III: Major Challenges and Opportunities

The Strategic Plan and the vision laid out within continue to provide a roadmap for the University and a detailed set of benchmarks against which we can measure our progress towards firmly establishing the University of Maryland as a world-class institution. No doubt, as with many public universities today, establishing the necessary funding to carry out these ambitious goals will remain one of our greatest challenges. This section of the report is focused on some key developments that we foresee will continue to move us toward our goals, along with some of the issues we will face in addressing them.

III.A: Enrollment Management and Future Planning [Standard 2]

III.A.1: The University System of Maryland’s 2020 Strategic Plan

In 2010, the University System of Maryland (USM) Board of Regents embraced the national goal of a 55% degree completion rate for U.S. citizens and developed a strategic plan to increase USM enrollment by about 40,000 students across the system institutions. Enrollment, rather than the number of degrees awarded, was to be provided to the state legislature as a basis for funding the plan.

The University of Maryland, College Park’s (UMCP’s) Strategic Plan and previously approved enrollment projections called for a decrease in enrollment of about 1500 undergraduate and 1000 graduate students over Fall 2010 enrollment, in conflict with the USM plan. In order to support the state and USM goal of increased degree production, we developed a new 10-year projection aligned with their goals. Initially, the plan was to increase growth by about 4000 students from Fall 2010 enrollment over a 10-year period. No funding for USM’s enrollment initiative was provided in FY 2012, thus the proposed enrollment increases have not begun. The projections in Appendix J thus initiate growth in enrollment starting in FY 2015, still contingent upon additional funding. The result would be an additional 2900 students by 2021, an increase of about 7.7% over Fall 2011 actual numbers. Approximately 2200 of those are projected to be undergraduates.

Growth at the Universities at Shady Grove is also anticipated, but will depend on the availability of funding and appropriate laboratory space to expand in the STEM disciplines.

The USM plan also calls for an increase of 40% in enrollment in STEM disciplines at UMCP. Enrollment growth of this magnitude, and especially the significant growth in the STEM disciplines, presents a number of challenges to the institution. Detailed and coordinated planning is required to achieve these goals and at the same time continue with the significant gains in quality of programs and the ability to attract talented students that have been achieved over the last decade. To achieve the STEM enrollment targets, the applicant pool will need to grow by more than 10% at a time when a 14% decline in the number of Maryland high school graduates is predicted. There is a current space deficit of 1.6M sq. ft. on campus, and enrollment growth will require space not only for classrooms, laboratories, mid-sized lecture halls, and computer rooms, but also for office and research space for new faculty and graduate students.

A financial challenge in meeting the STEM enrollment goals is the fact that the cost of instruction in STEM disciplines is substantially higher than in non-STEM areas. While this is in part due to market forces that drive faculty salaries, it is also because of the need for high quality laboratory instruction, in smaller section sizes and with laboratory equipment. UMCP is currently exploring, in collaboration with USM, a strategy for increasing tuition rates for students who enroll in STEM disciplines.

In Fall 2011, the deans of each of the academic colleges were interviewed to assess the impact of the proposed growth and to identify the specific demands that such growth would place upon their units. As expected, budget limitations are the most pervasive concern, along with shortages of faculty and in
the physical infrastructure. Every college has many courses with enrollment at or near capacity. Deans stress that the cumulative effect of furloughs and three years without merit pay has put the University at risk of continuing to lose excellent faculty and staff who are the backbone of the university’s high quality programs. Expanding capacity in virtually every dimension will require both additional funding and long-term planning.

An analysis of trends in student movement to and from STEM disciplines is in progress in order to better understand how and whether attracting and admitting more students to STEM disciplines will translate into additional STEM degree production.

III.A.2: Development at the Universities at Shady Grove

A location with potential for enrollment growth is the Universities at Shady Grove (USG), USM’s regional center in Montgomery County, Maryland. Educational programs at USG are developed and managed by nine of USM’s institutions, at both undergraduate and graduate levels. Degrees are awarded by the sponsoring campus. By design, undergraduate instruction is only in the third and fourth years. The majority of students (70%) transfer from nearby Montgomery College, thus requiring close collaboration with them in the development of new programs. There are no residence facilities at USG so, unlike the College Park campus, the student population consists entirely of commuters.

The administration of programs is typically through a program director from the sponsoring USM campus, and who is local to USG. The program director is responsible for securing instruction, classroom and office space, for student recruitment and advising, and for curriculum development. In the case of UMCP, additional program administration is provided through a Director of College Park Programs and a Coordinator for Shady Grove Admission. UMCP students are approximately half of the total undergraduate enrollment at USG. UMCP’s response to USM’s enrollment growth plan will require as many as 2000 additional students over a short period of time. To meet this demand, new program offerings and more electives will be required. A more centralized administration and financial model for academic programs would be desirable to manage this ambitious growth. The support of new programs will require additional faculty, facilities, and, for the highly desired STEM disciplines, teaching laboratories.

In collaboration with the University of Maryland, Baltimore (UMB), UMCP has proposed a major academic initiative at USG as part of its newly formed partnership “MPower Maryland” (described below). The plan calls for new educational programs in health, law, and human services (UMB) and science, technology, engineering, math, business, and the social sciences (UMCP) at USG. The research efforts of the two campuses will also be enhanced through the existing Institute for Biosciences and Biotechnology Research (IBBR), adjacent to the USG campus, in cooperation with the National Institute of Standards and Technology (NIST) in Gaithersburg, Maryland.

A key requirement of the plan is the joint appointment of a senior academic leader (dean). This individual will lead IBBR, organize the USG geographically-based faculty, expand technology transfer and commercialization activities in the region, act as the MPower point of contact at USG, expand collaboration among academic programs, and support the home campus deans in fulfilling their institutional requirements for their programs, including accreditation. This leader will be charged with creating a strong collaborative relationship with the USG’s executive director. The net result would be a substantially increased academic pipeline of students in Montgomery county, from the undergraduate level through professional programs, into key areas of workforce needs identified in the county and the region. Planning is currently underway and will require close cooperation with the University System of Maryland.
III.A.3: Supporting the New Plan for General Education

Section VI contains a discussion of institutional planning and budgeting efforts to prepare for the General Education program, which begins in Fall 2012. There will be several years of transition, as current students, who are under the existing CORE program, move through their curricula and as new students enter, requiring that both plans be supported in this transition period. Some aspects of the new program will be delivered as third and fourth year instruction, not phasing in until Fall 2014.

As indicated in section VI, the total number of credits required in the new General Education plan is comparable to the number of credits required under CORE, but there will be shifts in instructional demands. Some aspects of the new program, such as the I-Series courses and Scholarship in Practice, require that new courses be developed, and in some instances by academic units that have not typically delivered general education instruction. Aspects of the new program provide more flexibility in the counting of credits and students may end up completing their requirements with fewer courses overall. We are hopeful that transfer students may come to the University more likely to have completed their General Education requirements because of degree-completion initiatives underway at community colleges across the state.

Exactly how shifts in instructional demands will play out will depend on all of these factors as well as on student interests and on faculty engagement in developing new courses. Financing the new General Education program will require careful attention. Adjustments will be required on a year-by-year basis, likely for at least six years, until the new program is fully in place and CORE has been phased out.

III.B: International Engagement [Standards 11 and 13]

Substantial growth in the University’s engagement in its international agenda is a major initiative of the Strategic Plan, and global engagement has become a focal point of the University under President Loh. Goals include enhancing and enriching undergraduate opportunities, including but not limited to Education Abroad, increased research and graduate-level educational partnerships with international peer institutions, and enhanced collaboration with official and informal international communities in the Washington, D.C. area. While some steps have begun in this direction, much of the work will proceed over the next several years.

Education Abroad opportunities continue to expand, with an increasing focus on providing more opportunities for students in STEM disciplines. New directions include the establishment of “Freshmen Abroad” to provide incoming students with an immediate overseas immersion program and Graduate Student Research Fellowships that provide graduate students the opportunity to participate in research projects abroad. Increasing financial support for students will be a necessary step for Education Abroad programs to continue to grow.

III.B.1: International Undergraduate Enrollment

In addition to continuing to send our own students abroad, the University seeks to increase enrollment by international students in our own undergraduate programs. In Fall 2011, 111 international students matriculated at the University as new freshmen, contributing to a total of somewhat over 700 international undergraduates. While the University provides the necessary services to these students such as advising, orientation, visa processing, and some transitional housing, it is recognized that these services could and should be improved if the campus is to welcome a larger population. In September 2011, the Vice President for Student Affairs convened a task force to evaluate the experiences of international students and make recommendations for improvement. The report provides a set of 21 recommendations that range from increasing campus awareness of the special needs of international
students, the development of summer orientation and bridge programs, enhanced housing support, to increased mentoring and establishment of an umbrella organization to support international student groups.

International students who come, by cohort, into the undergraduate curriculum starting in their junior year (in so-called “2+2” programs) tend to be more likely to be retained and to graduate than those entering in their freshman year. This is thus a potential area of successful growth. The College of Agriculture and Natural Resources has several such programs with China that have operated successfully for a number of years and serve as a model to those units wishing to move in this direction.

III.B.2: International Graduate Student Enrollment

International graduate student enrollment presents a different set of challenges and opportunities. The University has a long tradition of strong and successful international recruitment into our doctoral programs. Approximately 50% of the 22,000 graduate applications received annually are international; about 63% of those are from China and India. International doctoral students have a comparatively high ten-year graduation rate of 65.5% and a comparatively low time-to-degree rate of 5.78 years. They represent approximately 36% of doctoral degrees awarded and they enjoy considerable success in our internal fellowship competitions. Since the decennial review, the University has either expanded or created several programs for international graduate students, including the English Editing for International Graduate Students Program, airport pick-up service for new international students, and an annual Thanksgiving Dinner for international graduate students and their families, hosting about 600 guests.

We seek to continue to improve the quality of the overall graduate applicant pool and both the quality and quantity of professional masters degree applications and enrollments. English language proficiency is an ongoing challenge. This is addressed through testing and instructional options that maximize flexibility while maintaining rigorous standards. We have also begun working at an institutional level to create opportunities for U.S. graduate students to study, conduct research, and present research abroad. New initiatives include International Conference Student Support Awards and Graduate Student International Research Fellowships.

III.B.3: Joint Graduate Programs

A new direction to enhance our global reach has been to establish more formal partnerships with overseas institutions in areas of mutual benefit, through either joint or dual doctoral programs. Recent examples include a joint Ph.D. program in Astronomy with the Pontificia Universidad Catolica de Chile, a dual Ph.D. program in Mechanical Engineering with Pusan National University in South Korea, a dual Ph.D. program in Chemistry with East China Normal University in Shanghai, China, and a dual master’s degree program in Transcultural Counseling in collaboration with the University of Malta. Some units are developing specialized masters programs for specific cohorts, such as the Master of Professional Studies in Justice Leadership, offered to the People’s Police Academy in Vietnam. This program was developed at the request of the U.S. Department of State, recognizing the national prominence of our program in Criminal Justice. These latter two programs, in Malta and in Vietnam, were accompanied by successful Substantive Change requests to the Middle States Higher Education Commission. It is our expectation that the development of new formal, strategic international partnerships will continue to grow in the coming years.
III.B.4: Creation of the Institute for International Programs

To provide a stronger framework for moving the global agenda forward, the University’s Office of International Programs was reorganized in 2009 to become the Institute for International Programs (IIP). International student admissions functions were moved to the Office of Undergraduate Admissions and to the Graduate School. The Maryland English Institute, responsible for testing and training in English for foreign students, was moved to the College of Education. In Spring 2011, a new interim director of IIP was appointed, with a new title of both Associate Provost and Associate Vice President, and who reports jointly to the Provost and the President. A new director will be arriving on campus in August 2012. The new director’s agenda will be to continue to expand and provide coherence to the University’s many international activities and to increase their visibility.

III.C: The Physical Environment of the Campus [Standard 3]

As indicated in Section II, there is an ongoing effort to both reduce the backlog of deferred maintenance on the physical infrastructure of the campus, and to develop new construction and substantial renovations to support the educational enterprise. The University has had recent success in securing Capital Improvement Funds from the state to address infrastructure needs. Planning for new buildings as well as renovations to existing facilities is strongly influenced by the priorities established in the Strategic Plan, with the goal of supporting the academic and research mission of the University.

III.C.1: Major Campus Construction and Renovation

Highlights of major projects that are either underway or are planned to begin within the next five years are identified below.

- An $80M Physical Sciences Complex, for which construction is scheduled to be complete in FY 2014, will provide new office and high quality laboratory space for the departments of Physics and Astronomy, the Institute for Physical Sciences, and the Joint Quantum Institute.
- The Edward Saint John Learning and Teaching Center, with projected cost of $45M, will provide new state-of-the-art classroom facilities in the center of campus. The building is expected to accommodate approximately 2000 students in a mix of large lecture halls and interactive classrooms. Construction is scheduled to begin in FY 2015, to be available for instruction in Fall 2016.
- A remote storage facility for library materials will free up space within McKeldin Library for substantially more student traffic and to create additional, well supported, learning spaces;
- A new Bioengineering building will support the University’s accelerated growth in both research and instruction in this rapidly growing interdisciplinary area.
- A new residence facility, Oakland Hall, opened in August 2011 for 709 residents. A 231,700 sq. ft. building, Oakland Hall has eight residential floors and seminar space for the Office of Resident Life’s academic enrichment center. The building recently received LEED Gold certification.
- Construction is scheduled to begin in June 2012 for another new residence facility, Prince Frederick Hall, which will accommodate 462 undergraduate students on six residential floors, and two new living-learning academic programs.
III.C.2: East Campus Development

The community directly surrounding the College Park Campus was identified in the Strategic Plan as a “threat” to advancing the University’s goals. The city of College Park itself is a wonderful community, but economic development of the region has been stagnant for decades, with limited amenities that are attractive to the academic community. New development would greatly benefit both the local community and the university. For many years there has been a plan to develop the section of University property to the east of the major closest North-South artery, referred to as East Campus. This development project would bring a more urban, pedestrian-oriented town center to College Park with a district of retail, residential, much-needed affordable graduate housing, hotel, and entertainment uses. The value to the University is to create a district that is more attractive to faculty and students at a major research university, and provide affordable housing in the region, particularly for graduate students. After a failed start due to the economic downturn, in 2010 the University successfully identified a highly respected development firm to work with. The first phase of development will include a hotel/conference facility, graduate student housing, and retail amenities to the northernmost section adjacent to the campus.

III.C.3: The University of Maryland Research Park: M Square

The University has created substantial opportunities for partnerships with federal agencies and private companies just a mile away, through the development of the University of Maryland Research Park. “M Square” (http://www.msquare.umd.edu) includes both UMCP initiatives and those in a public-private partnership between the University and the Corporate Office Properties Trust. It offers flexible space locations for startup companies and build-to-suit options for larger technology clients. When fully built out, M Square will encompass two million square feet and employ an estimated 6,500 people. It is quickly becoming a major center for climate and environmental science; current occupants include the Earth System Science Interdisciplinary Center, the National Oceanic and Atmospheric Association (NOAA), the Joint Global Change Research Institute, and NOAA’s Center for Weather and Climate Prediction. This focus on the environment in M Square complements new educational opportunities including a new Bachelor of Science degree program in Atmospheric and Oceanic Sciences (as of Fall 2011), and a new Council on the Environment that will provide a network for interdisciplinary research through collaboration among the many activities in environmental science across campus and in M Square.

Additional occupants that have developed close research relationships with the University include the Federal Department of Agriculture’s (FDA) Center for Food Safety and Applied Nutrition, which has led to the UMD/FDA Joint Institute for Food Safety and Applied Nutrition; the National Foreign Language Center and the Center for the Advanced Study of Language, which have a partnership with our programs in Second Language Acquisition and languages; and the Intelligence Advanced Research Projects Activity (I-ARPA). Research collaborations with these groups are expected to grow in coming years as the new tenants become fully established.

III.D: “MPower Maryland”: Partnering with the University of Maryland, Baltimore [Standards 2, 3, 4, 11, and 13]

In Spring 2011, the Maryland State Legislature directed the University System of Maryland’s Board of Regents to consider the pros and cons of merging the two campuses, in College Park and Baltimore, into a single University of Maryland. In response, the Board oversaw a comprehensive study that involved UMCP and UMB community members and representatives from all USM institutions. The Board of Regents concluded that the risks and disadvantages of complete merger of the two institutions
outweighed the advantages, and instead embraced a more limited but structured collaboration that has resulted in a framework entitled “MPower” (http://mpowermaryland.com). Under this new working relationship, the two campuses will combine their highly complementary resources and expertise to provide new opportunities in education, research, and innovation and entrepreneurship to the State of Maryland. A broad implementation strategy was approved by the Regents in March 2012, which includes the following initiatives:

- A new academic vision for Montgomery County, centered at the Universities at Shady Grove (as described above).
- A Collaborative School of Public Health, in which accredited Master of Public Health degrees on both campuses would be combined into a single program. This relationship builds upon the existing, fully-accredited School of Public Health at UMCP and the department of epidemiology and public health within UMB’s School of Medicine which hosts an accredited MPH program. Accreditation of the collaborative school is expected to be granted upon receipt of a letter of intent to form the school and will be reviewed formally by the accrediting body, the Council on Education for Public Health, in two years.
- The formation of a new joint organization, UM Ventures, to promote technology transfer and commercialization through collaborative leadership and a unified set of services between the two institutions.
- Enhancements to the existing collaboration between the two campuses in Bioengineering and the health sciences, particularly pharmacy, including opportunities for joint faculty appointments, collaborative research, and joint degree programs.
- Establishment of a new Center for Biomedical Informatics and Imaging, jointly developed between UMCP’s Institute for Advanced Computer Studies and UMB’s School of Medicine.

Additional opportunities will include joint educational programs, a seed grant program in basic and translational research, and joint library access. Detailed planning in all of these activities has begun. All parties involved recognize that new financial resources will be required to execute this plan. The collaboration will be led by a steering committee, jointly appointed by and reporting to the presidents of the two institutions, who will then report to the University System Chancellor. The steering committee currently consists of the chief academic officers of each institution and the chiefs of staff of the two presidents. A timeline for implementation of the planned activities awaits the commitment of the resources required for their execution.

Summary

By 2013, the Strategic Plan will be in its fifth year. The period during the plan’s first five years has been one of significant budget stringency as well as one with significant changes in leadership. It is, in fact, a remarkable testament to the quality of the planning process that the University has continued to annually review its progress against the benchmarks established by the Strategic Plan, and succeeded in accomplishing the goals outlined within. As with the Middle States accreditation process, it is typical to carry out a periodic review of the 10-year Strategic Plan after approximately five years, to review accomplishments, and identify new challenges and opportunities.