Focusing Our Resources for Results:
Collaborative Initiatives to Advance the University's Strategic Plan

Background and Overview
Strategic planning is an important component of UMBC's culture. This focus on planning reflects the fundamental optimism and entrepreneurial spirit of a young campus that has made rapid and dramatic progress toward its goals. Through planning and implementation, we have identified numerous challenges, proposed approaches for addressing these challenges, and significantly advanced UMBC's educational and research programs, campus life and contributions to the State and nation.

The foundational planning document, *Strategic Framework for 2016*, *(http://www.umbc.edu/provost/PDFs/frameworkfinal.pdf)* identifies two over-arching goals and proposes approximately 35 sub-goals for accomplishing these over-arching goals. The two goals are:

Provide a distinctive undergraduate experience
Continue to build research and graduate education.

The supporting sub-goals reflect the campus' broad desire to enhance educational and research programs, co-curricular and extra-curricular opportunities for students, working conditions and opportunities for staff and faculty, and overall quality of life on campus and in the region. Some of the specific sub-goals include: increase student retention; increase graduate student enrollment; increase faculty hiring; increase staff hiring; develop cross-disciplinary centers in graduate education and research; enhance applied learning experiences; create applied professional programs; examine the role of athletics in enhancing student life; position UMBC as a cultural, artistic and intellectual destination; implement PeopleSoft to enhance business processes; develop bwtech@UMBC as a center for business incubation and Industry-University-Government collaboration; and develop frequent, convenient transit access to campus.

In addition to the *Strategic Framework for 2016,* the academic Deans led further effects to create plans endorsed by "clusters" of department and units (http://www.umbc.edu/provost/planning/Academic_Cluster_Recommendations.pdf). These plans were reviewed by a steering committee consisting of the Vice-Presidents, Deans, and Faculty Senate representatives and feedback was provided to the groups that formulated the cluster plans regarding the advisability and feasibility of recommended initiatives (see the referenced link for the feedback from the steering committee).

Since the creation of our strategic plan and the referenced documents, UMBC has made substantial progress on our over-arching goals, the specific sub-goals represented in the Strategic Plan and a select set of the initiatives proposed in the academic cluster plans. While much work remains to be done, increases in student retention, graduate enrollments, applied learning experiences, applied professional programs, research facilities and administrative staff, and many, many other areas, reflect the impact of our planning processes.

The Current Context
A series of national financial events, beginning in the fall of 2008, dramatically re-shaped the nation's economy and the overall fiscal climate for higher education. These changes include: dramatic reductions in personal and institutional wealth due to decreases in stock and real estate valuations; widespread unavailability of credit for business and personal investment; and substantial and sustained increases in unemployment. While the federal government has pursued extraordinarily aggressive monetary and fiscal policies, these approaches have not yet reversed

the economic situation. In Maryland, sharply declining state revenues led to state budget cuts which in turn led to budget cuts for the University System of Maryland and UMBC. Recognizing the significance of these events, the President's Council and the Council of Vice-Presidents and Deans undertook a number of steps designed to respond to the new economic landscape. The motivation underlying all of these actions is our strong belief that strategic planning and priority setting become more, not less, important when resources are significantly limited.

These steps included the review and revision of our principles and approaches for cost containment, and the construction of planning scenarios for impending budget reductions. In addition, the Council of Vice-Presidents and Deans, in close consultation with the President, conducted a review of our strategic plan and its goals/sub-goals.

As part of its review, the Council of Vice-Presidents and Deans considered two central questions. The first question concerned whether UMBC could maintain its over-arching goals of continuing to provide a distinctive undergraduate experience and building research and graduate education. The second question concerned which of the strategic plan's sub-goals and/or specific initiatives from the cluster plans should be pursued in the current period. In this context, the Council attempted to determine which of many potential priorities and initiatives would be most critical to advancing the University's goals in a time of economic challenges and constrained resources.

Proposals of the Council of Vice-Presidents and Deans

First, and most importantly, the Council of Vice-Presidents and Deans supports our dual goals of providing a distinctive undergraduate experience and continuing to build research and graduate education. While the Council recognizes that pursuing these dual goals creates certain financial challenges, we believe that these goals position UMBC strongly within the landscape of Maryland higher education, re-affirming our role as a research university and an Honors University.

Second, the Council recommends that three over-arching themes be considered as we pursue specific priorities and initiatives. These themes reflect feedback received from the UMBC community in multiple forums, as well as the strong sentiments of the Council. The first theme is to increase faculty hiring and the second theme is to increase staff hiring. These themes reflect our recognition that there are numerous departments/units on campus in which staffing is not yet sufficient. The third theme is to maintain and increase our historical commitment to diversity. UMBC has taken a national leadership role as a welcoming, diverse community, and our intent is to build on this legacy as we pursue future academic and programmatic initiatives. This intention is reflected in our recently-completed *Diversity Plan.*

Third, the Council recommends that four specific priorities be pursued in the coming two to four years. For each priority, we propose several initiatives designed to advance the priority. The priorities are:

- Student Retention and Graduation Rates
- Infrastructure for Research and Creative Activity
- Environment and Sustainability (Academic Programs and Practices)
- Campus Safety and Security

The first two priorities represent specific sub-goals from the strategic plan and initiatives supporting them are mentioned in multiple cluster plans. The Environment and Sustainability priority is listed in the cluster plans of the Natural and Mathematical Sciences, the Social Sciences and Engineering and Information Technology and is related to multiple sub-goals of the strategic plan. The Campus Safety and Security priority reflects goals and objectives represented in multiple sub-goals of the strategic plan, as well as more specific issues that have emerged since the formulation of the strategic plan.

For each priority, a sub-committee of the Vice-Presidents and Deans was convened to describe the priority, clarify the rationale for pursuing the priority, describe ongoing initiatives in the priority area, list ongoing initiatives that should be protected given budget challenges, determine new or

expanded initiatives in the priority area, specify the budgetary support necessary to protect current initiatives and build new initiatives and propose metrics for evaluating the initiatives. As will be evident, the specific initiatives for the four priority areas reflect many of the initiatives proposed in the cluster plans. The reports of these sub-committees are presented below.

Consultative Process

To solicit advice and guidance regarding our continuing commitment to our strategic goals, the three over-arching themes, and the four priorities for the next two to four years, an extensive series of discussions was undertaken across the campus in the winter, spring and summer of 2009. Four joint meetings of the Vice-Presidents and Deans and the Faculty Senate's Executive and Academic Planning and Budget Committees were held. The Provost and the Chairs of the four priority sub-committees met with the Non-exempt Staff Senate, the Professional Staff Senate, and the Academic Affairs Directors. In addition, Vice-Presidents and Deans were asked to share information and gather counsel about the priorities within their divisions/colleges. Invitations have also been extended to the members of the Student Government and the Graduate Student Association to meet and discuss the sub-committee reports in the fall.

The referenced discussions were robust, collegial and wide-ranging, and, as a result of these discussions, substantial changes were made in the sub-committee reports. Similarly, the Vice-Presidents and Deans attempted, as much as the current budget stringency permitted, to incorporate the priorities and their associated initiatives in the FY10 budget planning. (One issue that arose repeatedly in campus discussions concerned the meaning of the term "priority" and the implications of identifying priorities for overall resource allocations. This issue is addressed in Appendix 1 of the current document.)

The current document has been created as part of this consultative process to facilitate discussion at this year's University retreat. The reports of the sub-committee are presented in the following sections.

Student Retention and Graduation Rates Sub-Committee Report

Diane Lee, Chair
John Jeffries
Philip Rous
Janet Rutledge
Greg Simmons
Jack Suess

Guiding principles
The subcommittee has been guided by the understanding that programs and interventions should:

- be based in best practices that are informed by documented success at UMBC and nationally,
- reach large numbers of students, ideally early in their academic careers or at critical points in their chosen majors,
- produce outcomes that are measureable in terms of students success, retention and graduation (including time to degree),
- have the potential to be transformative in individual success and in improving retention rates for all students, but especially for first-time freshmen that may or may not be affiliated with a specialty scholar program,
- be effective across departments, colleges and divisions and be leveraged with other solutions/resources and
- be affordable and sustainable.

Basic description of the priority
We are committed to student success and to continued improvement in retention and four-year and six-year graduation rates.

Why the initiative is critical to UMBC now
Degree attainment is a central goal for our students (and their families) and a correlate of multiple important educational outcomes.

- UMBC's reputation is affected by both published graduation rates and community impressions regarding student success.
- Student retention builds enrollment.
- Student retention contributes to revenue.
- It is less costly to retain students than to recruit new students.
- Providing support for student success is the right thing to do.

Summary of status of current initiatives in this area
Current retention initiatives are designed to:

- help students in transition to UMBC (e.g., undergraduate First-Year Experiences (FYEs), graduate Summer Success Institute),

- provide academic stimulation and support (e.g., undergraduate research, applied learning experiences, Learning Resources Center (LRC), academic policy administration) and

- support pedagogical reform for large introductory classes (e.g., CHEM 101, PSYC 100).

Expansion initiatives and current initiatives to protect

Expansion initiatives

- **Create CNMS Active Science Teaching and Learning Environment (CASTLE).** Designing a space for discovery teaching and active learning in foundational math, physics, and biology is essential to undergraduate student success. The goal is to accommodate 90-99 students, with tables for nine to work in cooperative learning groups of three. The room will need 10 to 11 round tables, chairs, white boards, 30 to 33 networked computers, two LCD projectors, two screens, a printer, a fully equipped instructor station, an office and a supply closet. This active learning environment is patterned after the highly successful CHEM 101 Discovery Center and expanded using the SCALE-UP model which has been adopted nationally by over 40 universities. Based on analysis of the success of UMBC's Discovery Center and SCALE-UP models, we expect that pass rates can be raised to 80-85%, more than 20% higher than current pass rates. (Pass rates are 14.4% higher in CHEM 101 with Discovery Learning, even as academic standards have risen).

- **Convert funding for part-timers to funding for full-time lecture positions to enhance retention.** Reducing reliance on part-timers and moving toward hiring new lecturers and/or converting the best part-timers to lecturers on multi-year contracts with specific ties to retention efforts will provide students and programs additional full-time faculty. This will offer greater stability and ease of planning course offerings while simultaneously allowing for the expansion of retention efforts. Specific retention efforts include advising, linking with an Introduction to an Honors University (IHU) class, teaching in Collegiate Summer Institute (CSI) and/or a First Year Seminar (FYS), mentoring in a Living Learning Community (LLC), encouraging students to engage in Applied Learning Experiences (ALE) and integrating applied learning into course curricula. We propose that the Departments of English and Mathematics be the first to make these conversions in the introductory writing courses and calculus/pre-calculus courses, recognizing that writing and mathematics skills are foundations for student success.

- **Create a mandatory First Year Experience for General Scholars (unaffiliated merit scholars).** Improving the retention and graduation rates of students receiving scholarship money alone (69.6% for the 2001 cohort) to be more like the rates of specialty scholars (87.3% for the 2001 cohort) is highly recommended. To reach this goal, participation in an existing or newly certified FYE will be highly encouraged this year, and in fall 2010 General Scholars will be required to participate in an FYE. Priority will be given to expanding IHUs and establishing an LLC for General Scholars in STEM fields. Offering more FYSs in summer session and actively recruiting more emeritus faculty and other instructors will receive emphasis as well.

- **Implement a Graduate School matriculation fee to support graduate retention efforts that are currently grant funded.** The plan is to convert the orientation and graduation fees to a $200 matriculation fee. The development of base funds would apply to retention efforts including orientation, Summer Success Institute, Graduate Student Success Seminars, Professors in Training, Dissertation House, thesis/dissertation coaching office hours and the Ph.D. Candidacy Reception.

Current initiatives to protect

- Learning Resources Center (tutoring, LRC 101A, Early Alert, placement testing)

- First-Year Experiences (FYS, LLC, CSI, IHU, other approved experiences)

- Undergraduate research (Undergraduate Research Awards, Undergraduate Research and Creative Achievement Day, UMBC Review)

- Academic policy administration (e.g., course repeat policy)

- Applied Learning Experiences (undergraduate research, internship, cooperative education, study abroad, performance, service-learning, and student leadership positions).

Other issues

- Advising, and the need for additional professional advisors particularly in high volume departments, is an important retention issue with direct implications for faculty workload.

- Closing the achievement gap among transfer students, and African American male transfer students in particular, who are at greatest risk, through the expansion of IHUs and supplemental instruction.

- Create and/or develop capacity so that we can offer First-Year Experiences for all unaffiliated students.

- Expand the number of applied learning experiences for undergraduates at all levels (freshmen through seniors).

- Diversity of faculty.

Cost estimates or other resource requirements for new initiatives and/or for expanding extant initiatives

- **CASTLE.** Costs related to creating a 2,300-square-foot studio classroom that can accommodate 90 to 99 students at a time with adequate instructor space will be determined once space is identified. Equipment and furniture will need to be purchased. Existing personnel supporting existing traditional-format classes will be assigned to CASTLE. New personnel to be hired include:
  --one full-time Lecturer/Instructor @ $50,000 plus $15,000 in benefits,
  --one Graduate Teaching Assistant @ $30,000 including benefits and
  --six undergraduate learning assistants @ $12,000
  --two full-time Lecturers added by part-time conversions (see below for cost estimate).

  Operating at full capacity the CASTLE will serve approximately 800 to 900 students, the majority of whom will be freshmen or new transfers.

- **Conversion of part-timer funding to funding for full-time lecturers.** Eight part-time sections of three-credit courses normally cost about $24,000 in CAHSS and $28,000 in CNMS. To fund a CAHSS lecturer would require $35,000-$40,000 in salary plus another $12,000 in benefits. In CNMS, a lecturer salary is $50,000 plus $13,000 benefits (if the benefit pool does not cover the costs.) In CNMS the conversion cost is $35,000 including benefits. In CAHSS the conversion cost is minimally $11,000 and more likely $28,000 each.

- **A Mandatory First Year Experience (FYE) for General Scholars** (unaffiliated merit scholars).

--Coordinator @ $45,000 plus $13,500 benefits
--FYE sections focused on General Scholars
Two FYS @ $5,500 per section to serve 40 students
Two summer FYS (no additional cost) for up to 40 General Scholars, before or after their first year
One LLC @ $5,500 to serve 30 students, focused on STEM General Scholars
Current LLC (no additional cost) for 20 undeclared General Scholars
Ten new IHUs @ $2,700 each, serving 25 General Scholars each

Total cost: $102,000 (Raising the current $100 matriculation fee, formerly the graduation/diploma fee, to $150 will create approximately $150,000 in new funds to be used to mandate the FYE for General Scholars; the remainder should support slow growth in FYS, LLCs, and ALEs.)

Total General Scholars served: 380

- **A Graduate School matriculation fee** of $200 should yield about $70,000 more than the current orientation and graduation fees.

Core metrics for evaluating the initiatives
Dashboard indicators include:

- Four-year and six-year graduation rates, disaggregated as appropriate (e.g., affiliated and unaffiliated scholars; freshmen and transfer students, participants/non-participants in FYE, research, CASTLE, etc.) and measured over time.

- Pass rates for courses, disaggregated as appropriate (e.g., participants/non-participants in CASTLE, IHU, etc.) over time.

- Graduate program completion rates for master's, certificate, and doctoral students.

- Implementation of matriculation fee proposals, both graduate and undergraduate, to support retention efforts.

Research, Scholarship and Creative Activity
Infrastructure Sub-Committee Report

Geoff Summers, Chair
Kevin Eckert
Philip Rous
Jack Seuss
Greg Simmons

Basic description of the priority
Continue to build research and graduate education.
"Pursue growth in Ph.D.s granted, faculty awards, publications, scholarly activities, creative achievements, and research grants and contracts in order to strengthen the culture of UMBC as a research university and continue to rank in a prestigious cohort of research universities."
*-- From the **Strategic Framework for 2016** document*

The purpose of this priority is to enhance UMBC's reputation as a national research university by facilitating research, scholarship and creative activity. As part of this process we will strive to move UMBC from the Carnegie classification Research University/High Research Activity to the Very High Research Activity category. This is a multi-faceted challenge involving a total of four aggregate variables that Carnegie uses based on data collected and categorized by NSF including:

1) Science and Engineering R&D expenditures.
2) Non-Science and Engineering R&D expenditures.
3) Science and Engineering Research Staff (non-faculty doctorates).
4) Doctorates conferred in i) Humanities, ii) Social Sciences, iii) STEM fields, iv) Professional areas.
5) Science and Engineering R&D expenditures per FTE Faculty, Non-Science and Engineering Expenditures per FTE Faculty, Science and Engineering Research Staff per FTE Faculty.

To enhance the University's status as a research university and to facilitate further progress on these and other metrics, and to help the University move toward attaining the Very High Research Activity classification, the sub-committee recommends a series of initiatives to enhance the infrastructure supporting research and scholarly activity at UMBC. This infrastructure includes administrative support, facilities and equipment and selected mechanisms for directly enhancing research and creative activity. While these immediate initiatives may continue for some time, they are not the only research initiatives that UMBC will likely pursue in the medium-to-long run.

Why the initiative is critical to UMBC now

- UMBC's distinctive status as a leading research institution in the USM system has important effects on our State allocation and access to other resources.

- Attaining Very High Research Activity status in the Carnegie classification will substantially enhance the national prestige and reputation of UMBC with corresponding effects on:

  -- our ability to hire and retain top faculty working at the forefront of their field, enhancing the quality of the academic programs,
  -- our ability to recruit high quality undergraduate and graduate students.

Summary of status of current initiatives in this area

- New Ph.D. programs in Geography and Environmental Systems, Gerontology, Human Centered Computing and Language, Literacy & Culture are beginning to grow into strong national programs that complement existing doctoral programs.

- Core facilities in High-Performance Computing, Proteomics/Nucleic Acid Research and Microscopy continue to be supported. An atomic force microscope for both the life and physical sciences has recently been purchased.

- An NIH proposal has been recently submitted to renovate and expand the animal facility in Schwartz Hall and to enclose the balcony to add more research space.

- Undergraduate Research Assistant Support pilot program launched with $20K from the Vice President of Research (VPR) and $16K from Provost's Office.

- The Dresher Center is now facilitating research in the Humanities, with support from the VPR and the Dean of CAHSS.

- The Maryland Institute for Public Affairs Research (MIPAR) is now a University Center reporting to the Dean of CAHSS with an expanded role in supporting research in CAHSS, especially in the Social Sciences.

- OSP is now fully staffed at the level recommended by the Research Council.

- Grants Accounting infrastructure is being revamped.

Expansion initiatives and current initiatives to protect

Current initiatives to protect

- To the greatest extent possible, maintain the number of graduate assistantships in all Ph.D. programs and increase GAs in targeted programs such as Geography and Environmental Systems and Physics.

- Maintain faculty start-up funds to ensure recruitment of high-quality faculty.

- Maintain research support for tenure-track faculty to foster productivity and retention.

- Maintain the size of the tenure-track faculty, especially in areas aligned with new national priorities, e.g., Life Sciences, Health, Environment, Energy and Policy.

Expansion initiatives

- Establish a Research Initiative Venture Fund (i.e., seed funds) to give the VPR the ability to support research initiatives across campus (Arts, Engineering and Information Technology, Humanities, Natural and Mathematical Sciences, Social Sciences). One purpose of this fund would be to provide support for proposal submission through course buyouts, assistance in the collection of pilot data, proposal preparation assistance, summer stipends, etc. across all disciplines. To ensure that the fund renews itself and grows, a portion of the fund should be targeted to support proposals that generate full recovery of Facilities & Administrative (F&A) costs. It is acknowledged, however, that in some instances these funds will not be renewable in the sense that they will be used to support scholarly activities that may not in general

generate future F&A return. The Vice President for Research will report regularly on how these funds were allocated.

- Enhance the administrative support infrastructure of existing Centers - e.g., Center for Aging Studies (CAS), Center for Advanced Sensor Technology (CAST), Center for Urban Environmental Research and Education (CUERE), and MIPAR - that are positioned to attract significant external funding and that have the best opportunity of leveraging investment dollars. This support will be allocated contingent on the submission of proposals that as far as possible will recover the full allowable F & A. Once external funding grows sufficiently, these operations would be sustainable by returned F & A. Funds could then be allocated to the support of other initiatives.

- Add technical support in the High-Performance Computing Core Facility (HPCF) to enhance faculty use of the facility, e.g. add GA or post doc support.

- Purchase additional research equipment for the Porter Microscope Facility, such as upgrades to the transmission electron microscope, a microtone and sample trimmer. Investments could also be made to enhance equipment in other facilities or to provide NSF MRI matching funds when required.

- Begin the process of identifying one or two new centers (leveraging State or federal funding), e.g. Life Sciences (NIH, NSF); Environmental Science, Policy and Sustainability, (NASA, NOAA). The target centers would be determined in consultation with the Deans and based on faculty interest and support.

Cost estimates or other resource requirements for new initiatives and/or for expanding extant initiatives

- Establish a research initiative venture fund. $200K (to be phased in over 2 years).

- CUERE. $120K for an Assistant Director and Accounting Associate. (possibly could be shared with CAST) (year 1).*

- GA/post doc support for HPCF(year 2); $60K

.

- $60K for a pre- and post-grant support position focusing on budget preparation and post-award budget management in another targeted center (year 2).*

- VPR equipment support fund (year 3) $50K.

* These are seed funds. Once the external funding grows sufficiently, operations would be expected to be supported by returned F&A and funds would be re-allocated to other centers or faculty projects.

New Funding Annual Totals:
(cumulative total of funding in parentheses)

Year 1 $220K
Year 2 $220K ($440K)
Year 3 $50K ($490K)

Core metrics for evaluating the initiatives

- Increase UMBC total annual awards from $88M to >$100M/year and federal awards from$50M to $65M within four years.
- Increase the funding from grant/contract proposals and renewals for CUERE, CAS, CAST and MIPAR by 50 percent within four years.
- Increase the production of journal articles/books/archival records by five percent per year for the next three years.
- Increase the number of professional body fellowships in STEM areas by three per year for the next three years.
- Increase prestigious fellowships in CAHSS by two per year for the next three years.
- Increase the annual number of Ph.D.s produced to 115 in five years.

Other issues to consider

- Diversification of external funding sources. (Currently close to 50 percent of federal funding comes from NASA.)
- Review and enhance the Library budget, including the serials budgets.
- Revisit the Academic Cluster Plans to evaluate progress (what worked and what didn't).
- Focus on enhancing corporate partnerships.
- Consider implementation of another Humanities-based Ph.D. program.
- Maintain research computing facilities and support.
- Review business models for University, College, and Departmental Centers and modify as needed.
- Designate funds for ongoing maintenance contracts and bridge support for faculty.
- Start planning for a future interdisciplinary Life Sciences Building, including a replacement animal facility.
- Start planning for renovation of Fine Arts Building after the Performing Arts and Humanities Facility is opened.
- Focus the role of STEM education on campus, especially research.

Supporting narrative

The primary strategic goal of the "research infrastructure" initiative is to promote UMBC's reputation as a research university, while moving UMBC towards the "Very High Research Activity" category of the Carnegie classification. As noted above this is essential for the future of the University, attracting and retaining top faculty, increasing the level of the State appropriation, and attracting first-rate graduate and undergraduate students to UMBC, especially from out of state. It should be emphasized that all disciplines across campus benefit when external funding grows and it is the STEM fields that generally have the best chance of attracting significant funding. Nevertheless, it is important that faculty members in the non-STEM areas continue to

increase the level of external support for their work, not only because of the additional flexibility such funding provides them, but also because it enhances their academic reputation and that of UMBC. MIPAR has already shown how this can be done in the Social Sciences.

It is recognized that the overall scholarly prestige of UMBC also depends on other factors that are not so easily quantified as the level of external funding, such as the quality of the publications produced by the faculty, especially books, and the critical acclaim of the artistic performances. UMBC is already recognized for the per capita number of prestigious fellowships awarded to faculty, especially in the Humanities.

After climbing rapidly in the late 1990s as several large centers were established, research expenditures on campus have been flat in actual dollars for the past seven to eight years, reflecting the fact that funded scholarly activity of many tenure-track faculty has not increased significantly for many years. This is a result partly of stagnation in the number of tenure-track faculty in several key areas and partly due to inadequate investment in infrastructure to support research and scholarly activity generally. Currently the ability of the VPR's office to enhance research activity on campus and hence to promote the strategic goal is hindered by the lack of discretionary (or initiative) funds while the demands for such funds across all disciplines continues to increase. Of the more than $6M in Designated Research Initiative Funds (DRIF) generated annually all but ~$300K is allocated across campus by formula or for historical reasons, not always clearly identified with research infrastructure. Of the ~$300K remaining, something close to $160K is currently used to support salaries and operations in the VPR's office, e.g. Office of Sponsored Programs (OSP), Office of Technology Development (OTD) and the Human and Animal Research Protections Office (HARPO). As the total F&A climbs above the FY07 level, It is imperative that the increase is focused more directly on enhancing research infrastructure by adding to the Research Initiative Venture Fund.

Another priority is to support existing activities on campus that have the best chance of increased external funding, especially from federal sources. This would also be expected to lead to an increase in Ph.D. production. The recently enacted Federal Stimulus Bill includes large funding increases for NIH, NSF, DOE and agencies supporting the environment. Apart from the academic departments, UMBC has at least four Centers that can take advantage of these opportunities: CAS, CAST , CUERE, and MIPAR. Their immediate needs are similar. All need additional administrative support in order to submit more proposals and for post award operations.

UMBC has recently invested substantial resources in several core facilities. A priority now is to maximize faculty access to and use of these facilities. The focus currently is to assist faculty, especially junior faculty, in using the High-Performance Computing Facility. GA/post doc assistance in the Center for Interdisciplinary Research and Consulting (CIRC) is needed to help faculty and doctoral students develop parallel computing algorithms. Also, with relatively small additional investments both the Proteomics Facility and the Porter Microscope Facility would become first-rate facilities.

Environment and Sustainability Sub-Committee Report

Lynne Schaefer, Chair
Geoff Summers
Warren DeVries
John Jeffries

Basic description of the priority

- Raise UMBC's profile nationally in areas related to the environment, including atmospheric and other geosciences, water and groundwater, computational modeling and public policy through an integrated campus-wide approach involving academic and non-academic departments.

- Engage the campus fully in efforts to move toward climate neutrality.

Why the initiative is critical to UMBC now

- Builds on existing strengths and plans.

- Competitiveness in the global economy – demand for those with expertise in these areas will continue to grow.

- Engages the entire campus – students, faculty and staff.

- Consistent with State and national agenda.

Summary of status of current initiatives in this area

- Ph.D./M.S. in Geography and Environmental Systems recently initiated.

- Environmental Council – faculty with expertise and interest in environmental areas have begun to meet and document their efforts. Many departments and programs include an environmental emphasis:
  Biochemistry and Molecular Biology
  Biological Sciences
  Biotechnology
  Civil and Environmental Engineering
  Economics
  Environmental Statistics
  Geography and Environmental Systems
  Geographic Information Systems
  Human Context of Science and Technology
  Interdisciplinary Studies
  Marine-Estuarine Environmental Science
  Philosophy
  Physics
  Public Policy.

- National Teach-In on Global Warming on February 5, 2009.

- Climate Change Task Force underway – Climate Action Plan due Sept. 15, 2009.

- www.umbc.edu/sustainability – new web-page brought up in Sept. 2008.

- LEED certification for Performing Arts and Humanities Facility - planning and design underway to achieve this designation, and additional funds added to project budget to pay for it.

- 19.5% of UMBC electricity purchased from renewable sources, beginning in May 2008.

- Third year participating in Recyclemania, a national collegiate recycling competition.

Expansion initiatives and current initiatives to protect

Expansion initiatives

- Proposed new BS in Engineering concentration in Environmental and Water Resource Engineering. The Civil and Environmental Engineering (CEE) department and COEIT are investigating offering a B.S. in Engineering with an emphasis in Environmental Engineering, with a projected 100 to 125 new students in five years. Three scenarios are being investigated with staffing ranging from two Lecturers and one FTE of administrative/technical support as the base, to alternatives that range from no growth of the current 2.3 tenured faculty to two additional tenure track faculty with the associated start- up. The goal is an ABET-accredited BS program to complement the well-funded master's and Ph.D. programs in CEE. This supports the Environment and Sustainability initiative and it will directly tie into the campus's response to national and statewide climate change and energy initiatives. Environmental engineers, in addition to providing safe water and clean air, address many of the issues associated with climate change, the need for clean sources of energy and sustainable development.

- Incorporate environment and sustainability principles into curriculum and research focus across all disciplines (e.g., sustainable design in Engineering)

.

- Shift emphasis in senior Engineering capstone projects to environment and sustainability as appropriate.

- Build stronger emphasis on environmental and science policy.

- Focus some portion of the undergraduate research funding to specifically target environment and sustainability projects.

- Explore developing additional academic learning communities in this area.

- Establish external Environment and Sustainability Advisory Board to engage alumni and business leaders in UMBC efforts. Outreach to K-12 partners will also support greater visibility of UMBC's programs.

- Enter into an energy performance contract to finance and complete various identified energy conservation initiatives.

- Identify and pursue strategies to improve public transportation and car/van pool opportunities for students, faculty and staff.

- Through the incubator and research park, attract new businesses with a focus on environment and sustainability.

Current initiatives to protect

- Maintain and expand as possible support for the new Ph.D./M.S. in Geography and Environmental Systems.

- For the proposed new BS in Engineering concentration in Environmental and Water Resource Engineering, the projected cumulative investment over the first five years ranges from to $1.45M to $2.65M. One-time start-up cost estimates range from $50K - $525K. We believe offices and laboratory space are available in TRC, but will need a $100k renovation investment. Sustainability in Year 5 with 100 to 125 new students will require an addition to base ranging from $300K to $600K. CEE and COEIT are prepared to make phased investments of an open CEE tenure-track faculty position ($100K salary and benefits), COEIT will be prepared to reallocate a tenure-track position ($100k salary and benefits) that is matched by a new position and CEE expects to provide $200K for startup/renovation. After this investment by CEE and COEIT, the net cumulative additional resources required over five years are estimated to range between $0.95M and $1.6M.

- Use the funding saved through energy demand management incentive programs for energy management initiatives.

Core metrics for evaluating the initiatives

- Monitor reduction in carbon footprint, as reported to the American College and University Presidents Climate Commitment (ACUPCC) organization.

- Number of students engaged in academic programs in environmental areas – i.e., Environmental Engineering, Environmental Science, Policy, Economics.

- Undergraduate research support given to environmental/sustainability projects.

- Growth in external funds in support of research in environmental areas.

- Extent of diversification of external fund sources for environmental research

Safety and Security Sub-Committee Report

Nancy Young, Chair
Warren DeVries
Kevin Eckert
Lynne Schaefer

Basic description of priority
The term *campus safety and security* is used broadly in higher education contexts to refer to a wide range of areas from cyber security and lab safety to crime prevention and diversity climate. While all of these areas merit attention, this sub-committee used the Board of Regents' Workgroup on Campus Safety and Security's directive to respond to natural disasters, terrorism, violent crime/rampage shootings, pandemic disease, management of hazardous materials and campus specific hazards to suggest boundaries for our recommendations. Cyber security received early attention from BOR group and from system auditors. *Efforts to implement best practices in securing technology continue to be addressed by DoIT and will be included in this priority after further discussion with members of DoIT in response to current audit.*

This priority will continue to evolve as additional direction is provided by USM and government agencies. Therefore, the recommendations in this report relate to initial and immediate needs. Critical items are likely to be identified as simulations and review by external partners reveal needs.

Recommendations are intended to:

1. Implement best policies and practices related to safety and security in order to:

- Maintain and create environments that facilitate learning outcomes and personal or professional development by eliminating or minimizing physical or psychological disruption to normal University activity and operations

- Recruit and retain students, faculty and staff

- Manage institutional risk and liability

- Respond to external mandates and expectations.

2. Foster a campus culture of safety by training and providing resources to leadership, faculty, students and staff. Members of UMBC's community will possess basic skills and knowledge necessary to report, intervene or respond to potential or actual risks (while reducing or minimizing anxiety and fear).

Why the initiative is critical to UMBC now
- Incidents of terrorism (9/11), rampage shootings (VaTech, NIU) and natural disasters (Hurricane Katrina) heightened fears, drew attention to the failure of prevention and/or emergency response plans, and highlighted the particular vulnerabilities faced by colleges and universities as these crisis disrupted instruction and research, shut down campus operations and threatened institutional reputation and financial stability. Anthrax incidents, the SARS epidemic and Avian flu deaths concurrently increased concern about threats from biological agents and pandemic disease.

- Analysis of the incidents above resulted in best practice recommendations for emergency prevention, preparation or response and created new standards for safety policies and practices on college campuses (both for real increases in safety and to manage institutional reputation and legal liability, e.g., text messaging.)

- Anxiety of families, faculty, staff and students increased pressure to create support systems to respond to recruiting concerns and reports of concerning behavior from faculty and staff. In addition, UMBC health and mental health student assessments indicate higher frequency and levels of anxiety, depression and mental illness as compared to peer institutions creating additional pressure on current systems.

- External mandates and recommendations for emergency preparedness planning have been issued by federal and State government including, but not limited to:
  --Terrorism and natural disaster emergency preparation and response (with impacts on communication systems, lab safety chemical and biohazard response, police training, risk audits and more).
  --Pandemic emergency response plans (new guidelines in January 2009 add to previous impact on evacuation plans, business continuity, stockpiling of supplies, use of campus for mortuary or emergency medical space and more).

- Recent USM actions require action to implement current best practices related to risk management and campus safety and security including, but not limited to:
  --System-wide and individual campus risk audits (identified areas of strategic, reputational, compliance, operational and financial risk including safety and security, mental health issues, alcohol and more).
  --The Board of Regents Work Group on Campus Safety and Security (BOR Work Group) issued a report with both requirements and recommendations for improving campus safety. Requirements included accreditation for police forces, formation of Behavioral Risk Assessment and Intervention Teams and more with broader recommendations.
  --The BOR Work Group also raised a number of issues requiring legal advice. A series of legal opinions from the Office of the Attorney General followed (and should continue) including advice related to practices being implemented on other campuses including employee background checks, video surveillance, etc.

Summary of status of current initiatives in this area

- Emergency preparedness plans and pandemic response plans have been updated. Plans have not been disseminated widely to campus. Simulations are in planning stages. New recommendations for pandemic planning released by federal government in January 2009 are currently under review. Health center staff participated in Spring Grove's pandemic exercise in fall 2008. Police have participated in local and State planning efforts.

- Emergency response guide has been created and is awaiting printing approval and distribution.

- Communication systems upgrade for integration with local agencies and for multiple modes of emergency communication on campus. Additional equipment is necessary to complete the necessary upgrades. E2Campus text alerts, sirens, and web notices can create recommended redundancy.

- Behavioral Risk Assessment and Intervention Team created, trained and functioning on bi-weekly basis to respond to student concerns. Team can be consulted for staff concerns until plans for broader response to HR issues are completed (as recommended by National Center for Higher Education Risk Management)).

- Requirements for accreditation of police department underway and on track for 2013 required completion date.

- Requirements for accreditation of health services underway (not required.)

- Counseling center accreditation renewed with warnings that counselor-student ratios could jeopardize future review and will be scrutinized in future campus visits. Two interns added to gain client hours as temporary solution.

- Collaborative training agreement with Department of Health and Mental Hygiene provided training for two Student Affairs staff members to become Mental Health First Aid trainers. Nineteen members of Student Affairs and 3 staff from advising and police participated in first campus pilot training. Evaluations have been reviewed and recommendations for changes are being incorporated for wider campus roll out. Two additional sessions will be offered in spring and summer semesters.

- Police members trained in active shooter training and threat assessment and two members of student affairs staff attended behavioral risk and threat assessment academy.

- Web sites exist in multiple locations across campus, but have not yet been centralized. Training website and web based incident reporting system are being evaluated.

- Emergency response drawings have been completed. Drawings need to be reproduced as signage for public display in buildings as required.

- Inventory and control of chemical and hazardous materials conducted by risk management staff. Training required for lab staff and students.

- Communication center established by OIA and police to manage public inquiries and family response during incident

.

- Recovery and campus response in aftermath of disaster will now need greater attention including establishment of cooperative agreements with local agencies and system campuses outside of our area for support services.

- Instructional/business continuity plans will require significant future effort to meet BOR Work Group and audit recommendations.

Expansion initiatives and current initiatives to protect

Expansion initiatives

Four high-priority projects with costs per project under $100,000 and ready for immediate delivery are described.

- Upgrades to communication systems including improvements to the siren and PA system would allow the police activate the siren, dispatch on AM radio and make announcements on the PA system located on the Library roof and South campus. Currently the police department has “viewing only” capabilities for the PA system. In addition, additional base stations and handheld radios (and battery) should be purchased for critical staff without current access to communication equipment (UHS, emergency team). Communication upgrades could be completed with $10,000 (PA only) to $20,000.

- Emergency response signage is currently installed in 6 buildings. Drawings have been completed for 66 additional buildings. Signs for these 66 buildings can be produced in house through the sign shop with assistance from GeoSpatial. Frames must be purchased from outside vendor. With production and installation by sign shop over a 5 to 6 month period, this project could be completed in house with $35,000 - $50,000.

- Training and outreach for faculty, staff and students is a critical priority. Three additional areas have been identified for early implementation: 1) crisis and emergency response

training for leadership, 2) centralized information website and development of "training on demand" information, and 3) mental health and behavioral intervention for faculty, staff and students. The committee recommends the use of consultants for "train the trainer" and executive leadership training. The use of consultants and in-house expertise would be used to develop training programs and web site. One time costs of $15,000 -$22,000 would allow development of programs and resources that could be delivered in future years at orientations, in voluntary staff development programs and online with minimal cost. Alternately, online software could be purchased for initial cost of $16,000 per year with annual fees of $4,000- $8,000 per year. Costs range from $22,000 in one-time costs to $35,000 per year if outsourced.

- Additional counseling center therapist hours are necessary to meet recommended guidelines for accreditation and to manage increased demand for services and emergency response. Two additional therapists at $70,000/therapist are recommended to meet minimal recommendations and would require office space and start-up cost (Cost would exceed $150,000.) Until budgets allow for full staffing, we propose the addition of one training supervisor/psychologist at $70,000 plus benefits per year, two clinical interns at $10,000 per intern/year and one time start-up costs. A training supervisor would allow UMBC's psychology graduate students to complete internships on campus adding value to both the psychology department and to the counseling center. The addition of a training supervisor would also free current psychologist hours from supervising two recently added clinical interns. First-year interns add little additional expense and clinical interns completing final requirements for practice require $10,000 per year. Total cost would be $90,000 - $100,000 per year plus one time start-up costs of $10,000 - $30,000 for supervisor and interns (desks, computers, etc.)

- Education and intervention related to alcohol, drugs and sexual assault will continue to be critical elements of any campus safety program. Voices against Violence program will no longer have staff due to unfilled vacancy. Part-time or graduate level funding would be required if area were to continue functioning with specific focus on domestic and sexual violence prevention and response. Estimated cost is $25,000 – $30,000.

Current initiatives to protect

The greatest priority for protection in safety and security is the challenge of maintaining personnel in areas critical to safety during budget reductions including, but not limited to, police, risk management, counseling and judicial and behavioral management staff. Student access to online programs related to alcohol and mental health approach $25,000 per year and should be protected if possible.

Core metrics for evaluating the initiatives

- No metric can measure success in behavioral risk assessment and intervention (Effective interventions = 100%).
- Successful risk audit annually.
- Successful test of communications system during normal operating hours.
- Number of students accessing counseling services with wait time less than 2 days
- Retention data from counseling, health and judicial indicate impact on retention.
- Emergency response simulation conducted by fall 2009. Findings from simulation used to modify plan if necessary.
- Three mental health first aid trainings held by fall 2009 with faculty and staff assessment of training at "effective" rating level.
- Training for executive and front line responders occurs by fall 2009.
- Emergency response and Behavioral Assistance materials distributed campuswide and used by faculty and staff as evidenced by increase in appropriate referrals and response.
- Campus crime statistics.

Other considerations

Until final recommendations are received and exercises conducted, the full extent of needs are not known. Some recommendations could require significant investment in technology, equipment or personnel (e.g. business/instruction continuity). Individual unit plans and business continuity plans will require broad campus involvement.

Appendix 1: What a Priority Is and What a Priority is Not

A priority is…

An inter-related set of initiatives designed to advance the University toward a critical goal

An important mechanism for advancing the University during a specified period of substantial financial constraints

A commitment to pursue a set of initiatives prior to other initiatives

A commitment to provide budgetary support prior to other initiatives

A commitment to provide management attention and focus to a set of initiatives

A set of initiatives that will receive support from multiple divisions/colleges of the University

A priority is not…

A commitment that precludes all other initiatives in individual units/departments/colleges

A commitment that precludes the future adoption of other initiatives

A commitment that precludes all other budgetary re-allocations within units