	120	0	16	162
University of Florida	74	7	76	98	647	4	1	907
University of Illinois	19	1	15	22	229	8	23	317
Indiana University	16	0	9	11	210	16	3	265
Iowa State University	0	1	0	0	97	0	0	98
University of Iowa	17	3	39	22	473	7	9	570
University of Kansas	4	1	10	4	230	4	28	281
University of Maryland	0	0	0	1	26	0	0	27
University of Michigan	48	9	117	25	383	7	85	674
Michigan State University	20	1	37	17	248	0	0	323
University of Minnesota	7	8	52	6	502	9	89	673
University of Missouri	11	1	14	4	257	0	4	291
University of Nebraska	3	0	2	0	105	1	6	117
State University of New York - Buffalo	27	4	61	14	380	11	27	524
University of North Carolina	49	5	50	6	472	5	2	589
Ohio State University	40	5	69	19	611	9	22	775
University of Oregon	2	2	8	5	139	1	12	169
Pennsylvania State University	0	0	0	0	0	0	0	0
University of Pittsburgh	26	2	46	22	452	23	6	577
Purdue University	5	0	16	6	155	6	4	192
Rutgers, The State University of New Jersey	50	0	86	39	302	11	77	565
Texas A&M University	0	2	5	5	112	0	1	125
University of Texas	15	2	54	57	416	4	39	587
University of Virginia	34	3	50	5	346	0	67	505
University of Washington	7	10	95	12	320	10	22	476
University of Wisconsin	28	10	33	27	495	14	0	607
AAU Mean	17	3	39	17	261	5	24	367

* Data not available for State University of New York - Stony Brook

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Source: IPEDS FY 2001-2002 Completions Survey

TABLE 14

**In-State Graduate Tuition and
Required Fees (in \$ dollars)
Academic Year 2002/2003**

PUBLIC AAU INSTITUTIONS	2002/2003
University of Arizona	2,593
University of California - Berkeley	4,431
University of California - Davis	4,902
University of California - Irvine	5,444
University of California - Los Angeles	4,549
University of California - San Diego	5,015
University of California - Santa Barbara	5,162
University of Colorado	4,489
University of Florida	4,304
University of Illinois	7,420
Indiana University	5,361
University of Iowa	4,887
Iowa State University	4,770
University of Kansas	3,790
University of Maryland	8,054
University of Michigan	12,197
Michigan State University	7,062
University of Minnesota	7,662
University of Missouri	5,498
University of Nebraska	4,290
State University of New York - Buffalo	6,153
State University of New York - Stony Brook	5,626
University of North Carolina	4,043
Ohio State University	6,639
University of Oregon	7,848
Pennsylvania State University	9,324
University of Pittsburgh	11,286
Purdue University	5,580
Rutgers, The State University of New Jersey	9,194
University of Texas	4,295
Texas A&M University	4,989
University of Virginia	5,661
University of Washington	6,758
University of Wisconsin	6,880
AAU Mean	6,063

**Source: "Academic Year Tuition and
Required Fees, AAU Public Universities,"
Annual Rep. compiled by Univ. of Missouri System,
Sept. 2002**

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TABLE 15

**Out-of-State Graduate Tuition and
Required Fees (in \$ dollars)
Academic Year 2002/2003**

PUBLIC AAU INSTITUTIONS	2002/2003
University of Arizona	11,113
University of California - Berkeley	16,074
University of California - Davis	16,493
University of California - Irvine	16,437
University of California - Los Angeles	16,040
University of California - San Diego	16,329
University of California - Santa Barbara	16,226
University of Colorado	18,910
University of Florida	12,046
University of Illinois	15,308
Indiana University	15,925
University of Iowa	13,833
Iowa State University	12,802
University of Kansas	10,687
University of Maryland	14,434
University of Michigan	24,185
Michigan State University	15,423
University of Minnesota	16,854
University of Missouri	14,705
University of Nebraska	10,718
State University of New York - Buffalo	9,750
State University of New York - Stony Brook	9,258
University of North Carolina	15,140
Ohio State University	14,640
University of Oregon	15,888
Pennsylvania State University	17,816
University of Pittsburgh	17,336
Purdue University	16,260
Rutgers, The State University of New Jersey	13,284
University of Texas	10,490
Texas A&M University	11,288
University of Virginia	19,990
University of Washington	15,337
University of Wisconsin	18,426
AAU Mean	14,984

**Source: "Academic Year Tuition and
Required Fees, AAU Public Universities,"
Annual Rep. compiled by Univ. of Missouri System,
Sept. 2002**

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III. SPECIAL TOPICS: C. Information Systems/Information Technology

THE LIBRARIES

The Rutgers University Libraries seem transformed since the 1998 Middle States Accreditation Review. The rapid development and expansion of networked electronic resources and the reinvestment in library collections over the five years since the MSA report have made this transformation possible. While the Libraries' continued substantial reliance on one-time funding is problematic, significant progress has been made in base funding and especially non-state funding. The utilization of the increased funding has been guided by the Libraries' five year plan, *A Bridge to the Future: The Rutgers Digital Library Initiative*, completed in March 1999, the development of which was recommended by the MSA team. *A Bridge to the Future* complements the university's Strategic Plan (see http://www.libraries.rutgers.edu/rul/about/long_range_plan.pdf).

The need for reinvestment in library collections must be addressed by base funding targeted for strategic investments in research materials and increased funding for resource sharing and document delivery rather than one-time opportunistic funding. Strategic planning efforts underway in the libraries should identify priorities for collection growth based on the university's strategic planning priorities and a three- to five-year plan for reinvestment should be developed using an all-funds approach.

The report's foremost recommendation was "the need for reinvestment in library collections" In FY1998, the base collections budget was \$5,229,379, the same amount that it had been for the previous four years. It represented 77% of the total collections budget. One-time money consisted of 13% and non-state funds 9% of the total budget. In FY2001, the base budget increased by 17% for an average annual increase of 4.24 %, but as a percentage of the total budget base funding had decreased to 74%. The base increase was due to an arrangement by which the university matched the amount the Libraries contributed to the base budget through library salary savings. Using the "all funds" approach to budgeting, i.e., allocating strategically all available funds (state funding-base and one-time- and nonstate funds), there was an overall 23% increase in the total budget in FY2001. One-time funding increased by 20% over the four years and remained 13% of the total budget. The biggest increase was in non-state expenditures which grew by 73% and became 13% of the total budget. This latter figure testifies to the Libraries' efforts in fundraising and more aggressive and systematic use of gifts and endowment funds.

Investment in research collections is primarily reflected in the increase in networked electronic resources. Expenditures in Academic Year 1997/98 for this category represented 10% of the total expenditures and four years later, it was 31% of the total expenditures, for a 298% increase. The types of resources acquired have been indexes, such as the

Web of Science, and a variety of full-text databases and journal packages in many fields. During this time the number of networked resources increased by 198% and the number of electronic journals available through the online catalog rose six-fold. The Libraries now provide access through the online catalog (IRIS) to approximately 60,000 electronic books (including both current imprints and early English books), over 150 subject-based or specialized and multi-discipline databases, and over 9,200 full-text electronic journals. These resources are equally available to all members of the Rutgers community, wherever they are located. This availability and equity among the campuses is a fundamental Libraries' principle for electronic resources.

Progress has been made on the MSA team's recommendations on resource sharing and document delivery as supplements to the extant collections. Rutgers is a member of three library consortia, including the North East Research Library Consortium, VALE (Virtual Academic Library Environment of New Jersey), and PALINET (Pennsylvania/New Jersey/Maryland region for interlibrary loan and cooperative purchase of databases). All of these consortia have been extremely useful in resource sharing: members get access to some of the electronic journals at the other member institutions, get reduced pricing for joint purchases, and work out contract terms acceptable to all participating libraries. The libraries are member/owners of the Center for Research Libraries (CRL), which houses an extraordinary collection of research materials in broad disciplines that are rarely held, but necessary for in-depth scholarship. Materials requested by Rutgers are shipped expeditiously with extended loan periods, including long runs of print journals. Rutgers has a long-term relationship with Princeton involving expedited interlibrary loan, borrowing privileges for Rutgers faculty, and collection development agreements among the selectors. Rutgers is also a member of the Metro Research Libraries, which includes Columbia, New York University, New York Public Library, and recently Princeton. The selectors meet annually and discuss areas of mutual interest, make agreements on cooperative collection development, and engage in joint purchases. Rutgers is a member of the Research Libraries Shares Interlibrary Loan consortium and is also seeking direct borrowing agreements with regional research libraries. The Libraries has increased expenditures on Interlibrary Loan and Document Delivery by 180% between 1997/98 and 2000/01, and the amount borrowed from other libraries has increased 21.4%. Effective Document Delivery to the user's desktop has been a goal of the Libraries outlined in *The Bridge to the Future*. To address this, Rutgers contracted with UNCover and then Ingenta. Due to various vendor technical and managerial issues the results have not been as successful as expected but it is anticipated that this service will grow as improvements are made in the future.

As recommended by the MSA team, the Libraries have compiled data to track usage of library materials and levels of satisfaction to assist in collection development decision making.

The new on-line integrated library system, SIRSI, can be used for gathering data about who uses the library's resources, the types of materials used in the collections, the location of demand, and the degree to which demand can be satisfied by extant collections, document delivery, etc.

- Usage and cost per use data of networked electronic resources are compiled annually.
- The Libraries Assessment Committee was established in 1998 and has conducted three major surveys: 1999 Users' Survey asking questions about types of materials and services used, and frequency and level of satisfactions and relevant user information; 2001 Electronic Reserve User Survey; 2002 E-journal User Survey.
- SIRSI, the integrated library system, has been utilized to compile collection holdings information related to duplication of titles, cost of materials, and usage patterns of circulating materials.
- Departmental Liaison Survey that can be customized for each department has been developed to ascertain faculty input on collections and services.

The data and information collected strongly suggest that the Libraries are moving in the right direction, as user satisfaction continues to be high. Electronic resources and services are heavily used and statistics indicate continuous growth in this area. The survey data have also informed decisions and actions. For example, the Electronic Reserves Survey indicated broad enthusiasm for this service but noted areas for improvement, especially in presentation and ease of copying. Survey suggestions were implemented. The results of the E-journal User Survey indicated that Rutgers users were using e-journals more frequently than had been reported in other studies, and use of e-journals exceeded that of print. While these users cited numerous advantages for e-journals, specific comments suggest that increased outreach is needed to make users aware of the existing and new electronic titles. A communications plan was implemented to expand marketing of services and collections. Since new library resources and services are continuously introduced, data will continue to be gathered on an ongoing basis to ascertain changes in use patterns.

CHANGES SINCE 1998 MIDDLE STATES REVIEW

COLLECTIONS BUDGET	1997/98	% OF BUDGET	2000/2001	% OF BUDGET	% CHANGE
Base	\$5,228,379	77%	\$6,140,703	74%	17%
One-time	\$891,145	13%	\$1,072,832	13%	20%
Non-state	\$636,082	9%	\$1,103,374	13%	73%
TOTAL	\$6,755,606	100%	\$8,316,909	100%	23%
Electronic	\$657,000	10%	\$2,615,181	31%	298%
Indexes/Databases					
Inter-library loan/Document Del.	\$48,979	1%	\$136,938	2%	180%
ITEMS	1997/98	2000/2001	% CHANGE		
# of Inter-Lib. Loan Borrows	15,157	18,407	21.4%		
# of Intra Lib. Loan	97,434	119,985	23.1%		
# of Electronic Indexes/Databases	42	125	197.6%		
# of Vols. Added	72,825	71,683	-2%		

The Library Strategic Planning Advisory Council should be encouraged to reach general agreement about the percentage of collections funds to be spent for monographs, journals, electronic resources and other types of research materials. These general guidelines must take the competing needs of undergraduate and graduate education, teaching and research, and disciplinary differences into consideration.

Until the rate of growth of electronic resources stabilizes, it will be difficult to establish a fixed percentage for the various categories, particularly because of the rapid growth in electronic resources contracted on a subscription basis that increases yearly commitments. Networked electronic resources, however, reflect a good balance among the disciplines and teaching and research level offerings. The area that has been least adequately addressed is monograph purchases in general, and specifically in the areas of foreign publications to support the needs of global and international studies. During FY1998, only 72,825 volumes were added, a low level for one year's acquisitions. Three years later the level had dropped by another 2% to only 71,683 volumes added during FY2001.

Increasing collection development resources and the growth of library endowments should be a significant priority of Rutgers' capital campaign.

Rutgers' capital campaign has emphasized increasing collections development resources and growth of the libraries' endowments, as the MSA team recommended. The Libraries' Case Statement for the capital campaign identifies as priorities the Endowments for Library Collections and the Endowment for Strategic Technology Initiatives. Since FY1998, there have been major

fundraising efforts related to annual giving and the establishment of new endowments and funds added to existing endowments and there has been a 73% increase in expenditure of these funds for collections. Rutgers gifts and endowments compare favorably with the top state research university libraries.

Since the bibliographic records for approximately 30% of library holdings are not converted to machine-readable form and hence not available on the online catalog, Rutgers should invest one-time resources in the conversion of these records to provide electronic access to all library holdings.

Since browsing the stacks is not the way most users find materials, IRIS -- the Rutgers Libraries' catalog -- must list all holdings. It is essential to include all library holdings in IRIS so they can be discovered and used. Cost estimates to convert collections are significant—perhaps as much as \$1 million. The university places higher priority on support of new acquisitions, so funding for the conversion is not yet available. Some resources have been allocated to the effort over the last five years, but the process is slow. Based on what has been done and what remains to be done, it will cost about \$750,000, over a period of three years, to convert the remaining paper-cataloged collections to IRIS.

TECHNOLOGY AND COMMUNICATIONS

Attention to the people side of technology initiatives through training and faculty and staff development will maximize effectiveness and support academic priorities such as learner-centered instruction.

In the time since the last Middle States review, the Teaching Excellence Centers (TECs) on each of Rutgers three regional campuses have enhanced and expanded seminars and workshops for faculty on the improvement of teaching, evaluation and assessment, and the use of instructional technologies. Workshop topics focused on instruction-related technology tools include the use of e-mail for teaching, how to conduct online discussion groups, web page design for instruction, the use of Photoshop, and the development of courseware products for online instruction.

During the same timeframe, the Reinvest in Rutgers program implemented an Instructional Technology Initiative (ITI) to foster instructional improvements and encourage the innovative use of web-based technologies across all of its campuses. The program used internal funds to support pilot projects that promote the infusion of technology into teaching and learning and the restructuring of core courses. Examples of instructional technology innovations that have been advanced by the ITI include a virtual biology laboratory, enhanced techniques for teaching literature in a foreign language, and emerging visualization technologies.

Rutgers University Computing Services (RUCS) also plays an integral role in faculty and staff information technology awareness and development. RUCS makes both campus-based and university-wide learning opportunities available. Commercially and internally developed programs are delivered based on relevant and emerging technologies. RUCS provides hands-on computer training courses for faculty, staff and students across the university. A variety of options are offered, including Unix, Macintosh, and Microsoft courses geared to develop both basic and intermediate skills. In addition,

RUCS' Telecommunications Division (TD) and Cisco, a vendor, have jointly delivered several training sessions that are open to computing specialists in academic departments. Further, a Systems Administration, Network and Security (SANS) certification-training program was recently sponsored by RUCS' Information Protection and Security organization and TD. The programs sponsored by RUCS are coordinated with and complementary to other university programs. RUCS also manages the memberships with EDUCAUSE and the Gartner Group on behalf of the university. Access to these memberships is extended to the larger Rutgers community.

In 2001, RUCS sponsored an Information Technology Forum for the purpose of presenting background information on a variety of IT topics to members of the university's Administrative Council. Some of the presentations were also delivered to the President's Cabinet. The Forum was an opportunity for RUCS to share IT information with a broad cross section of university leaders.

RUCS also helps faculty and staff stay informed and educated on IT matters through direct participation in activities throughout the university. For instance, RUCS personnel are members of many ongoing committees, working groups, and user groups on all campuses. Active participation on these committees and in these forums varies, but often includes the presentation of relevant information by RUCS and the use of RUCS resources for the analysis and implementation of committee recommendations.

Planning should begin now for a replacement, upgrade, and ongoing operation strategy for the RUNet2000.

Planning began in 1997 to identify ongoing support mechanisms for RUNet 2000. At that time, project leaders prepared a preliminary long range needs assessment. This assessment resulted in Board of Governors approval of five years of support for operation and maintenance of the RUNet 2000 infrastructure. This funding included continuing staff lines for RUCS' telecommunications support and network security.

The President's Cabinet made a decision in January 1999 that RUCS would be responsible for providing network support beyond the network router and up to the users' wall plates. By 2001, RUCS was able to determine that many additional resources would be required to accomplish this task. Network lifecycle replacement funding is under consideration to ensure ongoing replacement of end of life network equipment.

Careful priority setting and investment strategies to create new instructional applications must be addressed by the Rutgers community if the new electronic resources and planned infrastructure services are going to respond to initiatives such as learner-centered instruction and world-class research programs.

RUCS actively supports the application and development of technology in research, education and administration. With the formation of a university-wide *Information Technology Coordinating Committee (ITCC)* in FY02, Rutgers created a strategic decision-making body to advance university goals through the assessment and coordination of IT needs, opportunities and solutions. In addition to strengthening technology support for Rutgers' mission, the committee has been charged with enhancing the cost-efficient exploitation of Rutgers' network infrastructure and computing resources.

RUCS also takes an active role in the development of instructional technology at the university. RUCS works with faculty committees and provides information to make departments aware of the technical capabilities and features of courseware products.

In an effort to support the integration of instructional courseware within the university, RUCS recently obtained a university-wide site license for WebCT, one of the many courseware products available. This site license not only saves money, but the use of WebCT can provide a common platform for support of

online course materials for any department that chooses to use it. If the university selects a standard courseware product, RUCS will work to evolve the integration of the selected product with other applications and databases to ease some of the administrative overhead for the departments.

Consider external benchmarking. The struggle to set priorities among the various opportunities to stimulate innovation and change in the use of instructional and information technology could be assisted by a focused benchmarking effort that will provide data on which decisions can be made.

RUCS is in the process of developing a strategic plan. This plan, along with the advice and counsel of the ITCC and guidance from the university's strategic goals and objectives, will provide RUCS a framework for setting priorities in many areas, including the use of IT for academic purposes. Strategic plans from several AAU universities were reviewed, which provided valuable insight into what peer universities included in their strategic plans.

RUCS supports the use of benchmarking and uses it extensively to assist with analyses and decision-making processes on behalf of projects or within committees. RUCS uses comparative data from the AAU, consulting firms, vendors, professional associations and web sites to gather benchmarking data. Some specific examples follow.

RUCS used benchmarking in a process of quality improvement called Commitment To Excellence (CTE). To develop CTE recommendations for human resources, interviews were held with seven AAU institutions and data from industry experts was considered. To develop CTE recommendations concerning the ease of use and content available on websites, web-based information from six AAU institutions was reviewed.

In 2000, the university's Internal Audit organization developed an *Action Plan for Building a Sound Working Environment*. The intent of this plan is to enhance the university's methods for assuring the achievement of important business and computing objectives. The plan recommends activities that are part of a six-step process to create the best possible workplace environment for Rutgers. The new business framework, as described in the Action Plan, has gained acceptance throughout industry and two of its objectives directly impact RUCS — creating a professional development program for staff and guiding business and computing activities. RUCS has completed many of the recommended actions and others are in progress. One recommendation was to perform an analysis of computing and security needs across the university. During fiscal 2001, the Executive Director of Computing and IT worked with the New Brunswick Computing Advisory Committee and the Office of Institutional Research to develop a survey instrument to assess user satisfaction with computing services. Another recommendation was to assign managers authority and responsibility for internal assurance in their areas. To reinforce this assurance process, a second University Audit workshop was held for RUCS directors during the of 2001, and the Pay for Performance and Mercer job assessment processes also contributed to RUCS' efforts to tighten job descriptions and focus on manager accountabilities.

In 2000, the Internal Audit Committee approved the recommendation and formation of the Information Protection and Security (IP&S) office within RUCS for the purpose of developing a university-wide information protection program. Audit approval was based on the findings and recommendations of a security assessment conducted by Andersen Consulting in 1997. The IP&S office was established in September 2000 and by the end of FY01 security initiatives including an intrusion detection pilot, the formation of a policy committee, and the establishment of a forensic lab were underway.

In 1999, during the first months of Rutgers' four-year RUNet project to build a new high-speed data, voice and video network infrastructure, three university vice presidents worked together to develop a *High Speed Network Applications Committee* (HSNAC) to investigate incentives for and potential uses of the new network. After two years of study, HSNAC issued a report that conveyed a set of short and long-term recommendations regarding the evolution of IT at Rutgers. As one of several ways to determine best practices and encourage the use of IT and RUNet for academic purposes, HSNAC advocated for an external IT benchmarking study involving peer institutions in the AAU. The committee proposed that the Office of Institutional Research and Academic Planning undertake this study. The Office has completed the final report on an internal, university-wide, e-mail survey about computing services at Rutgers. Institutional Research also completed an AAU Data Exchange survey concerning IT budget, staffing, and service issues. Additionally, the June 2001 IT Forum mentioned earlier in this document was a direct result of a HSNAC recommendation.

Go forward with plans to develop a university-wide information technology advisory council and consider the development of more formal mechanisms for linking other technology committees and task forces to this university-wide council.

As noted above, a university-wide *Information Technology Coordinating Committee* (ITCC) has been formed. It is charged with providing advice and counsel to the President's Cabinet on a variety of IT matters, including user needs, resource efficiencies, IT support, best practices and standards, information protection and security, integrated planning, and enhancement of computing and telecommunications environments. The diverse membership of the committee brings together a cross section of administrative, academic and technology planners who offer varying views and perspectives for consideration, but the resultant recommendations will be those that best support and advance the university's goals.

The ITCC is also formally linked to existing campus-based computing committees. The chair of each committee is a member of the ITCC. These committees include

- New Brunswick Computing Advisory Committee, which provides advice to the University Vice President for Academic Affairs and the Vice President for Continuous Education and Outreach on the priorities for and the development of academic and administrative computing services that support the mission of the New Brunswick campuses;
- Camden Faculty of Arts and Sciences Information Technology Committee, which meets to discuss the computing needs of the Camden Faculty of Arts and Sciences and provides advice to campus leaders on such issues as instructional and research computing, wireless computing, smart classrooms and web development;
- Instructional Technology Faculty Support Committee, which oversees the delivery of support services to assist faculty in the design and development of new instructional technologies on the New Brunswick area campuses;
- New Brunswick Advisory Committee for Instructional Computing, which studies needs and provides recommendations for the use of annual revenues from student computing fees;
- Newark Information Technology Advisory Committee, which provides strategic/tactical advice on academic/administrative IT priorities and evaluates the current effectiveness of and future directions for IT on campus; and
- Newark-New Brunswick Business School Computing Policy Committee, which assesses computing needs for the Rutgers Business School in Newark and New Brunswick and provides recommendations to the Dean for the cost-effective use of computing resources.

The chairs of these campus-based committees are well positioned to bring local IT issues and concerns to the ITCC. The ITCC, then, will have a university-wide perspective and will be able to advise the Cabinet

on strategic directions and long-term university initiatives. The ITCC will also recommend university-wide solutions for near-term issues.

The ITCC is viewed as a long-standing committee. The committee is in the process of making operational decisions and prioritizing focus areas. Ideas being considered by the committee in its first year include long-range IT planning, university-wide site licenses, security tools, central services (e.g., email), strategies for coordinated instructional (courseware) support, consistent data access policies and a standard approach to authentication services, improved web-based administrative processes, and new network applications.

III. SPECIAL TOPICS: D. Organizational Development and Leadership

The mission of the Center for Organizational Development and Leadership (ODL) is to establish and administer a coordinated, university-wide program for organizational and communication leadership, assessment and improvement. Its work focuses on organizational improvement frameworks, principles and practices and their application, particularly in higher education, in New Jersey, regionally, and nationally. See <http://www.odl.rutgers.edu/>. Its mission is achieved through education and instruction, consultation and guidance, and research and development in organizational excellence, leadership and communication.

During the nine years of its existence, the Center, formerly known as the Center for Quality and Communication Improvement (QCI) has come to be widely recognized as a national leader in higher education organizational assessment and improvement. In 1999, an informal study conducted by the Chancellor's Exploratory Committee on Continuous Improvement of the University of California-Berkeley ranked the Rutgers Center for Organizational Development as one of the leading programs of its kind in the country, and the national leader in leadership assessment.

Organizational effectiveness could be enhanced if QCI were linked and integrated with the university's strategic planning effort and to University Accountability and Excellence measures. This requires an assessment of the relationship and impact of university strategic planning initiatives against QCI goals. This linkage will allow the University to prioritize activities and allocate resources in a way that best serves the University's overall objectives.

The Center contributes to the university's Strategic Plan by providing institutional, state and national leadership in the areas of organizational assessment and improvement in higher education.

UNIVERSITY VISION, VALUES AND WORKPLACE PRIORITIES

To support the university's strategic planning efforts, the Center worked with the President's Cabinet to develop statements articulating the university's mission, vision, values and workplace priorities. The goal was to provide a succinct expression of the aspirations of the university, and to articulate the broad context within which the strategic plan was undertaken. By design, both the process and the statements that resulted were intended to be inclusive and meaningful to all of the university's many constituencies.

The resulting university vision statement, which came to be referred to as Rutgers' "Commitment to Excellence," was published in poster and pamphlet form and distributed and discussed widely within academic and administrative departments of the university, and with various external constituencies. The "Commitment to Excellence" materials and the process through which they were created and disseminated serve a number of functions, including:

- Helping to tell the Rutgers' story and highlight the university's accomplishments;
- Clarifying the connection between the work members of the university community do and the goals and aspirations of the institution;
- Making clear that excellence requires a collective effort by the entire campus community;
- Providing a guide for self-assessment;
- Providing a common perspective to inform the varying perceptions of the university, its mission, and its goals; and
- Encouraging continued, constructive and self-reflective discussion on advancing the aspirations of the university.

There is a need to increase efforts to include all groups on each campus in the QCI effort. It is suggested that faculty and department chairs help shape the program agenda to ensure that their concerns are addressed. Such inclusiveness will help to integrate efforts to improve academic excellence with those designed to improve organizational effectiveness and efficiency, which is a major challenge for QCI.

In the past four years, the Center for Organizational Development and Leadership has successfully broadened its efforts on all campuses to engage and serve faculty, staff, students, and external groups. Through a needs assessment, ODL involved the academic community in helping to shape the agenda to be addressed by the Center and its programs. Based on this information, the Center has focused attention on facilitating conversations between faculty and administration on institutional change, creating a forum for the discussion of leadership theory and practice, and assessing and promoting organizational change. Descriptions of key projects follow.

- The Leadership for Institutional Change initiative (LINC) is a national leadership development initiative sponsored by the W. K. Kellogg Foundation. Rutgers is one of over 100 colleges and universities exploring ways to enhance leadership capacities within higher education as a part of this project. Efforts are underway at each of these institutions to foster

dialogue among faculty and staff who are interested in leadership development issues and to facilitate conversations among faculty and administrators from across the member institutions to identify opportunities for institutional advancement. Rutgers, along with nine other invited institutions, joined together to form the Mid-Atlantic Consortium (MAC). The ten institutions share a regional bond and a history of working together on highly collaborative, inter-institutional projects. Membership in MAC has played a critical role in efforts to involve faculty, and has provided a context and funding for the development of a number of programs including leadership and organization assessment.

- The Excellence in Higher Education (EHE) organizational self-assessment system is a higher education adaptation of the criteria and methodology in the Malcolm Baldrige National Quality framework. EHE, which helps departments identify strengths and areas for improvement and plan and organize for action, has been an important program within the university and elsewhere. Internally, demand for formal organizational assessments using the model has increased significantly in both academic and administrative units. In total, 401 individuals from 17 academic and 13 administrative units have participated in EHE since the program was first offered in 1994. Since 1998, 254 individuals in 11 academic and eight administrative departments have participated in EHE assessments in which faculty and administrators were engaged together in assessing and planning efforts.
- The student leadership development program is a university-wide academic program designed as a national model for the promotion, study and practical application of leadership development and organizational quality and leadership theory. The program provides integrated academic and co-curricular experiences to current student leaders and those who aspire to leadership roles. It creates opportunities for intra-university research projects and inter-disciplinary public forums for students, faculty, and staff. By providing support to graduate student research and coordinating efforts, it assists in graduate students' professional development. Undergraduate students have the opportunity to represent Rutgers in corporate, political, artistic, non-profit, educational, healthcare, and other settings. Knowledge that they attain in the classroom is enhanced as they engage in these practical experiences. For the university, these field experiences are another outlet for building relationships with various constituencies, providing them service and expertise. The program touches all aspects of the academic environment with a goal of bringing

these new leadership skills to bear on the work at Rutgers, and in refining those skills in relation to future employer needs, expectations and competencies.

This program which was initially overseen by ODL is now coordinated by a faculty member in the Department of Communication, School of Communication, Information and Library Studies (SCILS). Through this program, SCILS is now able to offer a leadership certificate program to its undergraduate students.

- Using the Baldrige criteria, ODL is working with Quality New Jersey (QNJ), a non-profit organization dedicated to the promotion of quality principles and processes in education. The New Jersey Commissioner of Education will provide support for QNJ, Rutgers, and Hunterdon Central High School in creating a partnership with Asbury Park High School to create a model of improvement for urban districts across the state. Specific goals include creating ways for improving student achievement, management system capability, and problem solving to facilitate removing barriers to improvement. The Excellence in Higher Education model will be used to facilitate the formal organizational assessment process. As part of this self-assessment process, the Center will oversee the administration and analysis of the ODL Organizational Climate Inventory for all faculty and administrators, a group of over 150.

CRITICAL SUCCESS MEASURES

Explicit measures and indicators need to be developed to track success in achieving QCI goals. Development of such measures sooner rather than later will permit the tracking of the implementation progress for the priority areas of improvement identified in Excellence in Higher Education assessments. Successful development of such measures also will allow QCI leaders to use successful examples to further promote its use.

Since the report of the Middle States team, the Center established a five-year plan for identifying and collecting critical success measures. The approach began with a clarification of the mission and core program areas, and the identification of measures, as displayed in the following table.

Center for Organizational Development and Leadership “Dashboards”¹

MISSION AREA	MEASURES OF SUCCESS	WHAT THE DATA SHOW
<ul style="list-style-type: none"> • Education and Instruction • Consultation and Guidance • Research and Development 	<ul style="list-style-type: none"> • Workshop participation <ul style="list-style-type: none"> - # attended - # of departments represented • Workshop participant satisfaction • Internal requests for service • Repeat requests for service • Referrals to others • Customized problem-solving programs • External request <ul style="list-style-type: none"> - # higher education - # state and national orgs. - # international • # of other universities and colleges adopting <i>EHE</i> • # of units engaged in ODL projects <ul style="list-style-type: none"> -Overall -By Campus -By Cabinet area -Academic/Administrative -By ODL program area • # of publications and external publications • # of external presentations • Participation and leadership on external committees and organizations • Number of organizations adopting/adapting our work • Number of hits on ODL website 	<ul style="list-style-type: none"> • 1000 individuals • 40 different departments • Satisfaction rating of 3.62 on 4.0 scale • 60 • 10 • 15 • 60 • 30 • 50 • 3 • 20 • <i>In process</i> • 20 • 18 • 15 • 28 • <i>Under development</i>

¹ All data, except for that related to partnerships, reflects activity from 1998-2000.

MISSION AREA	MEASURES OF SUCCESS	WHAT THE DATA SHOW
<ul style="list-style-type: none"> • Internal ODL Effectiveness • Cultural Change 	<p>Partnerships:</p> <ul style="list-style-type: none"> • Total in-kind support • Student support <ul style="list-style-type: none"> - # of students - \$ grant support • Student Development Program • Faculty support <ul style="list-style-type: none"> - # of faculty offered research and teaching opportunities • Grant support • Outcomes of annual <i>EHE</i> assessment • Organizational climate survey ratings • Professional Development <ul style="list-style-type: none"> - # of opportunities - use of knowledge gained • Employee welcome <ul style="list-style-type: none"> - # participating - satisfaction rating • Faculty welcome participants • Faculty recognition participants 	<ul style="list-style-type: none"> • \$1.7 million • 24 • \$757,100 • \$120,000 • 12 • \$225,000 • <i>In process</i> • <i>In process</i> • <i>In process</i> • <i>In process</i> • 370 (2000-01-new program) • 52% very helpful/helpful • 460 • 500

QCI programs should be considered a vehicle for bringing about a more collaborative approach between faculty and administration and among different faculty groups.

ODL has worked to create a collaborative environment for faculty and administrative discussion of issues confronting the entire university community. Several examples of initiatives follow.

- Academic Leadership Program (ALP). A survey of current and former chairs and deans identified the need for a forum for sharing information on policies and practices within the institution, addressing theoretical and practical problems of

academic leadership, sharing effective practices across disciplines and creating a collaborative network of administrators and faculty members charged with providing academic leadership for the institution. Based on that survey, the ALP program was developed. Components include: a “Welcome Back” event in the Fall for senior administrators, deans and chairs; an orientation for new chairs and deans, an ongoing luncheon series for chairs and deans; a support website, <http://www.academicleadership.rutgers.edu> and special programming on particular needs.

This leadership program, now in its third year, is coordinated by the Center under the auspices of the University Vice President for Academic Affairs. The Chronicle of Higher Education has recognized the program as one of a number of initiatives at major universities, and covered the Academic Leadership Program in the October 19, 2001 issue. Administrators and faculty members from over 50 disciplines, and nine academic units have participated in these sessions since their inception.

- Academic Administration Assessment. ODL and the New Brunswick Teaching Excellence Center have collaborated to support academic and administrative units undertaking academic administrator evaluations. The program is designed to provide department leaders with a simple tool for assessing their units, clarifying expectations and performance of leadership, and enhancing collaboration, communication and effectiveness within and between groups and units.
- Academic Services Committee. The Center serves as a member of the Academic Services Committee of the New Brunswick Faculty Council, which is charged with heightening collaboration among administrators and faculty in reviewing, assessing and improving student academic services.
- Academic Disciplinary Self-Study. ODL developed a model for an expanded Discipline External Review and disciplinary self-study framework to include themes and topics from the Excellence in Higher Education/Malcolm Baldrige framework. Pilot testing of the broadened framework is under consideration.
- The Committee to Advance Our Common Purposes. The Committee began in 1987 with one goal: promoting a climate that is hospitable to diverse groups and cross-cultural alliances while reducing acts of prejudice and bigotry throughout the Rutgers community. The group is composed of approximately 50 students, staff, faculty, and administrators from all three campuses. The Center for Organizational Development and Leadership is assisting the Committee with the review of its mission, programs, accomplishments, and future plans using the Excellence in Higher Education Baldrige-based assessment model.
- Academic Advising. The Center led a preliminary study of undergraduate academic advising at the university with guidance and support from members of the University Academic Advising Task Force comprised of faculty members, the Vice President for Undergraduate Education, and several key administrators. The results of this study form the basis of current work being undertaken by the Academic Services Committee of the New Brunswick Faculty Council.
- University Welcome/Orientation Program. This initiative is one of several designed to “make Rutgers the preferred workplace.” At the request of the President’s Cabinet, ODL facilitated a special committee represented by the Office of University Relations, the Office of Academic Support and Graduate Student Services, the Office of the Vice President for Academic Affairs, and University Human Resources. This committee was charged with the design and roll out of a multi-faceted welcome and orientation program for all new university employees. Based on the

values expressed in the university's Commitment to Excellence, the redesigned program will focus on: creating a positive and welcoming message to staff; conveying a message which underscores the value each employee has in shaping the vision of the university; and emphasizing the need for effective and collaborative communication.

IV. The Context of Outcomes Assessment at Rutgers University

Like other research universities, the structure at Rutgers through which educational activities are delivered is extensive and decentralized. University academic organization is multi-leveled, with campus, degree level, collegiate/decanal, and faculty unit distinctions. Each Rutgers campus is presided over by a chief academic officer and offers a variety of educational programs through multiple schools and faculty units. These organizational units play an important role in ensuring academic integrity and the delivery of a quality education to students.

INSTITUTIONAL RESEARCH

The university relies on a broad range of mechanisms for assessing/ensuring educational outcomes. One means is through institutional research. The Office of Institutional Research and Academic Planning is a centralized university resource designed to inform planning and policy decisions in a wide range of academic and administrative areas. The Office collects and mines data, and provides analytical, assessment, planning, and reporting services for the Rutgers community. In recent years, the Office has focused its efforts on data warehouse development, web applications, survey development, program development and assessment, strategic planning, and testing and placement. It provides critically important reporting, assessment, benchmarking, planning, and public information services to support institutional effectiveness and to respond to the needs of the university community and the citizens of New Jersey. Given the decentralized structure of Rutgers, the essential role played by the office in assessing educational outcomes is consultative.

UNDERGRADUATE OUTCOMES ASSESSMENT

Undergraduate outcomes assessment at Rutgers reflects the university's decentralized and multi-nodal nature. The broad goals for undergraduate education are set universitywide and emerged from the Rutgers Dialogues, a university-wide undertaking to establish a set of broad learning goals to be shared by all programs and which define the common curricular ground that unites the university. The goals are purposefully broad so that the various campuses, collegiate units, and faculties can integrate them into their unique educational identities to meet their individual educational missions while ensuring institutional consistency and effectiveness. The goals specify the skills and knowledge that all Rutgers students will acquire to support their roles as responsible citizens and productive contributors to society. There are three main categories of goals: intellectual and communication skills that support critical thinking, mathematical reasoning, scientific inquiry, and information and computer literacy; skills that facilitate understanding human behavior, society, and the natural environment such as historical understanding, multicultural understanding, the understanding of literary and artistic expression, and the understanding of the bases of individual and social behavior; and skills and knowledge that are needed to be a responsible citizen and ethical person.

Following these broad goals, individual colleges and schools and their respective departments and programs establish standards for what students are to obtain substantively from their academic studies and the instructional method with which these standards are delivered. Academic content, course sequencing, mode of instruction, specialized courses emphasizing research, service, and honors achievement all contribute to the rigorous yet decentralized process of ensuring academic integrity and educational achievement among Rutgers' undergraduates.

GRANTS FOR UNDERGRADUATE EDUCATION

Mechanisms and incentives for ensuring educational outcomes over the last few years at Rutgers have emerged from the many and varied grants the university has received to support and improve undergraduate education. Rutgers has received grants from federal and private sources and has used institutional funding sources to support programs in undergraduate education. An abbreviated list of these grants includes:

- A National Science Foundation Division of Undergraduate Education Grant obtained by the Office of the Vice President for Undergraduate Education in conjunction with faculty members in Chemistry, Life Sciences, Physics and Mathematics.
- A \$1.5 million institutional commitment through its Instructional Technology Initiatives to fund innovative educational strategies using instructional technologies.
- A \$500,000 Mellon Foundation Grant to evaluate projects funded under the Instructional Technologies Initiatives.
- A \$225,000 grant from the Bildner Foundation to enhance student multicultural learning at Rutgers.
- The Rutgers Dialogues grants that support educational efforts to meet universitywide learning goals.
- The Undergraduate Curriculum Seeds Grants program supporting faculty members in their efforts to acquire external funding for undergraduate curriculum projects.

The essential goal of these grants and programs is the improvement of undergraduate educational opportunities for Rutgers students. The initiatives cover a broad range of academic subjects and have included various strategies to assess their effectiveness. A more detailed description of the assessment components of these programs follows.

IMPROVING UNDERGRADUATE SCIENCE EDUCATION AT RUTGERS

A National Science Foundation Division of Undergraduate Education Grant has enabled the university to improve undergraduate science education through the redesign of introductory science courses for nonmajors and through increased emphasis on undergraduate research for science majors. These new courses in chemistry, physics, life sciences, and mathematics were developed comprising a course set called “The Impact of Science.” The content of each course focuses on areas of societal interest and personal importance to undergraduates. These issues are used as motivational and pedagogical vehicles for promoting learning of scientific and mathematical concepts, processes, and facts. Each course emphasizes presentation of disciplinary knowledge within the framework of issues that directly affect students’ lives and incorporated state-of-the-art pedagogy such as group work, case studies, and extensive use of demonstrations to improve learning. Descriptions of the courses are provided in Chapter IIIA.

Evaluations of these courses relied on self-administered surveys given to students at the beginning and end of the course. These surveys sought to gauge self-reported understanding of scientific concepts and student attitudes toward science. As a set, the courses were very effective in increasing students’ knowledge in science and mathematics. In addition, some positive changes occurred in students’ attitudes towards science and scientific literacy, although for the most part, these changes were not statistically significant. One of the courses, “Moving Bodies: the Biology of Movement,” did yield some significant changes. This course seems to differ from the others in that the content was related to very personal problems of the students. It is possible that the connection between the scientific content of the course and student personal issues accounted for the significant attitudinal changes resulting from this course.

Student ratings of teaching in these courses were also examined. Student ratings of the teaching effectiveness of the instructors of “The Impact of Science” course set and overall quality of the courses were found to be significantly better than for other introductory core science courses at the university.

USING TECHNOLOGY IN UNDERGRADUATE INSTRUCTION

The advent of technology in higher education has provided a wealth of opportunities and possibilities for postsecondary instruction. Unfortunately, attention to what students are learning as a result of the introduction of technology has received little attention, and rigorous evaluations of the impact of technology on student learning are few. Claims made for the importance of technology to student learning generally lack any empirical grounding. In an effort to change instructional practices and outcomes in a variety of academic departments at Rutgers, a number of separate projects have been supported by the university’s Instructional Technology Initiatives.

These initiatives are part of a \$1.5 million commitment of the Office of the University Vice President for Academic Affairs to improve teaching and learning in large classes through the use of technologies. Seventeen courses with an approximate annual enrollment of 9,000 student taught by five different academic departments on the university's New Brunswick campuses have been affected by these initiatives. The disciplines involved are geography, Spanish and Portuguese in conjunction with the library, engineering, communication and the life sciences. Some of the technological tools used as part of these initiatives included incorporation of virtual labs into the pedagogical format of the course, web-based software for homework and problem-solving, and computer instructional technology such as WebCT.

The New Brunswick Teaching Excellence Center obtained a \$500,000 grant from the Mellon Foundation to support assessing the impact of these new technologies on student learning and academic performance. The evaluation plan included efforts to find common information across projects. It also sought to measure changes in course delivery, student use, students’ attitudes towards technology and the courses, students’ learning of course content, and co-curricular knowledge. Efforts were made to identify the contribution of technology to the course/departments, collect data on usage, conduct process evaluations of implementation, and collect information on general attitudes. Strategies used for assessment included controlled experiments comparing sections of courses that had access to the new technology with those that did not, comparisons to past iterations of the course, equating tests from different years, withdrawal designs in which the technology was introduced and removed, and replication studies.

The assessment of outcomes resulting from the introduction of technology into these academic courses indicates an increase in computer literacy and competency among students, more interaction between faculty and students, more interest shown by students in the substantive material presented in class, and an improvement in student academic performance. Other results from this evaluative effort have shown the following: students with a positive attitude toward technology tend to do better in the courses than other students; smaller classes tend to be more efficacious when introducing technology into the course; and that the more students work with the technology introduced in the course, the better their academic performance.

ENHANCING MULTICULTURAL UNDERSTANDING

An initiative that promotes and enhances interaction among Rutgers' diverse undergraduate student body was begun in Fall 2002, supported by a three-year \$225,000 grant from the Bildner Foundation. The grant is part of the Bildner Foundation’s New Jersey Campus Diversity Initiative, which seeks to build on existing efforts in higher education throughout the state to use diversity as an educational resource that will prepare graduates to live and work in a diverse society. The universitywide initiative will reach

students in and out of the classroom through curricular and cocurricular activities that will include new courses in a variety of disciplines and modifications to existing academic programs on the New Brunswick, Newark and Camden campuses. As part of the initiative, the university has established the Office of Intercultural Initiatives in an effort to enhance student multicultural understanding at Rutgers. The mission of the office is the “development of an intercultural working model that will encourage cross-cultural interaction, collaborations, and exchange of ideas through discourse and programs, that both validate the status and integrity of the individual, ethnic, racial, and gender groups, yet makes possible cross cultural interaction among diverse constituencies.”

Both process and outcomes evaluation will be used to assess the effectiveness of this initiative. With regard to process, the number, content, pedagogical methods and enrollments for courses revised or developed to address intercultural interaction will be tracked. For co-curricular activities developed to address issues of intercultural interaction, the number, content, and participation rates of activities will also be tracked. In addition, faculty members will be asked to provide ratings for all faculty development activities. To assess outcomes, pre and post measures of faculty fellows' and students' attitudes toward multicultural issues and intercultural relations will be administered, both as survey questions and in narrative form.

INSTITUTIONAL GRANTS TO IMPROVE UNDERGRADUATE EDUCATION

Rutgers also administers many internal grants to facilitate undergraduate education. Each year, the Office of the Vice President for Undergraduate Education awards approximately \$140,000 in grants to faculty members for projects that improve the curriculum and teaching.

- Rutgers Dialogues grants provide support for initiatives that focus on meeting universitywide learning goals. The goals define the skills and knowledge that all Rutgers University students will acquire to support their development as responsible citizens and productive contributors to society, in their workplaces and in their intellectual, cultural and social endeavors.

Grants are also given to faculty that are intended to support assessment initiatives focusing on: 1) development and implementation of teaching evaluation procedures that supplement universitywide student ratings; and/or 2) development and implementation of curriculum evaluation plans. New proposals are evaluated through a peer review process on the following criteria: a) relevance to the objectives of the grant program; b) clarity of the project plan; c) soundness of the proposed strategies; d) potential for department, school, or college impact; and e) appropriateness of budget items. Criteria for continued implementation proposals are: relevance to the objectives of the grant program; b) clarity of the project plan; c) soundness of the proposed strategies; d) demonstrated effectiveness; e) evidence of unit commitment to adoption of the teaching or curriculum evaluation methods; and f) appropriateness of budget items.

Projects funded have included efforts to assess the effects of new instructional technologies, to develop new methods of evaluating teaching, and to gauge the effectiveness of retention program and services. A partial list of funded projects includes an evaluation of online versus classroom teaching formats; an assessment of an Educational Opportunity Fund General Biology Support Course; the development and testing of a clinical competency assessment for the new undergraduate Nursing curriculum; an evaluation of a novel research-based cell Biology laboratory on student learning; an examination of factors in students' persistence in the study of mathematics, science, and engineering at Douglass College; an analysis of the impact on Biology's Gateway Program; an evaluation of teaching by graduate students in the Criminal Justice major; and an evaluation of the effectiveness of the Writing Program's website as an instructional tool.

The Undergraduate Curriculum Seed Grants program is another university source for the development of undergraduate programs that contribute to the educational integrity of undergraduate education at Rutgers. This program supports the efforts of faculty members to obtain major funding from foundations and public agencies for undergraduate curriculum projects. The Teaching and Curriculum Evaluation Grants program supports initiatives focusing on: development and implementation of teaching evaluation procedures that supplement the universitywide student ratings; and/or development and implementation of curriculum evaluation plans. A retrospective evaluation of these programs by the Office of the Vice President for Undergraduate Education revealed that the large majority of funded projects have continued beyond the grant-funded period. In addition, the faculty members who received funds from these programs indicated that the funding was essential to the course and curriculum reforms they implemented.

Annually, through the Office of the Vice President for Undergraduate Education, an academic department or program is awarded the Rutgers Award for Programmatic Excellence in Undergraduate Education. An internal peer review process results in the selection of the recipient unit, which received a one-time \$10,000 budget addition. The award recognizes sustained excellence in the delivery of undergraduate education or excellence in curriculum development or teaching improvement.

FACULTY SUPPORT

The Teaching Excellence Centers have been a continuous source of workshops for faculty members in encouraging active learning and using new instructional technologies in the classroom. In addition to workshops and seminars, the TECs are responsible for administering the Rutgers Student Instructional Rating System for all courses offered at the university. All students are offered the opportunity to evaluate their instructor and course content at the end of the semester. Approximately, 120,000 ratings forms per term are distributed and processed. Each faculty member whose course is evaluated receives his or her scanned and processed forms, with summary results, within five weeks of the end of the term. Department chairs receive a collection of all summary results for all courses evaluated in their departments each term. Rating results have recently been made available to faculty and students via the Web (<http://sirs.rutgers.edu>) for all evaluated courses for the last two academic years.

PROGRAM ASSESSMENT

The quality of individual programs is of paramount importance to the university. The university oversees an extensive, cyclical external peer review process. The President's Committee on Standards and Priorities in Academic Development (CSPAD) regularly evaluates all academic programs, as the final step in the peer review process. When the evaluations were initiated in the early 1980s, only graduate programs were included. For over ten years, the external reviews and the CSPAD reviews have included assessments of undergraduate programs. Alumni surveys, supported by individual departments, frequently in consultation with the Office of Institutional Research and Academic Planning, also provide ongoing information about the quality of undergraduate programs.

GRADUATE/PROFESSIONAL OUTCOMES ASSESSMENT

The assessment of student competency in the chosen academic field is a critical component of any outcomes assessment program. At Rutgers, there are a number of mechanisms that ensure the attainment of such competency by graduate and professional students. First, each academic program is subject to periodic review by the Committee on Standards and Priorities in Academic Development (CSPAD). In these periodic reviews, which rely heavily upon external peer site visits and departmental self-study, all aspects of a program's activity, including the program's performance in the area of graduate and professional education, are examined and assessed. Focus is placed on the quality of its curriculum,

student and faculty scholarship, and its overall research strength. In undertaking this role, CSPAD ensures that the academic integrity of a graduate or professional program is maintained and that programs prepare students in their chosen field of study. CSPAD reviews are used by campus leadership as part of their ongoing accountability processes; recommendations by the external teams and by CSPAD inform central administration, provostial, and decanal decisions regarding allocation of resources, hiring plans, recommendations for curricular changes, etc.

The preeminent evaluation of graduate programs on a national scale is the well-known National Research Council's study of doctoral programs. In the last NRC study, published in 1995, Rutgers ranked 32nd nationally among all institutions in the ranking of its doctoral programs and 15th among public research universities. The university nearly doubled its number of top ranked doctoral programs from the previous ranking of these programs, increasing from eight to 15 the number of programs in the top 30%. While Rutgers performed well in the last NRC cycle, it is very difficult to rely on these rankings for evaluative material given the extended period of time between evaluation periods. (Over ten years elapsed between the previous two NRC studies and almost a decade since the release of the last NRC study.) Thus it has been incumbent on the university to become proactive in obtaining more timely information about its graduate programs.

Over the last few years, the university has moved to strengthen its collection and use of data about its graduate programs in a variety of ways.

- The development of a data warehouse by the Office of Institutional Research and Academic Planning (OIRAP) has had as a strategic goal the design of data marts that provide accessible and reliable data about graduate education at Rutgers. OIRAP has worked closely with graduate school deans, especially the graduate school at New Brunswick, in the development of these data marts. Data on graduate programs that presently exist in the warehouse contain both diachronic and up-to-date information about students and faculty.
- Because of the malleable and interdisciplinary nature of graduate programs at the university, especially of programs that are not directly tied to budgetary lines, the gathering of data about students and especially faculty is not a straightforward process. An ongoing effort in the development of the data warehouse has been to relate students and faculty accurately to specific programs.

The collection and proper identification of data sources is only one step in the development of a data warehouse for graduate education. Another important requirement is to make the data accessible in a timely fashion.

- OIRAP designed the data warehouse to allow various modes of data access for the end user. Querying of data through Open Data Base Connections (ODBC) and On-Line Analytical Processing (OLAP) are two of the basic mechanisms through which information in the data warehouse can be accessed. It is expected that as the requirements for data about graduate programs become more robust during the next year, reliance on the data warehouse to evaluate and assess graduate programs by graduate deans and CSPAD will increase.

In its work to better assess graduate programs, the university has embarked on an ambitious project of surveying graduate students at specific milestones in their graduate careers in order to obtain student evaluations of their graduate education.

- Presently, surveys are administered to all entering graduate students and all students receiving their Ph.D. degrees. This information is aggregated at the graduate program level and is released

only when enough responses are collected at the program level to ensure confidentiality of the respondents. These two surveys are part of an overall assessment strategy that includes the surveying of students at the end of their coursework, before they embark on their dissertation, and at two and five years after receiving their degrees. The first administration of the latter survey is planned for Summer 2003. Once again, OIRAP has worked closely with the graduate school at New Brunswick in the development and administration of these survey instruments. Now that the pilot phase of this effort has been completed, OIRAP will seek the participation of the graduate schools at Camden and Newark. Survey instruments for professional schools have also been developed and sporadically administered. OIRAP is seeking a more coordinated effort with the professional schools in the administration of these surveys.

Neither of these above efforts has occurred in a vacuum.

- In an effort to respond both to the suggestion made by the Middle States evaluators and to a report about the dearth of national data on graduate education by the Presidents of the American Association of Universities, Rutgers University has been engaged over the last three years in the development of an AAU pilot program to collect and exchange information about graduate education at the academic program level. The institutions initially engaged in this effort included Rutgers, Indiana University, University of California at Berkeley, University of California at San Diego, Duke University, and Princeton University. Additional members joining this year are the University of Michigan, University of California at Los Angeles, and University of Texas, and the University of Southern California. Columbia University was an original member of the group; it withdrew, but has indicated its intention to rejoin.

This working group includes representatives from the schools who are either graduate deans or institutional researchers. The combination of these two types of professionals makes this group rather unique and has contributed to its success so far. It has garnered much attention from graduate deans and institutional researchers at other schools, as well as from the AAU office and other parties interested in the collection and exchange of data about graduate education.

The group has been engaged in two simultaneous efforts.

- The first has been the creation of a database that contains information about clearly identified graduate programs from extant data sources, both nationally and at each institution. Included in the database are: data about student enrollment, academic profiles, and outcomes; data about faculty academic achievements and activities; and data about graduate program efficiency and effectiveness. Consensus has been reached by the pilot AAU group in the identification of over 30 graduate Ph.D. programs. Data about these programs are now contained in the database. Plans include the collection of information each academic year so that a body of data will be available to create longitudinal and static benchmarks for each institution.
- The group has also been engaged in the development of common survey instruments to obtain information from graduate students as they enter and leave their graduate program at their respective schools. The Rutgers graduate surveys described above provided the initial source for the development of these surveys. In particular, the exit Ph.D. survey seeks to obtain critical information from students about the process of conducting their research for their thesis and faculty mentoring activities. All members of the working group listed above have been engaged in varying degrees in administering these surveys to their students. Other institutions such as Washington University in St. Louis, while not members of the working group, are also administering the Ph.D. exit survey instrument to

their students with the help of the Office of Institutional Research and Academic Planning at Rutgers in the effort to better assess their respective doctoral programs. Each institution is responsible for the survey's administration and will be sharing summary information from the surveys through its inclusion in the database.

UNIVERSITY-WIDE ASSESSMENT SUPPORT

The Office of Institutional Research and Academic Planning is responsible for several specific areas of outcome assessment activities; some examples are described below.

TESTING AND PLACEMENT

Rutgers has had a longstanding history of assessment activity in the testing, placement and remediation of students in verbal and mathematical skills. The testing and placement of entering students occurs under the auspices of OIRAP and in close consultation with academic units throughout the university. The university's administration of the basic skills testing and placement program was part of a state-wide mandated program that required all public colleges and universities in New Jersey to test entering students for basic verbal and mathematical competency. However, changes in the structure of higher education within the state during the last decade have left the administration of this program to the discretion of each institution. In the absence of the state mandate to administer the basic skills program, Rutgers decided to continue the program while seeking to make it more effective and sensitive to the needs of its faculty and students. Over a two-year period a university-wide committee developed a series of in-house test components that provide a system of testing and placement while accommodating the specific developmental course sequences found on each campus. One of the mainstays of the program is the inherent process of reevaluation of students who are remediated. Students can move on to take nonremedial, required courses in these two academic areas only after their successful completion of the remedial process.

Rutgers tests all first-year students who are entering the university for the first time through the administration of a series of tests that are used both to gauge the basic competency in these two basic skills areas and to place students in either remedial or introductory English and mathematics courses. In 2002 on all campuses, the testing of 6,421 undergraduates for English resulted in 850 remedial placements, and the testing of 6,430 undergraduates for mathematics resulted in 1,208 remedial placements an additional 718 were placed in intermediate algebra¹). In 2002 on all campuses, there were 37 sections of remedial English courses and 97 sections of remedial mathematics courses.

Most students placed in remedial courses, either English or Math, successfully complete these courses. A basic measure of the success of the testing and placement program at Rutgers is the extent to which remedial students complete their remediation. By the end of the second year of study, a large majority of remedial students do complete their required remediation (as determined by obtaining a grade of "C" or better in their required remedial classes). A further indicator of the effectiveness of the testing and placement program is the extent to which remediated students successfully complete the core English and Math courses that students need to take for graduation. A comparison of students who were remediated with undergraduates who did not require any remediation based on their placement test results indicates that there is little difference between these two groups of students, suggesting that the remediation that students are required to take before they are allowed to continue in their studies has been successful at Rutgers.

¹ Under the old statewide New Jersey Placement system students placed in intermediate algebra courses were not considered remedial. Many institutions in the state still consider students placed in intermediate algebra as not remedial. However, Rutgers always approached this level of mathematical competency as remedial.

TABLE 16

Testing and Placement Report
Fall 2002 Entering Cohort
All Rutgers Campuses

English		Mathematics	
Number Tested	6,421	Number Tested	6,430
Number Remedial	850	State - Number Remedial	1,208
Percent Remedial	13.2%	State - Percent Remedial	18.8%
		* Rutgers - Number Remedial	1,926
		* Rutgers - Percent Remedial	30.0%

* Through Intermediate Algebra

Perhaps the paramount test for determining the efficacy of the remediation program at Rutgers is the success of remedial students in graduating from the university. While the rate of graduation among undergraduates requiring remediation in either English or Mathematics exceeds 60% at Rutgers, these students graduate at lower rates than students who do not require remediation. However, students who required remediation but did not successfully complete their remedial courses after two years lagged far behind the other two groups of students in their rate of graduation from Rutgers.

TABLE 17

Effectiveness of Remediation
Fall 1995 and Fall 1996 Entering Cohorts

	Success in First Non-Remedial Course			
	Enrolled	Passed	Enrolled	Passed
	1995		1996	
English				
NonRemedial	4,045	95.1%	4,099	95.4%
Remedial Completers	296	93.9%	519	91.9%
Mathematics				
NonRemedial	1,831	92.4%	1,907	91.6%
Remedial Completers	702	86.9%	761	85.3%

Note: English 101 and College Math or College Algebra are the first non-remedial courses used for this comparison. Non-remedial students placed into higher levels of English or Mathematics courses are excluded from the comparison.

TABLE 18

Graduation Rates by Remedial Status
Fall 1995 and Fall 1996 Entering Cohorts

	Total Number	Graduation Rate	Total Number	Graduation Rate
		1995		1996
English				
NonRemedial	4,720	73.6%	4,716	71.8%
Remedial Completers	321	63.9%	552	60.3%
Mathematics				
NonRemedial	4,022	77.0%	4,132	73.0%
Remedial Completers	865	69.1%	969	65.4%

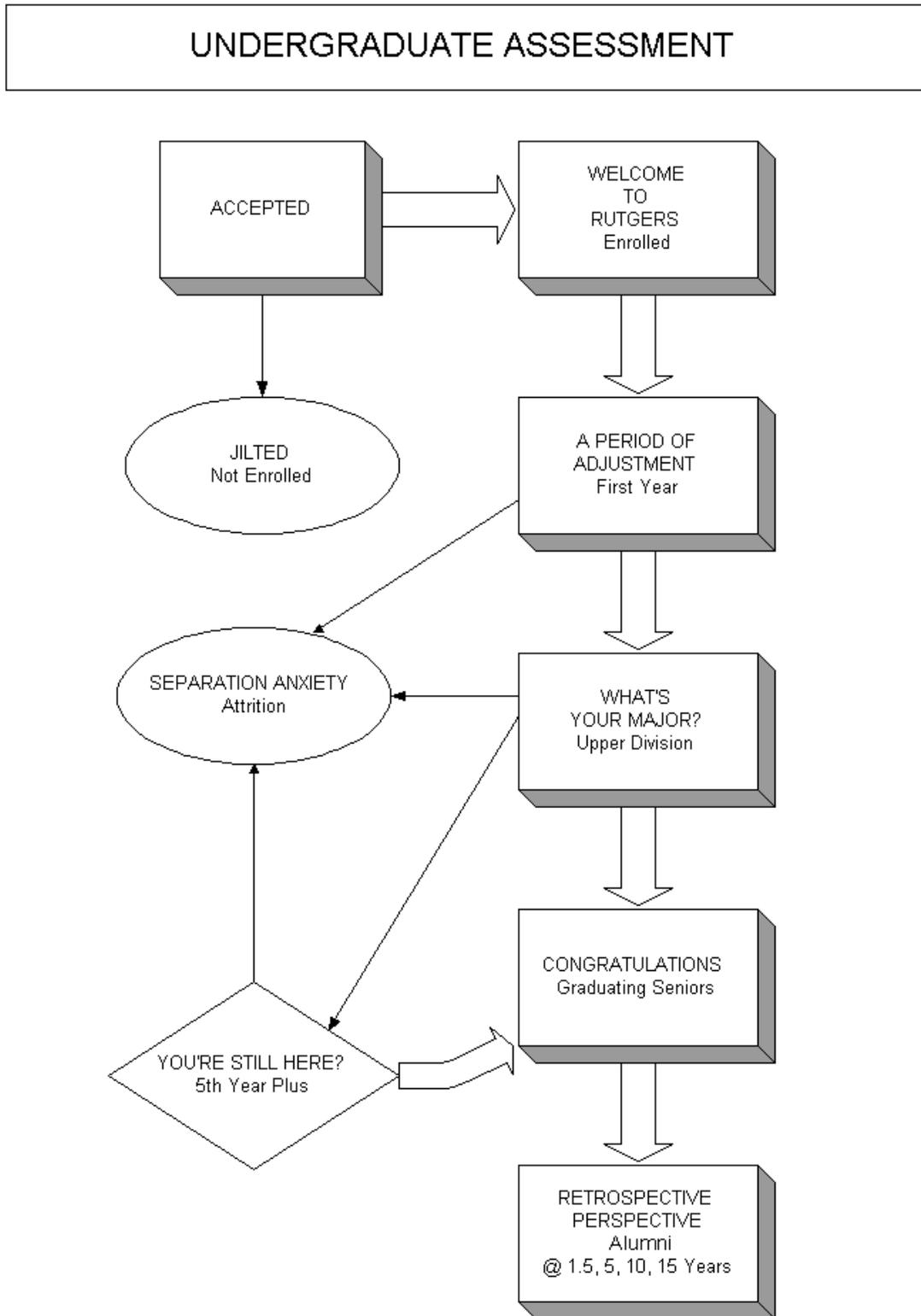
GENERAL EDUCATION ASSESSMENT

The area of general education includes the development of broad academic and nonacademic (i.e., personal and social) skills that undergraduates are expected to possess upon successful completion of their undergraduate careers at Rutgers. Efforts to assess outcomes in the area of general undergraduate education have been widespread at Rutgers. Much of this information on educational outcomes has been collected through an ongoing series of student surveys administered by or in collaboration with OIRAP. Over the last five years, OIRAP has provided survey research services to academic units, ranging from limited initial consulting to full instrument development, analysis and reporting for over 75 surveys. The OIRAP website provides a listing of some of the most recent surveys conducted on-line by the office (<http://oirap.rutgers.edu/survey.html>). This effort is part of a comprehensive survey research program that applies the techniques and practices of rigorous survey analysis to identify problems and issues facing the university, to shape and inform actions designed to deal with them, and to gather information and develop benchmarks for institutional reference, assessment, and accountability. The Office has developed and

has begun to implement an ongoing series of surveys that will provide continuous monitoring and assessment of undergraduate student achievement, attitudes, opinions, and aspirations. This effort involves a shift from the administration of periodic surveys to a survey design in which each student will be invited to participate in a survey according to an education milestone reached by that student, thus providing an ongoing forum for student input and feedback.

In addition, Rutgers will begin participation in the National Survey of Student Engagement in 2004 and share its results with its peers in the Association of American Universities (AAU). This project will allow for benchmarking and comparative analysis of the undergraduate experience at Rutgers.

FIGURE 4



Historically, the Office has conducted surveys of students, targeting special populations, to arrive at point-in-time assessments of: (1) the academic experiences of Rutgers undergraduates; (2) the evaluation of student services—both academic and nonacademic; (3) student academic and career goals; and (4) the reasons for attending and, where relevant, leaving Rutgers. Results from these surveys have provided various university and academic administrators with benchmarks to assess the success of academic and nonacademic programs in the intellectual, social, and personal development of Rutgers undergraduates.

An important measure of institutional effectiveness is the value-added that an institution provides its students during their undergraduate years. The administration of surveys at different points during the academic careers of undergraduates provides insight into the contribution of Rutgers to the academic, intellectual, and social growth of its undergraduates. As students enter Rutgers, they complete the Cooperative Institutional Research Program (CIRP) survey during orientation. (Results from the administration of CIRP during the last few years can be seen at <http://oirap.rutgers.edu/surveys/cirp.html>.) This survey asks entering students about their academic and personal aspirations and their expectations for achieving these goals while at Rutgers. Similar questions are asked of undergraduates at the end of their undergraduate careers through the administration of the Graduating Student Opinion Survey (GSOS). A report that compares the responses of Rutgers undergraduates from the CIRP and GSOS surveys and sheds light on the effect of the university in the undergraduate careers of its students can be found at the OIRAP web site (<http://oirap.rutgers.edu/reports/cirpgsos.html>.) The report compares responses from students entering Rutgers as first year, full time students in Fall 1996 to those of this same class graduating in Spring 2001 for each of Rutgers' regional campuses. Where appropriate, the responses to the 1997 GSOS completed by students who were seniors at the time the 1996 entering cohort was completing their first year of studies at Rutgers are used for comparison purposes, along with data from the 2001 CIRP. Some highlights from this report follow.

- While half (57%) of Camden entering students and two-thirds of Newark and New Brunswick entering students (64% and 65% respectively) reported that academic reputation is “Very Important” in their decision to attend Rutgers, students graduating in 2001 overwhelmingly agreed that Rutgers has high quality academic programs in general (96%, 94%, and 90% for Camden, Newark, and New Brunswick students respectively) and in their particular major area (91%, 84%, and 83% for Camden, Newark, and New Brunswick students respectively).
- At the start of college, two-thirds of Camden students, six-in-ten Newark students, and 80% of New Brunswick students believed the chances are “Very Good” that they will earn a bachelors degree. Three-in-ten Camden students expect the baccalaureate will be their terminal degree, while 15% of Newark students and 12% of New Brunswick students will not seek a more advanced degree.
- Almost half of Camden students and half of Newark students who began their college tenure in Fall 1995 as first-time full-time students have graduated after six years. The six-year graduation rate for first-time full-time students who entered a New Brunswick undergraduate college in Fall 1995 is 72%. All three campuses exceed the graduation rates of their respective peer institutions, as determined from data provided by the Consortium for Student Retention Data Exchange. Camden students exceed the average graduation rates of other institutions that offers a master's degree with enrollments of fewer than 5,000 students (49% vs. 40%), Newark student surpass the average graduation rate for doctoral/research intensive institutions with enrollments between 5,000 and 17,999 students (50% vs. 43%), and New Brunswick students graduate at a higher rate than the average public Association of American University institution (72% vs. 69%).

- Only a small percentage of students graduating in 2001 indicated on the GSOS that the baccalaureate is the highest academic degree they will receive: 6% among Camden and Newark students and 8% among New Brunswick students.
- Two-thirds of entering Camden students, half of Newark entering students, and seven-in-ten New Brunswick students expressed concerns about financing their education, while four-in-ten Camden and New Brunswick entering students and one-in-four Newark entering students expected they will have to work to supplement the financing of their college education. Eight-in-ten Camden students, three-fourths of Newark students, and 57% of New Brunswick students graduating in 2001 reported working more than ten hours a week in their final year of school.
- Rutgers students expected to be satisfied with the university when they began their studies. More than half of Camden students, 39% of Newark students, and 43% of New Brunswick students indicated that chances are “Very Good” they will be satisfied. After four years, 92% of Camden students, 90% of Newark students, and 90% of New Brunswick students rated their academic experience at Rutgers, in general, and within their major, in particular, as “Good” or “Excellent.” Among Camden graduating students in 2001, over 80% rated Rutgers as “Good” or “Excellent” in their preparation for the future and 89% indicated they would choose Rutgers again if starting over. Almost 80% of 2001 graduating Newark students rated Rutgers as “Good” or “Excellent” in their preparation for the future and 87% reported they would choose Rutgers again if starting over. Comparable numbers for New Brunswick graduating students in 2001 were 70% and 80% respectively.
- Students entering Rutgers cited “Very Important” reasons for going to college on the CIRP survey. These included both career related and personal or academic reasons (Camden students cited “to get a better job” – 83%, “to make more money” – 78%, “to learn more about things that interest me” – 75%, “to gain a general education” – 64%, and “to become a more cultured person” – 42%; Newark students reported “to get a better job” – 74%, “to make more money” – 72%, “to learn more about things that interest me” – 70%, “to gain a general education” – 77%, and “to become a more cultured person” – 53%; New Brunswick students cited “to get a better job” – 74%, “to make more money” – 70%, “to learn more about things that interest me” – 77%, “to gain a general education” – 70%, and “to become a more cultured person” – 47%). Data across campuses that are presented in the more detailed report demonstrated that a large majority of graduating students credited Rutgers with helping them achieve these goals.

DATA AND ANALYTICAL SUPPORT

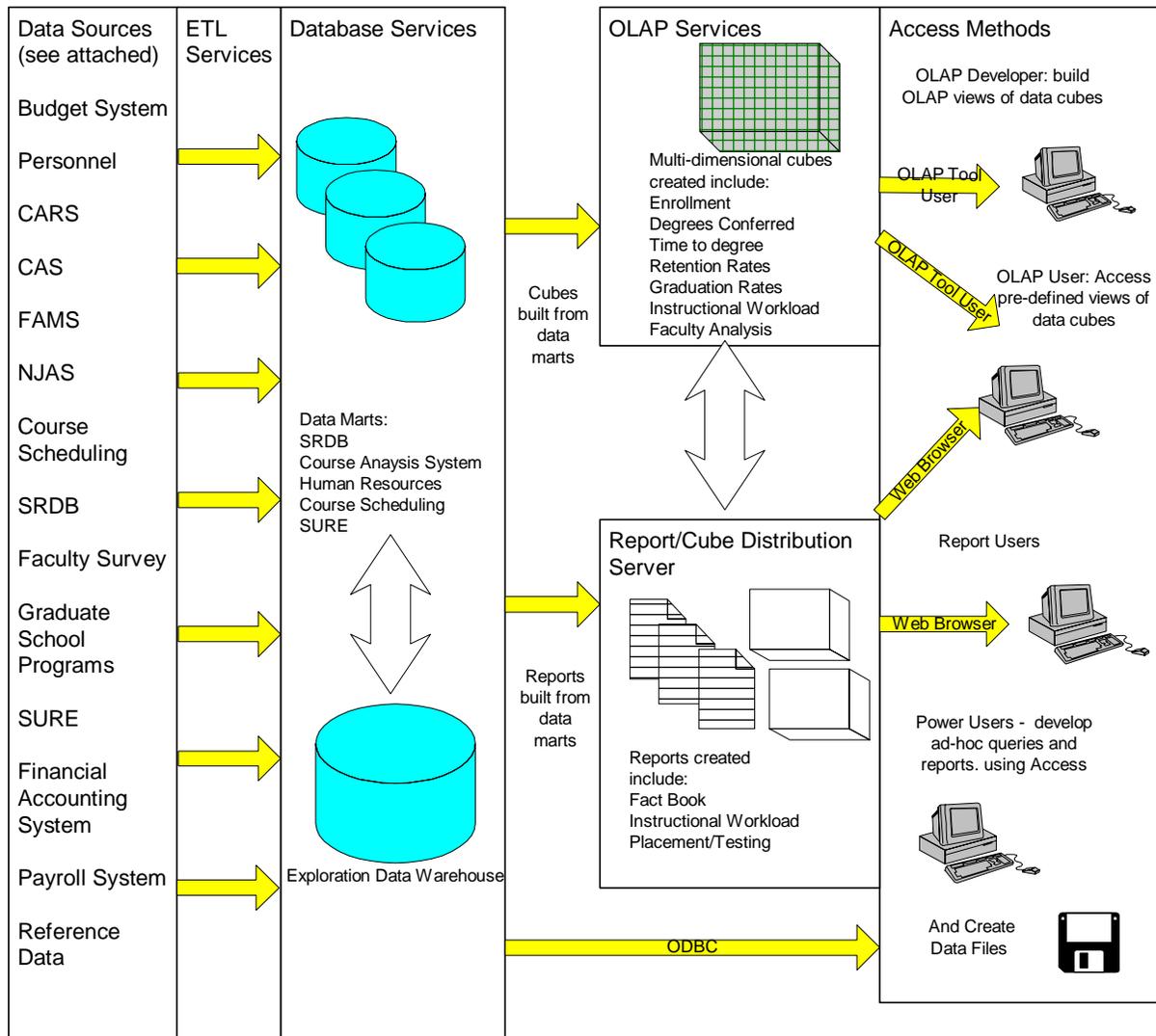
Another important role played by OIRAP in educational outcome assessment is supplying critical data to academic administrators so they can make decisions that ensure the educational integrity of their units or programs. Effective assessment practices require the collection and management of accurate data, accessibility to data, and accuracy in reporting. One aspect of this effort is through primary data collection efforts such as the previously mentioned administration of student surveys.

OIRAP is also the major institutional agency through which individual academic units and programs obtain meaningful assessment data that are embedded in the many transactional/operational data systems at Rutgers. However, the outdated structure of these data systems and the difficulties of retrieving information from them that can be used for educational assessment purposes are imposing challenges. While an old institution of higher education, Rutgers is young as a research university – and it is in many ways young in terms of developing infrastructure for effective delivery of information. This is especially the case in using information from its various secondary data sources for student assessment. In an effort

to address this shortcoming, OIRAP has expended considerable effort in shifting from reliance on databases with limited reporting and analytical capabilities to a warehouse environment that allows academic units and programs to directly obtain information about their respective students, faculty, and instructional activity.

While a multi-year effort, much work has already been done in the effort to construct a data warehouse environment at the university that will enhance student assessment and ensure educational integrity. Data Warehouse architecture has been developed and certain data components have been loaded and recently made available to academic administrators. It can be accessed using querying tools through Open Data Base Connections or through data views or marts that are available via the Web through On Line Analytical Processing technology. These data views are available via the Web at <http://oirap.rutgers.edu/dataware.html>. The warehouse provides cross-sectional snapshots of students as well as longitudinal views of student achievement.

FIGURE 5 OVERVIEW OF DATA WAREHOUSE ARCHITECTURE



Prepared by Michael J. Cullinan, Application Developer, OIRAP

In addition to providing data, OIRAP engages in a broad array of analytical and empirical studies to understand and advance educational outcomes, inform and guide institutional decision-making, and report on institutional performance. Institutional Research has worked collaboratively with other administrative and academic offices such as Budgeting, Physical Planning, Undergraduate Admissions, Undergraduate Education, and deans of academic units – as well as independently – to study issues pertaining to enrollment growth, academic advising, student retention, student learning, institutional accountability, and physical planning.

Building on its store of institutional research within the university, as well as data gleaned through exchange with other universities, OIRAP provides critical support for institutional and academic planning. Working closely with faculty and administrators from all three campuses and with university-wide campus leadership, activities in the last decade have focused on the development and implementation of the university's strategic plan.

ACADEMIC SUPPORT EFFORTS

Rutgers has many academic support programs that serve as an adjunct to the main instructional activities of academic units and programs. The programs include the Learning Resource Centers, Teaching Excellence Centers, the Educational Opportunity Fund, the Math/Science Learning Centers, the Writing Center, Academic Support for Student Athletes, the Douglass Project for Rutgers Women in Math, Science and Engineering, and Student Academic Support and Achievement. Recently, there has been an effort on the New Brunswick campus, based on a New Brunswick Faculty Council recommendation, to look at the effectiveness and efficiency of academic support programs in terms of campus-wide effort. The New Brunswick Task Force on Academic Support was created and studied a number of issues related to the effectiveness of academic support programs in ensuring student academic success. The University Student Retention Committee agreed with the importance of campus-based evaluations of academic support programs.

The New Brunswick Task Force on Academic Support has provided input on the structure and process for a comprehensive external review of academic support programs on the New Brunswick Campus. It has also been charged with developing recommendations on the following issues.

- What information from recent research and practice literature should be considered in the delivery of campus academic support services?
- What best practices at peer institutions should be considered in our delivery of academic support services?
- How should new technologies be used?
- What mechanisms should be created to ensure coordination among support services and between support services and academic departments?
- How well do current New Brunswick academic support services meet existing student needs?

In mid-April 2002 an integrated external review of academic support programs on the New Brunswick campus took place. The purpose of the review was to obtain external peer expert opinion about the strengths and weaknesses of our academic support programs, individually and as a campus-wide support system, and to provide direction for future program development. The process parallels the external review process for academic departments. This New Brunswick external review will serve as a model for future efforts on the Newark and Camden campuses.

Review team members were provided with a set of thirteen questions to guide their review. They were asked to focus particular attention on the following three questions:

- Comment on the quality of the services that are delivered to students.
- Comment on the ease with which Rutgers – New Brunswick students can access appropriate academic support services. How can program accessibility be improved?
- Comment on the contributions of these individual academic support programs to a campus-wide retention effort. How can the campus-wide effort be improved?

In their summary of major issues and recommendations the review team stated: “Throughout the review process, team members became increasingly impressed with the quality of various academic support services and the enthusiasm and commitment of the staff. In some cases, Rutgers programs are not only well regarded on campus, but at the national level as well. Team members were particularly impressed with Rutgers’ six-year graduation rate of 75%, which is truly stunning! Rutgers’ faculty and staff can also take pride in other AAU rankings; such as ranking 6th in minority enrollment, 3rd in African-American enrollment, and 11th in African-American six-year graduation rates. Although no direct cause and effect relationship has been established, the review team believes that academic support programs have contributed in meaningful ways to these outstanding achievements.”

The team also made a number of recommendations to assist in realizing “the full potential of these units.” The university will be working on these in the coming months. The recommendations include development of a more extensive assessment program, increasing communication and collaboration among academic support programs and between academic programs and the colleges, focusing more attention on the transfer student experience, and improving services for students with learning disabilities.

CONCLUSION: GOING BEYOND OUTCOMES ASSESSMENT

As the above discussion demonstrates, there is much going on at Rutgers in regard to measuring educational outcomes. But the discussion also reveals that the university is actively engaged in attempting to make changes that will improve educational delivery to its diverse student population.

Rutgers has always been concerned about the quality of its educational programs and student success. Before outcomes assessment was a formalized component of institutional self-study, the university sought to ensure academic consistency and integrity with the issuance of the Rutgers Dialogues. These learning goals represent the basic educational mission of the university and are the basis upon which educational outcomes are examined. The implementation of internal grant programs and the seeking of external grants for undergraduate education, some of which were discussed above, represent direct means by which the university has enacted changes in its curricula to improve the educational achievement of its undergraduates.

The role of institutional research is very simple and direct: to provide the various academic units and programs information that they can then use to assess and enhance the educational integrity of their respective areas. OIRAP has made recent advances in this effort with the ongoing development of its data warehouse and beginning implementation of a survey research process that will provide continuous monitoring and assessment of undergraduate student achievement, attitudes, opinions, and aspirations.

Most important to outcomes assessment at Rutgers is the knowledge that the information obtained by the assessment activities is actively used to ensure the educational integrity of each Rutgers campus. For example, in New Brunswick, based on information gathered by the unit and the central administration of

the university, the University Vice President for Academic Affairs, in consultation with Deans and Academic Unit Heads, annually sets and reviews the goals and needs of the academic units. These academic leaders in turn work with the Chairs and Directors of the academic programs within their unit to ensure that every effort is made in meeting the academic goals of the unit and its respective academic programs.

V. SERVICE TO THE STATE

The state's economic competitiveness and quality of life are dependent on an educated citizenry and a technically trained workforce that advances New Jersey's competitiveness with other states and other nations for high-tech entrepreneurs, industries, and companies. The New Jersey economy is driven by knowledge, information, and technology. Rutgers is playing a pivotal role in New Jersey's ability to address the challenges of the future. An educated workforce is one with not only technical skills and knowledge related to specific professions, but also with skills in critical thinking, problem solving, leadership, and communication, as well as an understanding of the global and culturally diverse human environment. Workforce development is a key function for the state's comprehensive public research university, and includes providing a high quality initial education, advanced and specialized education in emerging fields, and opportunities for continuous education, training and development according to changing workforce needs. Rutgers University is adapting to the new skills needed, the new workplace relations, and the new emerging industries in order to sustain New Jersey's economic competitiveness.

Demographic changes in New Jersey and the United States are creating significant education and workforce development challenges with implications for Rutgers and all sectors of the state's higher education system. Immigration into the U.S. during the 1990s (approximately 8 million) was the highest into the country since the decade of 1901 to 1910 (8.7 million). In New Jersey, over 15% of the population is foreign born and the state ranks 4th in the country in the percentage of foreign-born residents. New Jersey typically ranks 5th in terms of annual immigration total (usually following states with larger total populations).

This combination of unprecedented technological and organizational change and the changing demography of the state create new opportunities and responsibilities for workforce training and development. Language education, English as a second language, computer and technological competence, problem solving skills, team work, new learning techniques, lifelong learning, scientific research skills, professional education and continued certification, vocational and technical skills, and many other aspects of workforce development are now essential responsibilities of the higher education. In New Jersey, Rutgers University is a key catalyst for both economic and social development.

Further, the future productivity and competitiveness of the state's economy depends on maintaining a strong research and development environment for New Jersey businesses. New Jersey's economy is increasingly dependent on a scientific and research base of businesses. The profile of employment in the state emphasizes the service sector with 77% of the gross state product coming from services versus 65.3% nationally. Moreover, the manufacturing that remains in New Jersey is high value added, high productivity, and reliant on research and sophisticated technology.

Academic and corporate research creates new businesses and jobs, spawns new industries, improves productivity, and fosters new knowledge and discoveries. While the state is a leader in the telecommunications and pharmaceutical industries, it is challenged to look ahead and be prepared to lead in key emerging fields as well. In this regard, Rutgers has a central role. The presence of high quality research universities is a vital element in the synergy that exists among successful research-dependent businesses and the higher education sector.

Over 140,000 scientists and technicians are employed in more than 500 research and development laboratories in New Jersey, and over \$8 billion are spent on private R&D in the state annually—more per worker than any other state. Rutgers ranks high in terms of the rate of increase in total federal R&D support awarded over the past decade (federal R&D expenditures have risen by more than 95% since

1990), placing it among the top ten public AAU schools in rates of growth during this time span, and indicating increased effectiveness in competing for research dollars.

Recognizing the strong self-interest of the nation in advancing basic and applied research, the federal government has increased science and related research funding significantly over the past several years with major emphasis placed on the life sciences (NIH), information and communication technology (NSF), and national security (all agencies). New Jersey's profile shows strong commercial interests in these very same research areas. The extent to which New Jersey universities are competitive for these funds will have a positive impact on the state's attractiveness for businesses by providing excellent opportunities for the exchange of scientists, research, commercialization of intellectual property, and trained students.

The university's Office of Corporate Liaison and Technology Transfer (<http://ocltt.rutgers.edu/>) works closely with Rutgers faculty and with industry to secure corporate funding for research, and to license marketable inventions and intellectual property which make additional income available for university research. By facilitating industrial support of faculty research and commercialization of technology developed at Rutgers, the university promotes economic development of the State of New Jersey. Rutgers has an impressive record of technology transfer, as the most recent available data indicate:

- Rutgers has increased its annual U.S. patent applications six-fold from 21 in FY 1991 to 129 in FY 2001.
- U.S. patents issued to Rutgers faculty more than tripled from 10 in FY 1991 to 35 in FY 2001.
- Rutgers faculty have created 48 spin-off companies, including 35 in New Jersey.
- Annual licensing income increased from \$1.7 million in FY 1991 to \$4.8 million in FY 2001.

Among public AAU institutions, in FY 2000 Rutgers placed:

- 6th in licenses and options yielding income
- 11th in US patents issued
- 4th in US patents issued among public AAU institutions without medical schools
- 6th in the number of startup companies (seven) formed between FY 1998 and FY 2000
- 7th in U.S. patents filed (103), and fourth among public AAU institutions without a medical school.

In addition, Rutgers makes important direct economic contributions to New Jersey's economy. Through direct and indirect spending, Rutgers channels over \$2 billion into the state economy each year. Rutgers' employees, students, and visitors generate over \$50 million in New Jersey tax revenue annually and contribute nearly a billion dollars to New Jersey's credit base each year. The university is a major creator of jobs in New Jersey, with over 22,000 full-time, part-time, and temporary positions at the university and the generation of nearly 8,000 jobs through its direct purchasing and capital improvements.

SERVICE TO NEW JERSEY: THE NEWARK STORY

Rutgers faculty and staff work in every area of New Jersey, serving teachers all over the state, agriculture in the southern part of the state, and businesses in the central and northern part of the state. This section focuses on Rutgers-Newark as a superb example of the work done by each campus to reach out to the state and its citizens.

Rutgers-Newark has continued to play a leadership role in many local and regional consortiums and foundations, including the Regional Business Partnership, the New Newark Foundation, University Heights Science Park and its affiliated Science Academy, and the Council for Higher Education in Newark (CHEN) (<http://www.njit.edu/old/Publications/twanext/2001.12b/page1.html>) The campus is involved in development of the city of Newark and is a participant in major citywide planning, including plans for a new arena in the downtown area. Strengthening ties with the other Newark University Heights institutions of learning through the CHEN partnership has vigorously continued and a shuttle service now links the four schools (Essex County College, New Jersey Institute of Technology, Rutgers-Newark, and University of Medicine and Dentistry of New Jersey) (<http://nwkpolice.rutgers.edu/chen.html>). The Graduate Center at Newark, a collaboration of Rutgers-Newark, NJIT, and UMDNJ, encourages shared research and capitalizes on combined resources of these institutions.

The campus programs and affiliations with businesses in New Jersey and beyond include those with Prudential Corp., IDT Corp., Lucent Technologies, Merck & Co., Novartis Pharmaceuticals Corp., Bristol-Meyers Squibb Co., Hoffmann-La Roche Inc., Johnson & Johnson, Warner-Lambert Co., Organon Inc., Pharmacia Corporation, SAP, among many others.

Rutgers-Newark also continues to have a strong relationship with the thriving Portuguese community in the City of Newark. A new major in Portuguese and Lusophone World Studies, now in the final stage for approval, is the result of collaboration with Lisbon's Camões Institute. The Institute's first Language Center in North America will be located at the Dana Library on the campus.

In addition, many of the units of the Newark campus have developed special programs for serving the city, the state, and the region:

FACULTY OF ARTS & SCIENCES-NEWARK

The Faculty of Arts and Sciences-Newark continues to promote the campus through programs that emphasize interdisciplinary approaches. Institutes such as the Cornwall Center for Metropolitan Studies, the Center for Global Change and Governance, and the Institute on Ethnicity, Culture and the Modern Experience emphasize local, national and worldwide issues.

Various outreach and research programs link departments with the Newark Public Schools.

- Upward Bound, a national effort to assist under-prepared students from urban public schools, is a multiyear program that addresses low graduation rates in high schools by providing tutoring, counseling, and career guidance.
- The Saturday Academy, which prepares high school students to take the SATs, has been expanded to include sophomores, as well as juniors and seniors.
- The Allies in Teaching Mathematics and Technology program trains Newark high school teachers to use technology and create new models for teaching and learning.
- Lucent's Project Grad helps students of Newark's Malcolm X Shabazz High School prepare for college by providing summer institutes on campus.
- The Academic Foundations Center fosters a working partnership between Rutgers-Newark graduate and undergraduate students and the Newark public schools in developing science mini-courses as part of an NSF grant.

Other outreach programs include the State Police Scholars Program (in collaboration with the School of Criminal Justice), and collaboration with the Law School on urban education research.

RUTGERS BUSINESS SCHOOL-NEWARK AND NEW BRUNSWICK (RBS)

Business School faculty serve on many public and nonprofit organizational boards. In turn, almost 150 leaders of major corporations serve on the School's advisory boards. These individuals are also involved in advising, mentoring, and teaching.

Through a partnership with industry leaders, RBS recently turned the advantage of its proximity to the great concentration of pharmaceutical companies in New Jersey into a new M.B.A. in Pharmaceutical Management. Over the last decade, exciting advances in pharmaceutical research and development have fueled growth in this multi-billion dollar global industry, creating a new demand for talented, motivated individuals with a special knowledge of the business. Designed to answer this need, the Rutgers M.B.A. in Pharmaceutical Management is a unique gateway to one of America's most respected and socially beneficial industries.

The New Jersey Small Business Development Center (<http://www.njsbdc.com/home/>) provides training, counseling, and management expertise to small businesses, and has an impact on 14,000 business people each year. Inter-functional Consulting Teams provide innovative business solutions for over 65 public and private organizations. Other examples of community outreach include a Business Forum program that offers students the opportunity to meet prominent corporate executives, and public events such as a symposium on the Enron proceedings sponsored by the Prudential Ethics Center. The newly built Global Financial Market Center allows students the opportunity to study and simulate worldwide financial markets.

SCHOOL OF LAW-NEWARK

The School of Law-Newark has nine clinics, which provide legal services to the surrounding community <http://www.rutgers-newark.rutgers.edu/law/clinics.html>:

- Child Advocacy Clinic;
- Community Law Clinic;
- Constitutional Litigation Clinic;
- Environmental Law Clinic;
- Federal Tax Clinic;
- Special Education Clinic;
- Urban Legal Clinic;
- Women's Rights Litigation Clinic;
- Women & AIDS Clinic.

All clinics offer educational programs, conferences and training sessions to community residents and attorneys, in addition to publishing brochures and handbooks. Other outreach efforts include:

- The Institute on Education Law and Policy, which was established at the Law School in collaboration with the Joseph C. Cornwall Center for Metropolitan Studies (<http://www.cornwall.rutgers.edu/>). With its affiliates throughout the university and in higher education, government and the private sector, it is working to lessen the disparity in funding between urban and suburban school districts;
- Work in support of the long-running Mount Laurel litigation concerning the obligation of every municipality to provide housing for lower-income people;
- Eric Neisser Pro Bono program, which has arranged for more than 300 students to provide at least 35 hours of service to community and volunteer programs.

The Law School also sponsors or co-sponsors conferences exploring racial profiling, hate crimes, international terrorism, the threat to civil liberties in times of crisis, and other topics, and in conjunction with other units at Rutgers-Newark hosts school groups from kindergarten through high school.

COLLEGE OF NURSING

The College of Nursing takes a very active stance in providing direct services to the community. Several grants have enabled College of Nursing faculty to provide community health-care programs:

- The Newark Housing Authority funded community health education, parenting skills seminars, immunizations, and health fairs;
- Union County funded self-care for patients;
- The City of Elizabeth funded the ElizabethPort Community Health Center, http://www.phcmed.org/pr_eport_open.htm, which was operated by the College of Nursing until the City of Elizabeth assumed responsibility for the program in late 2002.

In addition, the College's nurse-managed centers are a major contributor to the lead screening program in Newark. "Leady Eddie" is a traveling van staffed with nurse practitioners who implement screening tests, educational programs and appropriate follow-up.

College of Nursing students participate and/or conduct immunization programs, health screenings and health education programs throughout the state, organize health fairs at Newark's Penn Station, and hold anti-drug programs in Newark elementary schools. The students have also been instrumental in starting up community health education and screening programs in a nurse-managed clinic at ElizabethPort.

SCHOOL OF CRIMINAL JUSTICE

The School of Criminal Justice has been involved in establishing several new initiatives which involve the larger community. Among these are:

- Greater Newark Safer Cities Initiative, <http://rutgers-newark.rutgers.edu/rscj/research/gnsoci.htm> a collaboration among criminal justice agencies, community and faith-based groups, social service and treatment providers, private organizations, the business community, and the School;
- Police Institute, <http://policeinstitute.org/>, established to improve the quality of policing and promote safe neighborhoods in New Jersey;
- New Jersey State Police Scholars Program, <http://www.njsp.org/recruit/scholars.html>, to provide stipends and mentoring to students who are considering careers as State Troopers.

JOHN COTTON DANA LIBRARY

The Dana Library, a branch of University Libraries, has many instructional, research, and outreach programs that receive publicity and contribute to the university's role as a catalyst for social and economic development. Programs range from activities of the Institute of Jazz Studies: <http://www.libraries.rutgers.edu/rulib/abtlib/danlib/jazz.htm>, to web-filtering work in business administration, programs for training executives of small businesses, arts exhibitions, cultural programs, software and videoconferencing, and other instructional technology activities.

The Institute of Jazz Studies' internationally renowned director, Daniel Morgenstern serves as an authority regularly appearing in newspapers and other media. He served as a senior consultant to the Ken

Burns PBS television jazz documentary that received national publicity. The Mary Lou Williams collection has also received extensive press coverage.

An award-winning web guide in business information (Argus Digital Librarian Award for Dana Library developer, Ka-Neng Au) is the basis for the Cyber Library in business available on the Rutgers Business School website, <http://business.rutgers.edu/cyber>, and used by thousands of information seekers. As another business initiative, Dana's program to train New Jersey executives in the small business community in using web-based government information was presented at a national conference (National Online, May 2000) and written up in the American Library Association's prestigious journal, *College & Research Libraries*.

Outreach to the Newark Literacy Campaign (<http://community.nj.com/cc/newarkliteracycampaign>) in a video production of "Urban Diaries" made use of Dana's advanced digital video editing facilities, documenting lives of people in Newark. Dana Library also has hosted the Annual New Jersey Book Arts Symposium and other arts programs. Videoconferencing, in support of creative use of technologies for learning in the K-12 community, has involved teachers and students from schools throughout the state.

VI. SPECIAL INTEREST AREAS: GOVERNANCE AND COMMUNICATIONS

The team recommends that Rutgers continue to improve its shared governance structures and mechanisms and its inter- and intra-campus communications.

Since the 1998 MSA review, faculty and administrators on all three campuses have worked to improve communications and enhance shared governance by establishing an appropriate balance of responsibilities and focusing on accountability.

GOVERNANCE

UNIVERSITY GOVERNING BOARDS

New Jersey statutes designate the Rutgers Board of Governors as the principal decision-making body of the university. The Board of Trustees serves in an advisory capacity with certain fiduciary responsibilities over assets of the university in existence before Rutgers was reorganized as The State University of New Jersey in 1956. Student and faculty representatives participate in both of these boards. Faculty and student representatives to the Board of Governors serve with full voice but without vote. Twenty alumni and three students have voting rights on the Board of Trustees. Standing committees of educational planning and policy, budget and finance, and buildings and grounds discharge many of the board's responsibilities. Major academic and administrative decisions, including faculty appointments, promotions, new degree programs, establishment of major academic centers, strategic planning, physical master planning, and major budget and finance matters are considered and acted upon by the Board of Governors. See <http://www.rutgers.edu/governance/>.

The President's Cabinet, comprised of senior administrators, and the Administrative Council, comprised of deans, vice presidents, and other senior administrators, assist the President in implementing the policies of the Board of Governors. Each campus has a faculty council or senate that provides advice to the campus provost or campus/university leadership concerning academic and administrative matters. In addition, the campus councils each send representatives to a President's Faculty Advisory Committee that meets with the president throughout the academic year.

UNIVERSITY SENATE

The University Senate is a university-wide governance body composed of approximately 98 faculty, 56 students, 40 administrators, and six alumni/ae representing units on the Camden, Newark, and New Brunswick campuses. The University Senate conducts most of its activities through committees and is responsible, under University Regulations, for establishing minimum standards with respect to admission, scholarship, and honors, and the university calendar. The full Senate meets approximately seven times during the academic year and provides advice to the President on a wide range of academic and administrative matters. See <http://www-rci.rutgers.edu/~rusenate/>.

The University Senate annually elects representatives to serve, with full voice but without vote, on the Board of Governors and the Board of Trustees. The three representatives to the Board of Governors are: one elected faculty senator who is a full-time faculty member; the chairperson of the University Senate ex officio; and one elected student senator. The four representatives to the Board of Trustees are: two elected faculty senators who are full-time faculty members; one elected graduate student; and one elected

senior, junior, or sophomore undergraduate student. These representatives report regularly to the Senate and its Executive Committee. Senate representatives are assigned to committees of the Board of Governors and the Board of Trustees by those bodies.

The Senate Executive Committee coordinates the activities of Senate committees by making committee assignments, referring matters to standing committees, establishing ad hoc committees as appropriate, and evaluating the performance of committees. Standing committees include:

- Budget and Finance Committee
- University Structure and Governance Committee
- Student Affairs Committee
- Faculty Affairs and Personnel Committee
- Instruction, Curricula and Advising Committee
- Academic Standards, Regulations and Admissions Committee
- Equal Opportunity Committee.

The University Senate has been active in addressing current major issues that confront Rutgers. In November 2002 the University Senate made its Initial Response to the Report of the New Jersey Commission on Health Science, Education, and Training, the proposal to merge Rutgers with the University of Medicine and Dentistry of New Jersey and New Jersey Institute of Technology. See <http://senate.rutgers.edu/mergresp.html>. In February 2003 the University Senate issued its Report and Resolution on Proposed Reduction in State Funding. See <http://senate.rutgers.edu/budgetresolution.html>. Plans to address the current difficulties and future possibilities regarding undergraduate enrollment levels are under study by an *ad hoc* Enrollment Committee. See <http://senate.rutgers.edu/enrolcte.html>.

Recent and current work by the Senate involving educational practice at the university includes:

- Best Practices in Assessment of Teaching. See <http://senate.rutgers.edu/bestprac.html>.
- Posting Student Instructional Rating Data to the Web. See <http://senate.rutgers.edu/ratedata.html>.
- Student Advising Services, including resources currently available and recommendations for improving academic advising. See <http://senate.rutgers.edu/advise.html>.
- After-Hours Study Space, Classroom/Building Security and Vandalism. See <http://senate.rutgers.edu/charges.html>.
- Mid-Semester Course Assessment: Review the use of the Mid-Semester Course Assessment as a formative assessment tool. See <http://senate.rutgers.edu/charges.html>.

In April 2001 the University Senate endorsed the development and implementation of a new evaluation system for deans (see <http://senate.rutgers.edu/adminrev.html>). See Chapter II, Significant Developments, section on Diversity for discussion of the Senate's recent recommendations addressing the status of Hispanic/Latino faculty and administrators throughout the university. Concerning Senate work on the issue of health care coverage for graduate students with fellowships, see Chapter III B, Graduate/Professional Education and Research.

NEW BRUNSWICK CAMPUS

Because of its size and complexity, the New Brunswick campus has developed the most elaborate mechanisms for shared governance. The University Vice President for Academic Affairs (UVPAA) is integrally involved in the academic goals and directions of the New Brunswick faculties, schools, research centers and institutes and oversees all of the academic schools on the campus, as well as 16 research centers. He convenes a monthly *New Brunswick Deans Council* meeting which includes the campus academic deans (and the Dean of the Rutgers Business School who has a dotted line reporting relationship to the UVPAA) as well the Vice Presidents for Undergraduate Education and Student Affairs and the University Librarian. This group provides opportunities for discussion of university policies and procedures, “best practice” presentations, input-seeking sessions, and informational updates and reports. In addition, he meets individually with each dean for a planning meeting every fall, and an accountability meeting each spring. College and school academic, fiscal, facilities and personnel matters are discussed in depth at these meetings.

The UVPAA is also directly involved with the *New Brunswick Faculty Council*, the elected campus-wide representative faculty body that is advisory to him. See <http://nbfc.rutgers.edu/>. He works closely with the chair each year in order to set an agenda of issues and projects for the Council’s Committees that make optimum use of the expertise of this elected faculty body and ensures faculty input into university decision-making. Each year, the Faculty Council and its committees have addressed a variety of important and complex issues and have approved numerous resolutions and recommendations. Examples of issues addressed during Academic year 2001-02 by the New Brunswick Faculty Council include:

- *Library Advisory Committee.* The survival of the academic enterprise depends on the free flow of information, so it is of great importance that Rutgers, as a community, consider ways to ensure broad, timely, and inexpensive access to scholarly work. The UVPAA accepted the recommendation of the recently formed Library Advisory Committee that faculty members assume an active role in developing and contributing to electronic journals and ensuring that such activity is reported and considered in reappointment and promotion packets.
- *Research Committee Report on Policy and Procedures for Research Involving Human Subjects.* Within the constraints of the law and the regulations imposed by grant agencies, the university supported a Faculty Council recommendation that the protocols to approve research involving human subjects be made more flexible for researchers in the social sciences and the humanities. To avoid imposing unnecessary burdens on individual researchers, a network of senior social scientists and humanists was formed to advise faculty members and help them to determine the necessity of complying with specific federal guidelines. In addition, ongoing work in Washington, DC will keep elected officials informed of the effects of the various regulations they impose on university researchers in all fields.
- *Library Committee Report on the Draft University Copyright Policy.* The university-wide Copyright Committee continues its work on a draft document that balances compliance with copyright law with issues of academic freedom and the rights and responsibilities of faculty as members of a state university. The New Brunswick Faculty Council as well as the University Senate and the AAUP have had representatives on this committee from its inception.
- *Interim Report on Advising.* The recommendations of this report, which call for a coordinated advising system to provide access to accurate information to all constituencies within the university community, were supported fully by the University Vice President for Academic Affairs. In response to these recommendations, an Electronic Degree Audit System Task Force has been formed.
- *Final Report of the Teaching Committee on Transfer Policies.* The issues involved in establishing a coherent and consistent policy on transfer credits are complicated ones involving

fairness to students, the integrity of the institution, and obligations to citizens of the State. The report of the New Brunswick Faculty Council has been forwarded to the Vice President for Undergraduate Education for review and consultation with the administrators who would be affected by the changes recommended in the resolutions so that she may advise the UVPAA on the feasibility of these suggestions.

- *Final Report of the Budget and Planning Committee on Capacity Issues.* The capacity concerns raised by the NBFC Budget and Planning Committee about the university's mission to educate the citizens of the State are critically important. This issue will continue to be a factor in all of the university's long-range planning efforts as Rutgers tries to achieve a balance between an unwavering commitment to provide an excellent education with the responsibility to provide the citizens of the state with access to the university.

Camden and Newark faculty are similarly involved in key governance issues for the university and serve on the university-wide committees identified above.

NEWARK CAMPUS

The Newark campus has a tradition of shared governance in academic matters. The Faculty of Arts and Sciences – Newark, the Graduate School – Newark, the Rutgers Business School – Newark and New Brunswick, the School of Law – Newark, the College of Nursing, the School of Criminal Justice, and the Center for Molecular and Behavioral Neuroscience all have their own strong and independent faculties that meet regularly and take the initiative for such academic personnel decisions as appointments, reappointments, and tenure. They are responsible for decisions governing curriculum, degree offerings, graduation requirements, budgets, departmental governance, and student services. The faculties at the colleges function through committees, which provide faculty participation in college policy and formulation and decision-making.

Representation of Newark campus viewpoints in the university context is achieved in many ways: the campus is represented by the Newark Provost in the President's Cabinet; the seven member university-wide Promotion Review Committee includes the Newark Provost as a permanent member (Newark faculty members have also been selected to serve on the Committee on a rotating basis); the Committee on Standards and Priorities in Academic Development includes three senior faculty members from the Newark campus; of the approximately 260 members of the university's Strategic Plan Implementation Committees, about 60 were drawn from Newark; similarly, the Newark campus is represented on the university's Committee for the Future; and Newark faculty members are active on faculty committees of the university.

The locus of responsibility for services to the academic community reflects a balance between centralized and local authority. The university has delegated to the Rutgers – Newark campus such services as security (including cooperation with neighboring college security forces), maintenance, parking, and other services. Other services such as political relations, the Washington office, statewide budgeting, and payroll are effectively provided centrally. In response to recommendations of the Newark and Camden provosts and others, the university is currently devolving some of the major administrative responsibilities so that the Newark campus will have considerably more autonomy in administration and management of its resources and services.

The deans of the several academic units in Newark report directly to the Newark Provost. Their personnel and support budgets are allocated according to historical needs and program developments. The Provost meets regularly and separately with each dean to discuss achievements, difficulties and priorities at least once a month. (See also Deans' Council below.) These frequent, informal meetings permit ample feedback for both deans and the Provost to gauge impact on the academic progress of the units and

reactions by the university administration. The Provost's associates work closely with the deans, their staffs and faculties for the planning and development of academic programs as well as for the planning and development of student-support services and infrastructure needs.

The Newark Provost also directs the administrative affairs of the campus. These administrative offices include, among others, Athletics and Recreation, Business Affairs, Campus Housing, Physical Plant, the Paul Robeson Campus Center, University Police (in Newark) and the Newark Department of Personnel. Administrative units which have primary reporting relationships to New Brunswick vice presidents and dotted line relationships to the Provost include Registrar, Financial Aid, Admissions, Student Health and Alumni Relations.

The Provost also convenes campus groups to hear directly from constituents and enhance communications among constituents. These forums are the Deans' Council, the Council of Center Directors, the Newark Faculty Council, and the Administrative Forum. While the Provost communicates regularly and formally with the faculty and administrators, he has no regular, effective mechanism for talking periodically to students and student leaders. Each college has its own strong, student organizations, but apart from occasional meetings with student leaders, there is no campus-wide mechanism that gives student leaders ongoing contact with the Provost.

The Deans' Council generally meets every other week during the academic year. The council consists of the deans of the five academic units, the Provost, his six associates, the assistant to the Provost, the director of the campus library, and the director of public information. The meetings are held to discuss issues of current concern to the deans, for news affecting the welfare of the campus and the university, and for assembling a consensus regarding such issues.

The Council of Center Directors was formed in Fall, 2002 and consists of the directors of the six interdisciplinary centers/institutes at the Newark campus (Center for Molecular and Behavioral Neuroscience; Center for Global Change and Governance; Cornwall Center for Metropolitan Studies; Institute on Ethnicity, Culture and the Modern Experience; Center for Information Management, Integration and Connectivity; and Prudential Business Ethics Center), the Provost and the Associate Provost for Academic Affairs. The Council meets twice a semester. It provide a campus-wide forum for direct exchange of information between the Provost's Office and center directors, facilitates collaborations among the centers, and develops ideas on how center directors can work together as spokespersons for building excellence in research and training at the Newark campus.

The Faculty Council consists of elected representatives of the five schools and a Dana Library faculty member. It meets with the Provost and his associates (who have voice but no vote in the council) monthly to air matters of academic concern and provide a venue for discussion of matters affecting the well being of students or the success of academic initiatives. The council elects its own officers and defines its own agenda. As a sounding board for the Provost, it has played key roles in raising the quality of services, suggesting budget priorities and adjustments, and guiding development of the campus strategic plan..

The Administrative Forum, consisting of 105 senior and middle managers of campus administrative departments, is convened by the Provost twice each semester to hear about and discuss important events relating to the Newark campus. It has been functioning well for the past few years and has helped to develop a consensus on campus regarding many issues.

The academic units of the Newark campus consist of the Faculty of Arts and Sciences, home to the two undergraduate liberal arts colleges – Newark College of Arts and Sciences and University College – Newark; the College of Nursing, which offers both graduate and undergraduate degrees; the Rutgers Business School – Newark and New Brunswick, which offers undergraduate and graduate programs; the

School of Law; the Graduate School – Newark; and the School of Criminal Justice, a graduate school whose faculty also are responsible for the undergraduate criminal justice major in Newark College of Arts and Sciences and University College-Newark. Also reporting directly to the Provost is the Center for Molecular and Behavioral Neuroscience (for budgetary matters; the CMBN reports to the FASN Dean's Office for programmatic matters); the Center for Global Change and Governance; and the Center for Information Management, Integration and Connectivity.

CAMDEN CAMPUS

In Camden, as in Newark, the Provost provides guidance and direction to the academic and administrative units on the campus and represents the campus to the university and to the broader community in which it makes its physical home. The units reporting to the Camden Provost include the College of Arts and Sciences and University College, the Business School – Camden, the School of Law, and the Graduate School. A primary responsibility of the Provost is to assure that each campus sets its academic sights high yet recognizes its obligations to the communities which neighbor the campus. Uniting the campus community around shared goals is achieved, in part, through the strategic planning process.

The Camden Faculty Senate is the representative governing body of the Faculty of Arts and Sciences – Camden. See <http://www.camden.rutgers.edu/RUCAM/facinfo/FacultyHandbook01.htm>. The Faculty Senate consists of thirty to sixty members drawn from qualified full-time faculty including professional librarians. Each faculty senator serves for a two-year term and may not serve more than two consecutive terms. The officers include an elected president, vice president, secretary, and parliamentarian. Eight student representatives participate in discussion without vote. The Faculty Senate acts on matters within the jurisdiction of the Faculty of Arts and Sciences – Camden and is advisory to its deans.

A recent success of the Camden Faculty Senate is its approval of a new general requirements curriculum that includes foreign language and diversity studies or global studies. The Senate also developed a policy for the treatment of retiring faculty. Presently the Faculty Senate is examining the college plagiarism policy within the context of the university's policy on academic integrity. Additionally, the Senate is reviewing the grading practices of full-time and part-time college faculty and is planning on developing teaching aids for constructive approaches to fair and effective grade distribution.

The Camden Faculty Senate works through the following standing committees.

- The Academic Policy and Courses of Study Committee oversees curricular requirements and academic standards, reviewing new curricula and course changes proposed by faculty members.
- The Admission and Retention Committee establishes criteria for admission, monitors retention rates, and develops programs to improve recruiting and retention.
- The Appointments and Promotions Committee advises the Dean about appointments, reappointments, promotion, and personnel matters.
- The Information Services Committee represents faculty interests involving library collections.
- The Planning and Budget Committee proposes long-range plans including program development, considers the relationship of the Faculty of Arts and Sciences-Camden to other units of the university and to other institutions, and advises the Dean on academic and budget priorities.
- Other committees are concerned with the honors program, scholastic standing, student life, faculty life, and rules and procedures.

COMMUNICATIONS

The university is moving ahead to gain greater visibility and to provide the public with more information about Rutgers' contributions to the state. In spring 2002, the University Relations Committee of the Board of Governors approved a constituency research project, whose goal is greater understanding of how New Jersey citizens view their state university. With the baseline data, Rutgers will be in a better position to plan effectively to get out the Rutgers story, and to build pride in, and increase the appreciation and support of Rutgers in New Jersey.

We suggest that the university intensify its efforts to communicate the Rutgers story so that state decision makers and the population as a whole become more fully aware of the institution's essential role as a catalyst for economic and social development.

National and local trends in higher education marketing, issues raised in earlier Rutgers studies, and the current fiscal and political climates in New Jersey suggest that university leaders should consider formulating and implementing a comprehensive, research-based, proactive approach to understanding and influencing public opinions of Rutgers. The experiences of other institutions also suggest that a systematic, well defined, market research program can facilitate measurement and evaluation of the effectiveness of current communication efforts, discern new marketing opportunities, provide a foundation for ongoing assessment, and guide future planning.

The objective of the Constituency Research Project is to generate qualitative and quantitative information and data that define perceptions of New Jersey higher education in general, perceptions of the image of Rutgers overall and of each of its major campuses individually, effectiveness of Rutgers' current communication and outreach programs, and which sources of information most significantly influence the image of Rutgers and each of its major campuses. The market research information will serve as the baseline study used to formulate and implement an overall, comprehensive marketing and image improvement initiative. The information and data should facilitate monitoring and evaluation of the performance and continuous improvement of marketing programs, plans, and initiatives. This Board-financed study is currently on hold because of budget constraints, but it is anticipated that it will move forward in the near future.

Rutgers has already completed a major study of its impact on the surrounding community. The university's significant impact on the state and region was the focus of a special project in 2000 to launch the new report, *Engaging the Community*, produced by the Office of Institutional Research and Academic Planning. University Relations spearheaded this project from conception through implementation, working closely with other units of the department and the Office of Government Relations to ensure its success.

Rather than limiting the launch to a media event, the office helped to create a *Trenton Seminar* where Rutgers administrators, faculty and students could tell their stories directly to key policy makers in Trenton. The session highlighted projects from all three campuses that illustrated key areas of the report, giving faculty and students an opportunity to describe their work not only to the media, but to representatives of the governor and legislature as well. In addition to representatives of government, business and industry in attendance, the event was covered by commercial and student newspapers. This project illustrates how the office has in recent years expanded its approach from traditional media relations to more broad-based public relations.

The Office of Media Relations and Communications also promotes information about research that translates into new businesses or jobs for the state. Some specific examples include:

- *RU President Urges Funds for Defense Research.* In 1999, Media Relations arranged an interview for Gannett Washington Correspondent Ledyard King with President Lawrence, who was in Washington to provide testimony before the House of Representatives' Committee on Appropriations Subcommittee on National Security. He urged members to support strong federal funding for research and technology programs.
- *Senator Lautenberg Donates Official Papers to Rutgers.* In 2000, Media Relations helped plan and promote a campus event at which Sen. Frank Lautenberg donated his official papers to Rutgers' Special Collections.
- *New Jersey's Economic Strength.* In September 2000, the Garden State's 100-month economic expansion was the subject of Rutgers' first New Jersey Public Policy Seminar in Trenton for the academic year.
- *Science Coalition Champions of Science.* In 2001, Media Relations arranged and actively promoted an event held at Rutgers' Institute of Marine and Coastal Sciences. U. S. Representatives Rodney P. Frelinghuysen and Rush Holt were recognized for their work in support of federal funding for university-based scientific research. Awards were presented by Rutgers President Lawrence and Princeton President Shapiro on behalf of the Science Coalition.

The Department also sought to enhance the university's relationship with government and business leaders. In addition to *Engaging the Community*, the office collaborated with the Office of Government Relations on a number of important projects, including the awarding of the Rutgers Medal to Senator Frank Lautenberg; support for Representative Rush Holt's meeting with R&D leaders; the drafting of a technology-based op-ed piece for Senator Robert Torricelli; and the development of a proposal for NSF Director Rita Colwell. The Office provided media support for several economic outlook reports, seminars and conferences, as well as the release of numerous reports addressing various aspects of public policy. In addition, the office was involved in partnership activities with such companies as Becton, Dickinson; Cisco Systems; Sun Microsystems; and Bristol-Myers Squibb.

Business news, including the health of New Jersey's economy, is of particular interest to the state and regional press. James Hughes, Dean of the Bloustein School of Planning and Public Policy, and Joseph J. Seneca, University Vice President for Academic Affairs, are often called upon to give perspective to business and economic news stories.

Focus, a newspaper for university faculty and staff, remains an extremely important and effective communication tool for the university, both internally and externally. Knowing that the *Focus* is distributed to key opinion leaders in the state, staff have successfully included Rutgers-specific stories that might not be covered in the "outside" media. The high quality of *Focus* is the result of careful management and a collaborative staff. *Focus* continues to win external awards as well as internal praise.

Rutgers' "Research Highlights," the online window into current scientific research activities that is managed by Media Relations, was one of two universities featured on the Science Coalition website, opening this work of the university to a broader audience.

Rutgers Academic Challenge. Bringing together a team that includes NJN Public Television, the New Jersey Department of Education, and the K-12 education community, Rutgers, has spearheaded partnerships to create a high visibility intellectual competition called the Rutgers Academic Challenge. The Challenge is an interscholastic statewide competition for New Jersey high school students competing for a state championship. The Challenge brings to life the dynamic and interactive ways through which students learn in today's classrooms.

Designed to promote academic excellence among New Jersey's high school students, the competition is unusual in the type and structure of elements, which include demanding group problem-solving activities in social studies, language arts, mathematics, and science. Based on the Core Curriculum Content Standards adopted by the New Jersey State Board of Education in 1996, the program brings to life the dynamic and interactive ways in which students learn and by which academic achievement is assessed in today's classrooms. Using the curriculum standards as a guide, Rutgers faculty from a wide range of fields collaborate with high school teachers, curriculum specialists, and administrators from K-12 school districts across the state to develop high-level competition activities that stress the ability to think critically, solve problems as part of a team, and communicate effectively.

VII. SIGNIFICANT CAMPUS ISSUES

Rutgers, The State University of New Jersey, is accredited by the Middle States Commission on Higher Education as one university with three principal campuses in Camden, Newark, and New Brunswick. With a single tenure and promotion review committee, the same criteria pertain for all three campuses for faculty appointment, promotion, and tenure. The President's Committee on Standards and Priorities in Academic Development (CSPAD), which evaluates every program after its cyclical external peer review, also uses a single set of standards to assess work on each campus. The same high academic standards are applied on all three campuses. Since the decennial MSA review, the strategic planning process has fostered more collaboration among faculty and, as a result, has enhanced the quality of research and instruction throughout the university.

In this section, the issues of key importance to each campus are identified, with a focus on MSA recommendations.

Camden

The 1998 MSA report identified issues to be addressed on the Camden campus, including library access, articulation with community colleges, involvement of faculty in graduate programs that are not offered on the Camden campus, and telecommunications. The campus has made progress in each of these areas, as well as in other academic initiatives, student services, enrollment planning, service to the community, and campus visibility. The following briefly summarizes progress in these areas.

ACADEMIC INITIATIVES

Recent academic initiatives are designed to meet student interest and serve the larger community. The Teacher Preparation Program is an excellent example. Drawing on the strengths of the liberal arts and sciences, the program provides extensive experiential training for future teachers, offering them ample opportunities to observe, work with, and learn from students and teachers in the classroom environment. Currently, more than 300 students are enrolled and nearly one hundred student teachers are placed each year. Students develop intellectual breadth and depth through the requirements of their major department as well as via the College's general education requirements. At the same time, students take a specially designed package of professional development courses that place teacher preparation squarely in the context of the liberal arts and sciences. Students seeking certification at the elementary level must be prepared in a substantive content area such as mathematics, history, or science. Many of these students select preparation in a specialized track that focuses on the sciences or foreign languages, areas where the need for teachers is especially acute. Another, recently developed program to serve the larger community is the M.A. in Criminal Justice, launched in Fall 2002. Additional academic initiatives include B.A./M.A. dual degree programs in English, History, and Liberal Studies, B.A./M.S. dual degree programs in Biology, Chemistry, and Mathematics, and the B.A./J.D. dual degree program.

Taking advantage of faculty expertise in a range of disciplinary areas, the campus has developed multiple research centers and initiatives that provide a vehicle for instruction, outreach and community development, as well as scholarship.

- Center for Children and Childhood Studies
- Center for State Constitutional Studies
- Forum for Policy Research and Public Service

- Hybrid Materials Research Initiative
- Information Processing in Complex Biological Systems Project
- Mid-Atlantic Regional Center for the Humanities
- Walter Rand Institute for Public Affairs.

Recognizing its small size, faculty have developed these centers to bring together colleagues in different, though related fields, to create programs that uniquely advance institutional goals.

The campus has also maximized its available resources by restructuring several departments. This provides greater administrative efficiency and provides students, more coordination among similar disciplines, and therefore a fuller educational experience for students. The departments have been reorganized as follows:

- Art, Music, and Theater combined to form the Department of Fine Arts
- Philosophy and Religion combined to form the Department of Philosophy and Religion
- French, German, Russian, and Spanish combined to form the Department of Foreign Languages
- Graduate Department of Public Policy and Department of Urban Studies combined to form the Department of Public Policy and Administration.

The MSA review noted the importance of participation of the Camden faculty in graduate programs on the Newark and New Brunswick campuses.

The university should explore ways better to involve members of the Camden faculty who so desire in the education and training of doctoral students university-wide.

Camden faculty have served as full or associate members of New Brunswick graduate programs such as anthropology, cell and developmental biology, chemistry, ecology and evolution, economics, French, German, history, mathematics, physics, physiology and neurobiology, political science, psychology, sociology, urban planning and policy development, and women’s studies, as well as the doctoral program in management at Newark and New Brunswick. New Camden faculty should regularly be admitted to the graduate faculty of corresponding departments in New Brunswick or Newark, and invited

to teach a class every couple of years. This would help Camden recruit new faculty and would enrich programs throughout the university.

Camden faculty continue to participate in a number of graduate programs in the sciences, social sciences, and the humanities on the other campuses. Perhaps the most notable example is the highly rated Graduate Program in History. The Ph.D. program, offered in New Brunswick, has close ties with the Graduate History Program in Newark, which offers the M.A. A new track in the Ph.D. program, “History of Technology, Environment and Health” draws upon history faculty at Rutgers-Newark, New Brunswick, and Camden, Rutgers faculty involved with the Edison Papers, the Institute of Electrical and Electronics Engineers History Center, and the Center for Health, Healthcare Policy and Aging, and faculty at NJIT. A distinguished professor from the Camden History faculty, Dr. Philip Scranton, played a key role in the development of this important initiative.

Camden faculty also participate in other graduate programs in the sciences, social sciences, and the humanities. They are also regularly involved in a number of joint professional degree programs, such as:

- J.D./Master of Public Affairs and Politics – with the Eagleton Institute in New Brunswick
- J.D./M.B.A. with the Rutgers Business School – Newark and New Brunswick
- J.D./Master of Social Work.

LIBRARY RESOURCES

The library should continue to explore ways by which to reduce students' anxieties regarding library services and to accept as a professional challenge increasing the "user friendliness" of the facility.

Several significant programs were initiated to assist students in using resources on site and from home to reduce student anxiety in using the Libraries. Information assistants, who "wander" around the computer area and work one-on-one with students, are available for as long as the patron needs help and is instructed to stop by and check up on the patron after the initial help is given. For the ever-increasing number of students using the services remotely, an e-mail help service is provided with a 24-hour response. The Libraries has just started a test of a "live" online reference chat during the afternoon hours. This should be extended as funding and staff become available.

Students on the Camden campus expressed unhappiness about their lack of timely access to library materials that support undergraduate education. Collection use data can be used to identify heavy demand items that may need to be duplicated. If duplication of resources is not a realistic fiscal alternative, the libraries need to focus on other, more timely means of access and delivery.

The problem of availability of collections has been mitigated through the use of more online resources. Since the last Middle States visit, students in Camden went from having access to just fewer than 1,500 journals in print to now having online 24/7 access to over 9,600 journals. In addition, there is online access to over 90,000 Early English Books and over 450 of the most popular computer science books. To get books back on the shelves faster and to alert students when materials are available, an e-mail recall process was initiated that has speeded up getting materials back and alerts are now in real time rather than using paper forms through the mail. In response to questions about finding information and resources, the Libraries' home page has been re-designed to make it simpler and easy to use, especially for undergraduates.

Delivery time among the campuses for physical materials has improved through the Rutgers Request Service, the intralibrary loan system, whose business has increased 23% since 1997/98. But even more significant is the 24/7 availability of networked electronic

resources that give undergraduates access to a wide range of resources such as reference materials and full text databases.

ARTICULATION WITH COMMUNITY COLLEGES

The Camden campus should work with the University to pursue better transfer articulation agreements with the community colleges that serve as its primary feeders.

Rutgers University and the community colleges have a new partnership agreement known as NJ Transfer. The program facilitates transfers by providing community college students and their advisors with course equivalencies and transcript evaluations and it enables students to plan their community college courses so that these courses will fit into the proposed Rutgers major. The university also has initiated a dual degree program with all nineteen New Jersey community colleges, in which the Camden campus participates.

The School of Business at Camden has formal articulation agreements with Atlantic Cape Community College, Burlington County College, and Camden County College. To date, attempts to create an articulation agreement with Gloucester County College have been unsuccessful because of curriculum differences. In the near future, articulation agreements will be developed with Middlesex County College, Mercer County Community College, and Bergen Community College.

Camden's Liberal Studies Program is primarily designed for students with Associate of Applied Science degrees in fields such as business technology, dental hygiene, legal assistance, nursing, or sign language, among others, who wish to earn a Bachelor of Arts degree. Students pursue a coherent yet broadly individualized interdisciplinary major that leads to a Bachelor of Arts degree, usually after two years of full-time study at Rutgers-Camden.

ENROLLMENT AND VISIBILITY ISSUES

Rutgers-Camden is addressing the issues of enrollment and competition, and the challenge of meeting constituent needs, by adopting two specific, high-priority goals for the next three to five years:

- Increasing enrollment by 1000 students, while increasing quality
- Increasing the regional and statewide visibility and effectiveness of the campus.

The campus developed a unique marketing strategy to increase enrollment and enhance visibility. The Office of Admissions, Student Affairs, and staff from the College of Arts and Sciences and the Business School developed a direct mail campaign to attain both goals. Special mailings with a distinctive presentation of materials were sent to prospective students throughout the region. Between 1997 and 2002 these efforts resulted in an increase of over 28% in the first-time freshman population on campus and an increase of over 15% in the overall undergraduate population. Campus undergraduate enrollment has grown by over 500 students since 1997.

In order to maximize available resources, the campus plans closer relationships with Rowan University and Camden County College within the city of Camden. Joint use of infrastructure and support systems such as libraries, computing support, food service, classrooms, and laboratories, as well as selective cross registration is under consideration. A joint University Bookstore to serve all three higher education institutions is planned near campus, on Cooper Street.

STUDENT LIFE

The campus is also augmenting and strengthening its athletic and recreation programs to enhance student quality of life, campus visibility, recruitment, and retention. The Camden Athletic and Recreation program has grown significantly since 1998. Intercollegiate women's soccer and volleyball greatly expanded the intramural and recreational programs for Camden students. In 2001, Rutgers opened two new, on-campus playing sites. With Rutgers as the owner of the new 6,500-seat minor league baseball stadium in Camden, the baseball team now calls Campbell's Field its home. This new stadium had an immediate effect on participation for baseball. The team tripled in size and needed to establish a junior varsity team in baseball, a first in Campus history. In addition to the baseball stadium, the campus, working with the city of Camden and with a Green Acres grant, opened a state-of-the-art soccer and softball complex that is also used for many field recreation programs. With these two sports complexes, Rutgers-Camden students can now play home games in three sports on campus for the first time.

The need for additional student housing has become clearer since the last accreditation report, and early plans for the development of several hundred new beds, in an apartment configuration, are being discussed. The plans for housing were further accelerated by the interest of the state, county and city in creating a "college town" redevelopment around the campus, which would anchor other revitalization efforts in the city. Investments in law school space, housing, and land acquisition, made possible by funding and a vision that is part of a larger effort to revitalize Camden, will address the needs of both Rutgers and the larger community for stabilization and improvement.

PHYSICAL PLANT AND EQUIPMENT

State funding is having a positive effect on the Campus. With assistance from the New Jersey Higher Education Capital Improvement Program (HECIP), Rutgers has spent \$20 million over the last several years on deferred maintenance, modernization, and renovation of campus facilities. Substantial work has already been done to the roofs, mechanical systems, and structures of most major campus buildings and other renovations still in progress.

HECIP also provided funding for work on the public areas and teaching spaces in Armitage, Fine Arts, the Business and Science Building, and the Science building. Coupled with investments from the Equipment Leasing Fund (ELF), most classrooms now have ceiling mounted liquid crystal display (LCD) projectors, with laptop links, new screens, and new seating. The teaching laboratories in the Science building, among the least suitable and most antiquated facilities on campus, have been completely modernized. Special attention was paid to lobbies and hallways in the major instructional buildings, to create a good first appearance. Extensive work was undertaken to the landscaping and the campus exterior, including signage. The highway frontage of the campus was improved, with large new landscape areas that create a suitable foreground on the most visible edge of the campus. Walkways in the interior quad of the campus were re-paved; new outdoor seating was added to facilitate outdoor gatherings that would animate the campus area. Student service areas, most notably the Bursar's office, Financial Aid, and the Registrar, have been completely renovated.

Over \$700,000 from the state's Equipment Leasing Fund is being used to upgrade computer and multi-media equipment for teaching improvements in business, law, arts and general use classrooms. These investments were linked with renovations funded through the Higher Education Capital Improvement Program.

More space on campus is still needed. The evolution of the campus, the aging of existing facilities, and the changing needs of pedagogy and programs, all require additional facilities. Plans are underway for major new facilities for the Law School. \$11 million will be provided by the State, matched by another

\$11 million from the university, to construct a new building that will contain additional critical program areas for the Law School, including a moot court, clinic space, and student organization and lounge areas.

Some land-banking has taken place in the area of the campus, including the purchase of a number of deteriorated historic buildings that have been renovated for offices, and one building that was extensively adapted for use as classrooms. Much more remains to be done in this area, however, and plans are being formulated for the purchase of the large parking lot on 5th Street, across from the campus, and the purchase of the other Cooper Street properties.

Future land banking will be guided by a new campus master plan, now in the final stages of approval. The plan clearly shows the boundaries that the campus will require, if it is to have the land area necessary for new buildings that are needed for existing and future programs and enrollment growth.

Parking has been largely accommodated by leased arrangements along the Camden waterfront. As the waterfront redevelops, long-term solutions to parking needs must be found, but this is not anticipated to be a problem over the next five years. The university operates a shuttle service linking the lots to campus, although most users walk the short distance.

TELECOMMUNICATIONS

At the earliest possible date, the Camden campus should upgrade its telecommunication system.

The Camden Campus is currently purchasing a new campus telephone system. Installation is expected during the summer of 2003. The new telecommunication system will have capacities sufficient to address all of the pre-existing problems.

NEWARK

The 1998 Middle States report called for an assessment of relationship between the Newark campus and the university as a whole. Specifically, there was concern about “the sometimes ambiguous pressures arising from the single university ideal juxtaposed against the unique features and qualities of Rutgers-Newark.”

Rutgers should continue thoughtfully and openly to address the sometimes ambiguous pressures arising from the single university ideal juxtaposed against the unique features and qualities of Rutgers-Newark.

As the northern campus of Rutgers University, Rutgers-Newark continues to build its excellence in a wide range of academic programs. These developments have been accomplished in a structure that provides campus autonomy in the context of overall, centralized planning and many centralized services. This structure is now in a state of flux, and a process of administrative devolution is underway at the Newark and Camden campuses. Administrative and academic functions are being decentralized. While it is too early to assess the full implications of these changes, the process addresses directly the relationship between the northern campus and the university as a whole.

ACADEMIC PROGRAMS

Since the MSA review, Rutgers-Newark has developed innovative academic programs and increased enrollment. Total undergraduate, graduate and professional enrollment at Rutgers-Newark reached

10,346 in Fall 2002. In addition, the student profile for full-time regular admitted students has significantly improved while the commitment to diversity has been maintained.

There are now 46 undergraduate programs in the College of Arts and Sciences (including four jointly with the Rutgers Business School-Newark and New Brunswick); 16 undergraduate major programs at University College-Newark (including four jointly with the Rutgers Business School-Newark and New Brunswick) in addition to the undergraduate program of the College of Nursing. A Bachelor of Fine Arts degree program is now offered through the Newark Department of Visual and Performing Arts. The Honors College at Rutgers-Newark was initiated in 1998. It is a four-year undergraduate “college within a college” that provides high-achieving students the opportunity to expand their intellectual horizons and to gain the competitive edge that makes the difference when applying for a top-notch job or graduate school. It features smaller classes, independent and cross-disciplinary study, off-campus internships and service opportunities. The recently established Provost’s Scholars and Honors College Programs have increased scholarship funding for campus undergraduate students.

There are now 21 master’s programs offered by the Graduate School-Newark and the graduate/professional schools. Among the new master’s programs is a Master of Public Health (joint with UMDNJ and NJIT). Three new Ph.D. programs have been added over the past five years—Global Affairs, Urban Systems (joint with NJIT and UMDNJ), and Environmental Science (joint with NJIT)—for a total of 13 doctoral programs at the Newark campus. Faculty from the Rutgers-Newark Ph.D. program in Behavioral and Neural Sciences have combined with UMDNJ’s Neuroscience faculty to create a joint Ph.D. in Integrative Neuroscience. Major shared research facilities for spectrometry (Rutgers-Newark Department of Chemistry and UMDNJ Department of Biochemistry and Molecular Biology) and functional magnetic resonance imaging for brain research (Rutgers-Newark and UMDNJ Department of Radiology) have also been developed during recent years. Three new interdisciplinary research centers have been launched:

- Joseph C. Cornwall Center for Metropolitan Studies
- Center for Information Management, Integration and Connectivity
- Center for the Study of Terrorism.

The Newark Campus continues to attract top-flight faculty commensurate with Rutgers University’s research university status and membership in the AAU. In addition to those discussed above, the following integrated programs among the CHEN schools and major scientific research and training programs with UMDNJ and NJIT have added stature to the campus and the university:

- Joint B.S. in Allied Health Technology with UMDNJ
- Joint B.S. in Human-Computer Interaction with NJIT
- Joint Master’s program in Computational Biology with NJIT.

As the Rutgers-Newark Campus has expanded its academic offerings, it has also increased its efforts to publicize the high quality of the campus’ established and new programs to the surrounding community and beyond. All Newark deans, four of whom arrived after the last MSA visit, have made it a priority to reach out to the community, to meet with leaders of the City of Newark, the region and the state, and to speak at events.

FACILITIES

Physical improvements and new building projects are greatly improving the visibility of the Newark Campus and securing its connection to the City of Newark and its environs. The Center for Law and

Justice (CLJ), which houses the School of Law-Newark, the School of Criminal Justice, the Center for Global Change and Governance, and the Provost's office, was dedicated in September, 1999. The CLJ has become the main Campus entry point, within walking distance of Newark's Military Park and the New Jersey Performing Arts Center and looking out toward the center of the city. The CLJ opens onto New Street, which has been closed to traffic and converted into a brick walk and tree-lined plaza. The main Campus Plaza was also converted to lawn space and will soon be connected to the New Street Plaza by continuing brick walkways. The S.I. Newhouse Center, which formerly housed the CLJ occupants, will soon be remodeled into the first new City of Newark hotel/conference center in decades. Expansion of Olson Hall will increase space for the Biology and Chemistry departments, creating an additional 35,000-square feet for state-of-the-art classrooms, teaching and research labs, and meeting rooms, helping to attract top faculty and students to the science programs housed there.

The Campus also continues to participate in major university-wide initiatives such as the Higher Education Capital Improvement Program, Equipment Leasing Fund, RUNet 2000 infrastructure, Rutgers Integrated Administrative System (RIAS), campus master planning and capital planning. Newark now has autonomy in managing new building projects and major renovations on campus.

CAMPUS DIVERSITY

At the time of the last Middle States visit, the Newark Campus had made major advances in promoting its character as a remarkably diverse urban campus offering high quality programs at both undergraduate and graduate/professional levels. Among the activities and programs highlighted in 1998 were campus participation in the revitalization of Newark and development of University Heights Science Park, the Center for Molecular and Behavioral Neuroscience, and the Dana Library. Since 1998, the campus has further developed these existing programs and created many new ones, expanding its promotional materials and initiatives, and emphasizing the special relationship of Rutgers-Newark with the City of Newark, all within the context of Rutgers University's structure and governance.

Evidence of recognition of the campus' distinctive qualities is its designation for six consecutive years by *U.S. News & World Report* as America's Most Diverse National University Campus and listing in that publication separately as among the top 100 national universities (the New Brunswick campus is listed separately). The Campus held a Diversity Celebration in January 2001 to which dignitaries, politicians, educators and prominent citizens, and Rutgers deans and administrators were invited.

Individual campus units have also served to enhance the profile of Rutgers-Newark as a major urban center of research and teaching:

FACULTY OF ARTS AND SCIENCES

The Faculty of Arts and Sciences-Newark (FASN) embraces the mission of Rutgers-Newark as Rutgers' urban campus, and increasingly emphasizes the unique role of the Newark campus within Rutgers University. Honors College brochures, along with the campus video and admissions materials highlight the resources of the city in providing experiential learning opportunities. Recent FASN faculty appointments in social sciences and humanities have focused on interrelated areas of urban policy studies, urban education, race, ethnicity and historical memory, heritage language study and global affairs. This recruitment strategy provides a critical mass of faculty in key areas of scholarship and promotes interdisciplinary interactions, for example through the Center for Global Change and Governance.

FASN appointments in the sciences also cut across disciplinary lines and make especially strong use of collaborations with UMDNJ and NJIT. For example, the newly emerging Center for Cellular Dynamics will include biologists, physicists, neuroscientists and chemists from Rutgers-Newark and will

incorporate collaborative arrangements with NJIT biologists, physicists and bioengineers, with UMDNJ physiologists, biochemists and molecular biologists, and with Public Health Research Institute scientists studying the cellular and molecular biology of infectious diseases. The Rutgers-Newark Department of Earth and Environmental Sciences will relocate to the York Center for Environmental Sciences at NJIT, where the department's faculty will closely interact with NJIT's environmental scientists to further the two institutions' joint bachelor's, master's, and doctoral programs in Environmental Science. These interdisciplinary and inter-institutional programs provide greatly expanded new opportunities for students to engage in hands-on internships that prepare them, for example, for graduate study and for work in New Jersey's pharmaceutical, biotechnology and environmental/energy sectors. Plans have recently been approved for the expansion of Olson Hall, which will increase the space for the Chemistry and Biology departments, provide space for the planned Center for Cell Dynamics, and facilitate collaborations with faculty in neuroscience, cognitive studies and physics. Approximately 35,000 square feet for state-of-the-art classrooms, teaching and research labs, and meeting rooms will result from this project. It will help the campus attract top-flight faculty and students to the Newark Campus science programs.

RUTGERS BUSINESS SCHOOL-NEWARK AND NEW BRUNSWICK

The Rutgers Business School-Newark and New Brunswick (RBS) represents the consolidation of management education, outreach efforts, and fund raising between the school's divisions on the two campuses. RBS is a Newark unit, reports to the Newark Provost, and has continued to grow in reputation and visibility as a result of the mergers that created the Rutgers Business School-Newark and New Brunswick.

To address the differences in admissions standards, student preparedness and performance, and curricular needs between the campuses, new scholarship money has been targeted in Newark to outstanding students, and opportunities are available in conjunction with the NCAS Honors College. In addition, more faculty members are now teaching on both campuses.

Outreach programs such as the Center for Entrepreneurial Management have helped provide coordination between the school's different locations. Other entities include the New Jersey Small Business Development Center; University Ventures, Inc. (formerly called Rutgers Minority Investment Company), which is the only university-based specialized small business investment company (SSBIC) in the United States; and the Rutgers University Technical Assistance Program, which consults with municipalities to formulate plans for economic development.

SCHOOL OF LAW-NEWARK

The Law School has joint programs with other units headquartered in Newark: J.D./M.B.A.(in management or professional accounting) degree with the business school; J.D./Master of Accountancy degree with the business school; M.A./J.D. degree with the School of Criminal Justice; J.D./M.D. degree with the University of Medicine and Dentistry of New Jersey-New Jersey Medical School. Additionally, the School of Law-Newark and FASN have a Dual Admission agreement, which provides up to five qualified FASN students each year with guaranteed admission to the Law School. The Law School-Newark also offers J.D./master's programs with the Edward J. Bloustein School of Planning and Public Policy in New Brunswick, and the School of Social Work, headquartered in New Brunswick. Some law professors have joint appointments with schools in New Brunswick, and co-teach distance learning courses with the School of Law-Camden.

COLLEGE OF NURSING

Distance Learning Based M.S. Degree in Nursing

Progress continues with implementation of the distance learning based Master of Science degree in nursing. In addition to the seven courses already online that are taken by all students in the master's program, the graduate program in nursing is in the process of developing an online format for the course *Advanced Health Assessment*. It is anticipated that this course will go online Fall 2003, thus enabling nursing students in the master's program to take the entire eight-course core through distance learning. Also under development is a plan to offer online options for all of the degree program's clinical specialty tracks. Program faculty continue to develop expertise in all aspects of online teaching, and the existing online courses continue to be enhanced with the addition of high quality graphics and streaming video.

The online graduate nursing courses are highly attractive and thereby increase the program's ability to recruit the most competitive graduate students from across the state and beyond. The online courses consistently receive positive written evaluations from students and faculty. A comprehensive formal evaluation of the entire distance learning based M.S. degree in nursing is planned for the 2003-2004 academic year. This evaluation will include student and faculty focus groups, review of written evaluations from students and faculty, and external consultation.

Other College of Nursing Initiatives

The College of Nursing (CoN) sponsors many events that promote the school's diversity and involve the local community, thus promoting Rutgers-Newark's unique nature. For example, CoN was the organizer and host of a statewide Educational Opportunity Fund (EOF) student nurse conference sponsored by the New Jersey Commission on Higher Education, to address issues of retention and graduation. The Minority Nurse Leadership Institute is a program designed to provide minority nurses with the leadership skills necessary to become effective community leaders.

The college and its faculty have been featured in various media including professional nursing publications and general circulation newspapers. A television news program featured SimMan, a \$33,000 state-of-the-art computerized patient simulator, which is the first of its kind to be offered to New Jersey nursing students. The CoN graduate psychiatric/mental health program was ranked in the top five in *U.S. News & World Report Best Graduate Schools 2000* and the master's program was ranked in the top tier nationally.

SCHOOL OF CRIMINAL JUSTICE

As is the case for all schools and colleges at Rutgers-Newark, the School of Criminal Justice is strongly connected to its urban environment. SCJ's centers and research initiatives include: Center for Crime Prevention Studies, which develops research and public policy in situational crime prevention; Newark Violence Prevention Project, which collects data to develop an understanding of the violence problem; Center for Justice and Mental Health Research, which identifies critical needs and interventions for individuals in correctional populations with medical, psychiatric or substance-abuse problems; Joint Center for the Study of Law and Crime, which is a venture of the SCJ, Law School-Newark and Center for Global Change and Governance to encourage research on topics related to criminal justice and legal policy. The School of Criminal Justice is home to the new Center for the Study of Terrorism, which is also a collaborative effort with the Law School-Newark and the Center for Global Change and Governance.

DANA LIBRARY

The thousands of full-text journals now available in the sciences, business, and other areas of direct interest to the Campus have greatly facilitated the campus' research and teaching programs. Dana is continuing its information literacy programs and its development of a series of web-based guides, including the RUL Business web page guide that received the Argus Digital Librarian Award for its compiler. With a grant from Verizon, University support for strategic planning activities, and University support through the Equipment Leasing Fund, Dana has moved ahead on the development of infrastructure for building a digital library in jazz and in related areas. The receipt of two NEH Access and Preservation grants provide additional support for the activities of the Institute of Jazz Studies. The three "Jazz Greats" digital exhibits are viewed as initial components of the emerging digital library. Dana's community outreach work also continues, including work with the Newark Literacy Campaign, supported by the Mid Atlantic Arts Foundation, on a technology-based "Urban Diaries" project. Dana continues to receive the highest ratings by graduating seniors at FASN as an important and responsive service area for the Campus.

CAMPUS COMMUNICATIONS

All publicity emanating from the Newark Campus Communications office concentrates heavily on promoting the individuality of the campus, the excellence of its faculty and close faculty/student interaction, including the relationship of the campus with the city of Newark. "Dare to be Inspired," a campaign with display advertising and inserts in area newspapers, concentrated on these features of the campus. The campus' aggressive media relations campaign relies on faculty experts, mostly in areas of urban/Newark issues, law, criminal justice, public policy, business, and the sciences.

A Rutgers-Newark video, produced by Campus Communications with support of the Rutgers-Newark Admissions office, is an undergraduate recruitment video that focuses heavily on the urban nature of the campus, diversity of students/faculty, and excellence of academic programs. It is accessible on the website (<http://www.newark.rutgers.edu/about/index.php?sId=video>) and through the Admissions office. Particularly with regard to student recruitment materials, more can be accomplished in highlighting the campus as a unique part of the university as a whole, and in more clearly distinguishing the Newark and New Brunswick campuses.

The Office of Campus Information and Conference Services was modeled after the Campus Information Services office in New Brunswick, and tailored to the needs of the Newark campus. Created to accommodate the ever-expanding number of events and programs that connect the campus with the public, the office provides assistance to visitors and helps in hosting conferences and special events on campus that involve the broader community. Examples include the EOF Statewide 30th Anniversary Symposium and the America Reads Program, in partnership with the Newark Public Schools and other organizations.

STUDENT SERVICES

Spring Open House, which focuses on admitted students, brings together all Newark departments to promote the campus and host outside guests. Efforts are under way to further involve the community at large, and encourage greater participation by the city of Newark.

Major renovations at Blumenthal Hall transformed it into a more convenient environment. Designed to provide "one-stop shopping," the Student Services Mall brought together the offices of Admissions, Financial Aid, and Registrar, with the Business and Personnel Offices, Newark Campus Communications and other Newark service offices in a collaborative effort to improve student services in ways that meet

the particular needs of the Newark Campus. Waiting time has been reduced, processing of transactions has become more efficient, and staff members are very accessible to the students.

PERSONNEL/BUSINESS ADMINISTRATION

Personnel, Pre- and Post-Awards for Grants, Business Services, and Purchasing report directly to the Newark Provost while also working in close collaboration with central administration offices.

Newark and New Brunswick staff participate in teaching professional development training sessions on both campuses. New Brunswick experts make presentations of important material to Newark audiences concerning business management topics, RIAS, and mail handling in the current threat environment. Newark staff also serve as members of university-wide committees and implementation teams, including the areas of RIAS, Pay for Performance, Benefits Council, and Van Safety.

Organizational Development and Leadership (ODL), formerly known as QCI, was tailored to meet the needs of the Newark Campus. ODL efforts centered on fostering a sense of community and were accomplished through the Blumenthal Mall project, through a Kellogg grant-funded project aimed at improving administrative abilities of chairpersons, and through Staff Recognition Day for Newark non-faculty employees.

NEW BRUNSWICK

The 1998 Middle States recommendations for the New Brunswick campus noted the importance of identifying priorities to make the most of scarce resources for academic programs, the need to evaluate centers, bureaus, and institutes regularly and tie university resources to their effectiveness in meeting their respective missions, and the need for greater faculty involvement in governance. The governance issue is discussed in Chapter VI of this document.

There are insufficient resources to fund many worthy projects to further the quality and effectiveness of the mission of the campus. In this area, the reallocation of resources to provide funds for new projects has been helpful. Priority setting, with full understanding of the attendant trade-offs, is essential.

Given years of state under-funding, the New Brunswick campus has developed effective means to determine priorities and reallocate necessary funds. These issues are discussed fully in Chapter II, Significant Developments. In particular, funds for Reinvest in Rutgers and funds associated with implementation of the strategic plan have been clearly earmarked for priority programs. The ongoing assessment of programs and the formalized accountability measures used on the campus ensure that the process of priority setting is continuous.

Concerning New Brunswick Campus, conduct a campus review of Centers, Bureaus, and Institutes for enhanced funding or phasing out as appropriate.

The university continues to monitor the usefulness of existing centers and institutes and is alert to needs addressed and opportunities presented by the creation of new units. In the last five years, the following centers and institutes have been established:

In 1998 Cook College established the Center for Environmental Prediction.

In 1999, three centers were established:

- Alan M. Voorhees Transportation Center at the Edward J. Bloustein School of Planning and Public Policy
- Center for State Health Policy
- National Center for Neighborhood and Brownfields Redevelopment at the Bloustein School of Planning and Public Policy.

In 2000, two centers were established:

- Center for Children and Families at the School of Social Work
- Center for Urban Restoration Ecology at Cook College, in cooperation with the Brooklyn Botanic Gardens.

In 2001, three centers were established:

- Center for Early Education Research at the Graduate School of Education
- Equine Science Center of Excellence at Cook College
- Food Policy Institute at Cook College and the New Jersey Agricultural Experiment Station.

In early 2003, one center was established:

- Center for Advanced Energy Systems within the School of Engineering.

Prior to the establishment of each new unit, a clear case is made for its academic importance. In addition, each new unit must demonstrate how it advances school and campus priorities and must delineate the anticipated impact on available resources.

In keeping with the principles of the 1996 reorganization of the New Brunswick academic administration, several additional New Brunswick Centers which had reported to the University Vice President for Academic Affairs now report directly to the Dean of the most closely aligned academic unit:

- The Center for Advanced Food Technology now reports to the Dean of Cook College.
- The federally funded National Transit Institute has become an integral part of the larger coordinated Alan M. Voorhees Transportation Center and reports to the Dean of the Bloustein School of Planning and Public Policy.
- The Center for Urban Policy Research also now reports to the Dean of the Bloustein School of Planning and Public Policy.

Centers, bureaus, and institutes are subject to the same cycle of university external review that departments and schools are. Centers that have been reviewed recently include the Biotechnology Center for Agriculture and the Environment, the Environmental and Occupational Health Sciences Institute (a joint institute with UMDNJ) and the Center for Urban Policy Research. The Institute for Marine and Coastal Sciences is preparing for its second external review in Academic Year 2003-2004. Reviews for other centers, including the New High Energy Theory Center, the Laboratory for Surface Modification, and the Bureau of Physics Research, are planned for the near future.

The joint management group that oversees the three prestigious research centers that Rutgers sponsors jointly with the University of Medicine and Dentistry of New Jersey (the Center for Advanced Biotechnology and Medicine, the Environmental and Occupational Health Sciences Institute, and the New Jersey Center for Biomaterials) ensures the continuous oversight and reexamination of these important collaborative efforts.

The needs and progress of existing centers and institutes are reviewed on a case-by-case basis. Assistance has been provided in the form of enhanced equipment budgets, funds to help support faculty recruitment or retention offers, matching grant funds, funds to compensate research faculty for instructional contributions, and other special provisions designed in response to specific needs.

CONCLUSION

Rutgers is now experiencing strong enrollment pressures. As with public research universities in other states, the response to these pressures over the next few years is intimately tied to developments occurring within the state and to policy decisions being made at the state level. New Jersey has one of the highest rates of first-year students enrolling in institutions of higher education as well as one of the highest college-going rates among the states. Projections based on present college attendance patterns show that the cumulative effects of increased numbers of first-year students will result in significant enrollment pressures at colleges and universities throughout the state. In the current fiscal and planning environment, flexibility in enrollment and budget projections will help the Rutgers maintain its high academic standards and excellence in instruction.

Rutgers' ability to address these enrollment pressures depends, in large part, on development and implementation of two critical statewide initiatives: the Governor's framework for restructuring New Jersey's public research universities and the state's higher education long-range planning process. Current demographic pressures and a negative fiscal climate lend a sense of urgency to the outcome of these processes. In order to succeed in improving higher education in New Jersey, both of these efforts require significant state resources. But chronic underfunding of higher education threatens to stymie plans for the future, as well as to undercut the progress that has already been achieved.

Over the last decade the university has made considerable progress in bringing together the varied resources of its faculty and students to build a stronger institution. Rutgers is now devolving some of its academic and administrative functions so as to provide each campus greater autonomy to set and achieve its goals. Throughout this process, the standards that unify the institution as The State University of New Jersey remain strong and broadly supported. The issues raised in the university's self-study prior to the 1998 Middle States visit, and the issues raised by the MSA team focus on quality in scholarship and instruction, assessment, governance, technology, and communications are central to the university's understanding of itself and to its ongoing commitment to its public mission.

SUPPLEMENTARY MATERIALS

Rutgers Fact Book 2002-2003

<http://oirap.rutgers.edu/instchar/factbook02.html>

Catalogs

<http://www.rutgers.edu/catalogs/>

Faculty Benefits Guide

http://uhr.rutgers.edu/pdfs/2003_Faculty_Benefits_Guide_Web.pdf

Sabbatical Leave Program

<http://www.rutgers.edu/oldqueens/sabbatical.shtml>

Academic Reappointment/Promotion Instructions

<http://www.rutgers.edu/oldqueens/FACpromotions.shtml>

Post-Tenure Review Procedure

<http://www.rutgers.edu/oldqueens/tenure.shtml>

Information and Services for Current Students

<http://www.rutgers.edu/current-students.shtml>

Rutgers Financial Report 2002

<http://www.rci.rutgers.edu/%7Eunivcont/2002%20RU%20financial%20report.pdf>

Strategic Plan and Progress Report IV

<http://oirap.rutgers.edu/instchar/stratplan.html>

Collective Bargaining Agreements

<http://oer.rutgers.edu/agreements.asp>

