### Dean of the College of Engineering and Information Technology University of Maryland, Baltimore County

The University of Maryland, Baltimore County (UMBC) seeks nominations and applications for a visionary, energetic, and innovative leader to serve as Dean of the College of Engineering and Information Technology.

UMBC, which is classified as a Doctoral University: Higher Research Activity by the Carnegie Foundation, enrolls nearly 14,000 students, including approximately 2,500 graduate students. UMBC is one of the 12 campuses of the University System of Maryland and is located on 500 wooded, rolling acres just outside of Baltimore and about 45 minutes from Washington, DC. UMBC offers 59 majors and 40 minors, as well as 23 certificate programs, spanning the arts, engineering and information technology, humanities, sciences, pre-professional studies and social sciences. UMBC's Graduate School offers 39 master's degree programs, 24 doctoral degree programs and 24 graduate certificates. Graduate programs include engineering, information technology, education, emergency health services, imaging and digital arts, aging studies, life sciences, psychology, public policy and a host of other fields. UMBC contributes to the economic development of the State and the region through entrepreneurial initiatives, workforce training, K-16 partnerships, and technology commercialization in collaboration with public agencies and the corporate community. UMBC is nationally recognized for its innovative undergraduate education.

#### THE UNIVERSITY

Creation of the University of Maryland, Baltimore County began in 1963. In a matter of months, UMBC began to take shape with ground breakings and hirings, and welcomed its first class of 750 students in September of 1966. In 1967, the campus enrollment nearly doubled to 1,400 students. Today UMBC is a nationally known success story and continues to enjoy remarkable momentum as it celebrates its 50<sup>th</sup> Anniversary.



UMBC integrates teaching, research, and service to benefit the citizens of Maryland. As an Honors University, the campus offers academically talented students a strong undergraduate liberal arts foundation that prepares them for graduate and professional study, entry into the workforce, and community service and leadership. At the graduate level, UMBC emphasizes science, engineering,



information technology, human services, and public policy. UMBC is dedicated to cultural and ethnic diversity, social responsibility, and lifelong learning.

### Leadership



Freeman A. Hrabowski, III, has served as President of UMBC since 1992. His research and publications focus on science and math education, with special emphasis on minority participation and performance. In 2008, he was named one of *America's Best Leaders* by U.S. News & World Report. *TIME* magazine named him one of America's 10 Best College Presidents in 2009, and one of the 100 Most Influential People in the World in 2012. In 2011, he received both the *TIAA-CREF Theodore M. Hesburgh Award for Leadership Excellence* and the *Carnegie Corporation of New York's Academic Leadership Award*, recognized by many as the nation's highest awards among higher education leaders. Also in 2011, he was named one of seven *Top American Leaders* by the *Washington Post* and the Harvard

Kennedy School's Center for Public Leadership. In 2012, he received the *Heinz Award* for his contributions to improving the "Human Condition" and was among the inaugural inductees into the U.S. News & World Report STEM Solutions Leadership Hall of Fame.

#### **Strategic Plan**

The University has recently completed a new strategic plan "Our UMBC: A Strategic Plan for Advancing Excellence." The plan provides a focused, complementary set of goals, strategies, and recommendations to guide faculty, staff, students, and alumni to further UMBC's evolution as a nationally and internationally recognized public research university. Please click <u>here</u> for more information on the UMBC Strategic Plan.

#### Campaign

The *Exceptional by Example* Campaign ran from July 1, 2002 through June 30, 2011, with a public launch in 2006—UMBC's 40<sup>th</sup> Anniversary year—and a goal of raising \$100 million. The campaign surpassed its goal, closing at \$115 million. More than \$65 million went to programs that support student scholarship and success, and \$46 million was allocated to support research and creativity. The previous campaign (1995-2002) had a goal of \$50 million and raised \$66 million. UMBC has approximately 70,000 active alumni.

In conjunction with the University's 50th anniversary, UMBC is preparing for the public launch of its 3rd comprehensive campaign in Spring 2017. With fundraising priorities derived from UMBC's new strategic plan, this campaign is expected to have an ambitious goal of \$150 million, and will build on the fundraising success enjoyed in each the two prior fundraising campaigns.

### Faculty and Staff

The University employs 533 full-time instructional faculty including 158 professors, 154 associate professors, 110 assistant professors, 12 instructors, and 99 lecturers. An additional 278 part-time instructional faculty provide dedicated service to UMBC students. In addition to their commitment to providing high-quality classroom instruction, the faculty at UMBC are active researchers and scholars with \$85 million awarded for research, training contracts, and grants in FY'16. For annual reports from the Office of Sponsored Research visit research.umbc.edu/osp-annual-reports.

The executive, professional non-faculty, skilled craft, technical paraprofessional, support, and maintenance staff is comprised of 1,242 full-time and 49 part-time members.

#### Academics

UMBC offers <u>59 majors and 40 minors</u> as well as <u>23</u> certificate programs, spanning the arts, engineering and information technology, humanities, sciences, pre-professional studies, and social sciences.

UMBC's <u>Graduate School</u> offers 39 Master's degree programs, 24 doctoral degree programs and 24 graduate certificate programs. Programs are offered in education, engineering, emergency health services, imaging and digital arts, information technology, aging services, life sciences, psychology, public policy, and a host of other fields.

#### Students

UMBC students are hard-working, motivated and successful. The University is home to 11,142 undergraduate and 2,498 graduate students. Minority enrollment is 43.6 percent. The 2016 freshman class included 1,538 students with an average GPA of 3.75 and 1217 (2-part) and 1798 (3-part) SAT Score. First year retention numbers for students entering in Fall 2015 stood at 87.2 percent and the six-year graduation rate is 63.5 percent. Students come from 45 states and 96 countries. International student enrollment is 1,012.

More than 400 student-athletes compete in 19 NCAA Division I sports. The UMBC Retrievers participate in the America East Conference. Facilities include a 4,000-seat stadium with a track and field complex, the 3,500-seat Retriever Activities Center (RAC) Arena, an indoor and outdoor aquatics complex, tennis courts, a soccer stadium, baseball and softball fields, and practice fields. A new Event Center is currently under construction with the opening scheduled for early 2018

#### **Finances**

The University has an operating budget of \$436 million. Approximately 27 percent of UMBC's budget comes from the state.

### **Campus** Location

UMBC's 500-acre campus is located in suburban Baltimore County, on the I-95 corridor between Washington, D.C. and Baltimore. The campus is surrounded by one of the greatest concentrations of commercial, cultural, and scientific activity in the nation. The location is a strength that gives UMBC a high profile in the metropolitan area and attracts new entrepreneurial partnerships.

#### **RESEARCH PARK & TECH CENTER**

bwtech@UMBC brings research, entrepreneurship, business leads, prospective clients, and economic development in the Maryland region to one singular place—a place full of likeminded businesses on the forefront of innovation. The bwtech@UMBC community is a center of innovation for businesses in all different stages of development. The 71-acre community is located minutes from BWI Thurgood Marshall Airport and adjacent to UMBC. (www.bwtechumbc.com)

bwtech@UMBC North is a five building, 41-acre University-

affiliated business park with over 350,000 square feet of Class A office and laboratory space designed for technology companies and research institutions. Over 80 organizations call the Park home, including the U.S. Geological Survey, NASA/Joint Center for Earth Systems Technology, Allegis, and RMF Engineering. bwtech@UMBC's unique public-private partnership offers tenants access to world-class UMBC faculty, students, technology, programs and facilities. The Cyber Incubator, as well as the Northrop Grumman Cync Program, is located within bwtech@UMBC North campus. Both the Cyber Incubator and the Cync Program were created to deliver business and technical support to early stage companies providing cybersecurity-related products and services.

The bwtech@UMBC South is a nationally-recognized life science and technology business incubation and accelerator program that is home to over 50 early-stage bioscience and technology companies. Clients enjoy 165,000 square feet of affordable office and wet lab space, flexible lease arrangements, as well as access to resources and networking opportunities to help their businesses succeed. An experienced entrepreneurial services staff provides resident companies with general business support services and access to an active network of mentors and investors. The program is unique in its affiliation with UMBC and provides for potential collaborative relationships with UMBC faculty and graduate students, and access to shared scientific equipment and other University resources. Since its inception in 1989, the bwtech@UMBC Life Sciences Incubator has graduated over 75 companies, including Celsis/InVitro Technologies, Next Breath LLC, AVIcode Inc., and Direct Dimensions.





#### THE UNIVERSITY SYSTEM OF MARYLAND

Formed in 1988, The University System of Maryland consists of the campuses and research and service units formerly governed by the Board of Regents of the University of Maryland and the six state Universities and Colleges formerly under the aegis of the Board of Trustees of the State Universities and Colleges. The new System is governed by the Board of Regents of the University System of Maryland.

The system includes eleven degree-granting campuses:

- University of Maryland, Baltimore (UMB)
- University of Maryland, Baltimore County (UMBC)
- University of Maryland, College Park (UMCP)
- University of Maryland, Eastern Shore (UMES)
- University of Maryland, University College (UMUC)
- Bowie State University
- Coppin State University
- Frostburg State University
- Salisbury University
- Towson University, and
- The University of Baltimore

In addition, there are large research and public service components of the University System of Maryland, including the University of Maryland Center for Environmental Science.

Maryland has charged the System with ensuring distinctive and complementary missions for all campuses and with promoting academic excellence and economic development.

The Chancellor serves as Chief of Staff of the Board of Regents and as Chief Executive Officer of the University System of Maryland. The University System's Headquarters directs and coordinates the eleven-campus system and the research and public service component. The administration of each campus is the responsibility of a President who reports to the Chancellor.

For additional information on the University System of Maryland (USM) visit <u>www.usmd.edu/about\_usm</u>.

#### About the College

The College of Engineering and Information Technology (COEIT), established in 1985, is a relatively young entity that enjoys an unusually high level of national visibility because of its rapid growth and its place at the heart of UMBC's mission. Among the many successes achieved by COEIT in just the last year are <u>three Barry Goldwater Scholarships won by undergraduates in the Chemical</u>, <u>Biochemical</u>, and Environmental Engineering department. Six members of the UMBC community, including one current undergraduate and five recent alumni, received <u>National Science Foundation</u> <u>Graduate Research Fellowship Awards</u>, and three <u>National Science Foundation Career Awards</u> were

won by engineering faculty. These recent accomplishments are prime examples of the College's deep commitment to integrating undergraduate and graduate education, research and innovation, and service to address evolving global needs. COEIT is proud of its diverse student body and its inclusive culture, which mirrors UMBC's overall commitment to inclusive excellence.

COEIT is home to 4,128 undergraduate students and 1,298 graduate students, who are challenged and engaged by 104 full time faculty (88 are tenure/tenure track) and 37 professional and technical staff members. The College comprises four departments:

- <u>Chemical, Biochemical, and Environmental Engineering</u>
- <u>Computer Science and Electrical Engineering</u>
- Information Systems
- <u>Mechanical Engineering</u>

Across these departments, COEIT offers <u>a variety of undergraduate and graduate degree programs</u>: six bachelor's degree programs (four accredited by ABET), 13 master's degree programs (four are particularly tailored for working professionals), and eight doctoral programs.

The College also distinguishes itself with a strong commitment to cross-disciplinary research and education. It maintains four key research centers:

- <u>Center for Advanced Sensor Technology</u>
- <u>Center for Cybersecurity</u>
- <u>Center for Hybrid Multicore Productivity Research</u>
- <u>Center for Urban Environmental Research and Education</u>

Given UMBC's location in the Baltimore-Washington region, the College's faculty also frequently partners with federal agencies, national labs, and other entities to promote the transfer of research applications that benefit society and connect students with engaged learning opportunities. Current partners and collaborators include, but are not limited to, <u>NIH</u>, <u>NIST</u>, <u>USGS</u>, <u>Johns Hopkins</u> <u>Whiting School of Engineering</u>, and <u>University of Maryland</u>, <u>Baltimore</u>.

COEIT faculty members are active researchers who mentor both undergraduates and graduates in their labs. They address important global challenges ranging from clean water and air, Alzheimer's disease, biomaterials and bioengineering, cyber security, photonics and lasers for communications and health, to the broad spectrum of knowledge and innovation that provides people with access to information technology. The College's net external research expenditures in FY 2016 were \$10 million, with funding from the National Science Foundation, National Institutes of Health, Department of Defense, as well as from business and industry. Approximately 45% of this funding is through the cross-disciplinary centers listed above.

At the center of COEIT's focus, however, are its students, who are proud to be a part of UMBC's inclusive and high-achieving community. COEIT faculty are engaged teachers as well as talented researchers and are deeply committed to their students' success. One of the key accomplishments

under the College's current strategic plan has been the creation of the <u>UMBC Grand Challenge</u> <u>Scholars</u> program, which brings together students across disciplines to address selected challenges in a formal, personalized manner. COEIT students also benefit from a wide range of programs designed to encourage student interest and success in STEM fields, such as the <u>Meyerhoff Scholars</u> program, the <u>Center for Women in Technology</u>, and the UMBC <u>Cyber Scholars</u> program.

### Role of the Dean

Reporting to Provost Philip Rous, and mentored directly by President Freeman Hrabowski, the new Dean of the College of Engineering and Information Technology will oversee a rapidly growing and highly innovative organization. The Dean of COEIT occupies an unusually high profile position given UMBC's strength in STEM education and President Hrabowski's national stature. The Dean serves as a role model not only for COEIT's students and faculty, but for the future of engineering and computing as a whole.

The new Dean will succeed <u>Dr. Julia Ross</u>, who will assume the deanship of Virginia Tech's College of Engineering in July 2017. A member of the UMBC faculty since 1995 and Dean since 2014, Ross served as COEIT's leader during a time of remarkable growth and productivity. She facilitated the development of a clear, concise <u>strategic plan for the College</u> in Fall 2015 which identifies concrete strategic directions, goals, and metrics for the College. Dean Ross is also overseeing the current ABET re-accreditation process, for which the self-studies will be completed in June 2017. The new Dean will oversee the campus visit portion of the re-accreditation process, which is tentatively scheduled for October 2017.

The Dean's direct reports currently include the following, along with the four department chairs;

- Associate Dean
- Director of Administration
- Director of Undergraduate Student Services
- Director of Engineering and Computing Education
- Director for the Center of Women in Technology (CWIT)
- Director for the Center for Hybrid Multicore Productivity Research (CHMPR)
- Executive Administrative Assistant

The College enjoys a culture marked by collaboration and cross-disciplinarity, and its next Dean should be an advocate for and champion of these core principles.

#### **Opportunities and Challenges:**

The next Dean is expected to embrace the following opportunities and challenges:

• Further enhance the visibility and prominence of the College of Engineering and Information Technology both nationally and globally: UMBC's College of Engineering and Information Technology enjoys an excellent reputation and is poised to rise to an even more distinctive position within the engineering research and education landscape in the future. The Dean will serve as the public face of the College across campus, the region, the

nation, and the world. They will seek out opportunities for innovative partnerships and programs that will further distinguish UMBC's COEIT among engineering and information technology/computing programs.

- Raise the national research profile of the College, while maintaining a strong commitment to excellence in teaching: The Dean will leverage the impressive quality of COEIT's faculty to advance the creative, entrepreneurial culture that drives research and discovery in the College and will provide vision and leadership for pedagogical innovation. The Dean will work closely with faculty and students to identify additional sources of funding to enhance the research capacity of the College, including support from federal agencies, corporations, and other funding sources. They will also seek new external partnerships while continuing to build upon existing partnerships, to support and advance teaching, research, internships, and job opportunities for students. The Dean will cultivate an environment of the highest expectations in teaching and research, while simultaneously working closely with department chairs to ensure that all faculty members are adequately supported in their efforts to achieve the optimal balance between these two priorities.
- Advance the College's commitment to diversity: As diversity and inclusion are core principles at UMBC, the next Dean will need to model the University's dedication to academic excellence and continue to foster a diverse and inclusive community. The Dean will also work to recruit, attract, and retain faculty, students, and staff who are underrepresented in higher education and engineering in particular. The Dean will be a leader in maintaining a welcoming, supportive, and inclusive environment for all individuals in the College.
- **Support and manage enrollment growth:** The key challenges that the College faces are results of its recent success. As the College's innovative academic programs and its growing reputation attract record numbers of students, the Dean will need to embrace the challenges associated with enrollment growth in a resource-constrained environment.
- **Continue to build the philanthropic model for the College:** As COEIT is still a young college, the next Dean will continue the work of building foundational relationships with alumni, foundations, corporations, and other entities. The Dean will partner with the University's Office of Institutional Advancement to articulate a compelling case for supporting the College and laying the groundwork for future relationships.
- Further strengthen the College's connections to the surrounding community: As the leader of the College, the next Dean will ensure that COEIT's culture of collegiality, cross-disciplinarity, and collaboration extends beyond the campus' boundaries by embracing a wide range of constituencies and partnerships. The Dean will be expected to maintain a visible and active profile in the greater Baltimore area to leverage UMBC's current connections and to cultivate new relationships that will advance the College's ability to address important needs in the region, the nation, and globally.

### **Desired Qualities and Qualifications**

In keeping with the spirit and values of UMBC, the next Dean of the College of Engineering and Information Technology will be a collaborative and entrepreneurial leader. They will have an outstanding record of accomplishments including a record of scholarship, research funding, and credentials commensurate with an appointment as a tenured full professor in an engineering/computing discipline at UMBC. In addition, they will possess the following qualities and qualifications:

- The ability to articulate and implement a vision for research and creative activity in the 21<sup>st</sup> century to position the College as a leader in research and education in keeping with UMBC's culture and mission;
- Experience serving as a catalyst for research innovation and for the integration of research into the undergraduate and graduate education;
- A strong track record of identifying, developing, expanding, and sustaining public and private partnerships and sources of research funding;
- The ability to bring visibility to the research and educational accomplishments of the College both within and outside the campus;
- An ability to partner with the University's advancement office to build foundational relationships with alumni, parents, and friends of the College;
- An appreciation for both engineering and information technology/computing as equal facets of the College;
- A proven track record of, and strong commitment to, inclusive excellence;
- A deep understanding and appreciation of shared governance;
- The breadth of knowledge and foresight needed to identify existing, emerging, and interdisciplinary fields for investment, both within the College and collaboratively with other Colleges in UMBC and beyond;
- A commitment to fostering and facilitating opportunities for interdisciplinary research and educational collaborations;
- Demonstrated ability to develop and promote activities that support a large and diverse faculty, oversee faculty recruitment and development, manage promotion and tenure, and appoint departmental chair persons and center directors, as needed;
- Ability to foster a culture of high ethical standards, and effective business practices in the College, including exceptional fiduciary skills;
- An energetic and engaging personality with excellent interpersonal, oral, and written communication skills;
- Demonstrated ability to foster innovation in teaching pedagogy and curriculum design;
- Ability to work collegially and collaboratively with other university senior administrators (e.g. deans, vice-presidents, vice provosts, etc.); and,
- The capability to promote an agile and creative environment that inspires teaching for a 21<sup>st</sup> century engineering education.



### Contact

Please send nominations, applications, and queries in confidence and electronically to:

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UMBC is an Equal Opportunity/Affirmative Action Employer

UMBC is especially proud of the diversity of its student body and we seek to attract an equally diverse applicant pool for this position. We have a strong commitment to increasing faculty diversity.