



Office of the President

November 1, 2017

Mr. Alton L. Pscholka  
State Budget Director  
111 South Capitol  
P.O. Box 30026  
Lansing, MI 48909

Dear Director Pscholka:

Central Michigan University celebrated its quasiquicentennial on September 13, marking 125 years of meeting the needs of the state, its residents, communities and businesses. CMU started as a normal school for 31 students aspiring to be teachers and fill a void in the state's schoolhouses. Today, we serve about 25,000 students in more than 200 degree programs, focused especially in STEM, health care and business. With this letter, I welcome you in joining us as we recommit ourselves to the continual evolution that will meet emerging needs and in recognizing the many achievements that reflect our greatest impact today:

- CMU's inaugural class of medical students graduated in May and all 62 students were placed in residencies. Nearly half are in Michigan.
- Central also graduated its 10th class of mechanical and electrical engineers, with a nearly 100 percent placement rate and students receiving multiple job offers – sometimes before their senior years.
- Likewise, CMU physician assistant, physical therapy, audiology and speech-language pathology graduates continue to achieve a 95 percent or better first-time pass rate on national certification exams and also enjoy a nearly 100 percent job placement rate.
- CMU leads the way in research to sustain and manage the world's largest supply of fresh water, receiving \$20 million from the U.S. Environmental Protection Agency to monitor and assess Great Lakes coastal wetlands. The grant involves nine other universities and three governmental agencies.
- Two CMU physics faculty members have received \$4.8 million from the U.S. Department of Energy to solve a long-running challenge in molecular modeling, using computer calculations to make predictions about materials at the atomic or molecular level. They will direct the efforts of 10 senior scientists and five universities.

- A CMU neuroscience researcher has received a \$2.25 million National Institutes of Health grant to study brain disorders.
- Three College of Science and Engineering faculty have received prestigious early career awards. They are studying the mysteries of organism development, what makes bacteria so resilient, and the development of a mass spectrometer that could perform some of the world's most precise atomic mass measurements.
- CMU's Carls Center for Clinical Care and Education provides advanced hearing and balance diagnostics, hearing aid sales and service, cochlear implants, speech and language therapy, and world-renowned speech clinics. With a grant for pediatric cochlear implants, the center recently helped a 13-month-old boy hear for the first time.
- Central's privately funded Mobile Health Central motor coach takes medical services on the road. In July, faculty and students traveled to Flint for a senior health fair.
- CMU's new, Interdisciplinary Center for Community Health and Wellness recently held its first event – a forum on opioid use across the region.
- CMU collaborates with Michigan Technological University on a joint physical therapy program and with Michigan State on world-leading nuclear physics research.
- CMU is North America's No. 1 provider of SAP Terp10 certifications (for the leading business enterprise software – SAP – used by nearly 40,000 companies worldwide). CMU students often receive job offers on the spot during our annual ERPsim event that brings dozens of corporate representatives to campus as coaches.
- Central's national-model leadership programs connect new students to each other, teach them leadership skills and nurture their sense of belonging. Over 2,000 incoming students participate in Leadership Safari, a five-day leadership immersion experience. Nearly 300 students attended the second year of IMPACT, a mentoring program for multicultural students. Both programs are proven to increase student retention.
- CMU student volunteers go on the nation's third most Alternative Break trips each year, volunteering to help others during the holidays and spring/summer breaks. CMU students rank No. 1 among all Michigan public universities for their participation.
- CMU in the past five years has added an Office of Student Success, expanded its academic advisor ranks and adopted an electronic tool that enables students to easily track progress toward graduation. The university also was selected as one of 44 institutions nationwide to participate in the American Association of State Colleges and Universities "Re-Imagining the First-Year" project, supported in part by the Bill and Melinda Gates Foundation.

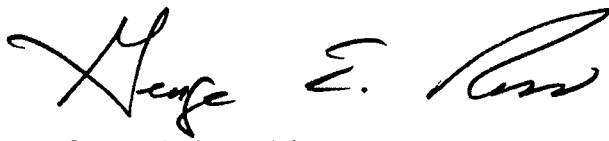
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At CMU, we pride ourselves on academic excellence combined with co-curricular activities that teach students to be leaders, think critically, focus on solutions and work in teams. In this, our 125th year, we honor our past, advance the leadership roles that each of us plays today and take strategic actions to ignite the best possible future for our students and the state.

Thank you for your continued support.

The following information responds to the questions you asked in your fall letter to us.

Sincerely,

A handwritten signature in black ink, appearing to read "George E. Ross". The signature is fluid and cursive, with the first name "George" being the most prominent.

George E. Ross, Ph.D.  
President

## Funding Formula Progress

### 1) Critical Skills Completions

CMU has grown from a teachers' college founded in 1892 to being among just five percent of U.S. universities in the highest two Carnegie research classifications. CMU is one of the 100 largest public universities in America and offers more than 200 academic programs at the undergraduate, masters, specialist and doctoral levels. Its nationally acclaimed degrees are in areas ranging from the health professions and biosciences to business and communications.

#### Operational Changes to Improve Performance within this Metric Category

CMU adapts to the changing needs of our students, employers, state and society. In FY 2011-12, the state reduced CMU's budget by 15 percent and subsequently introduced the performance funding metrics. The inception of performance funding metrics caused added emphasis on CMU's decision-making regarding programmatic changes, operational changes and facility needs moving forward. The following section discusses many of those changes.

CMU's program offerings are robust and reviewed on a continual basis for content and marketability. It currently offers programs in the following critical skills areas:

- Astronomy
- Athletic Training
- Audiology
- Biology
- Biochemistry and Chemistry
- Biomedical Science
- Communications Disorders
- Computer Engineering
- Computer Science
- Earth and Atmospheric Sciences
- Electrical Engineering
- Environmental Studies
- Fermentation Science
- Geography
- Geology
- Health Administration
- Health Sciences
- Industrial Engineering Technology
- Information Systems
- Mathematics
- Mechanical Engineering
- Medicine
- Meteorology
- Neuroscience
- Nutrition and Dietetics
- Physics
- Physician Assistant
- Physical Therapy
- Public Health
- Speech-Language Pathology
- Statistics

Over the past five years, CMU has experienced significant growth in our engineering programs. Our College of Medicine is assisting in filling a major shortage of medical providers in the state.

Operationally, CMU has invested significant resources in critical skills areas by hiring top-tier faculty cohorts to enhance the instructional quality and research agenda within the College of

Science and Engineering. In addition, CMU opened student success centers in each college. CMU provides academic advising, career services, internship placements and tutoring. Time spent with advisors is proven to increase retention and persistence, and gives students a focused plan for timely degree completion.

Significant investment has also occurred in our facilities. CMU has added active-learning classrooms for greater classroom engagement, upgraded technology in many buildings and will soon break ground on a Center for Integrated Health Studies. This facility will enhance the university's ability to deliver several undergraduate and graduate programs in health professions. This includes expansion of existing programs within The Herbert H. and Grace A. Dow College of Health Professions. Interest continues to grow in these fields and CMU is well positioned to serve student needs as they attain their degrees.

CMU's capital outlay submission this year centers on science programs. The Brooks Hall renovation (submitted separately to the state) will modernize 53-year-old instructional and laboratory space, enhancing technology while advancing active teaching and learning, research and collaboration among students and faculty. This renovation will address ongoing demand for STEM-oriented degrees.

Overall, CMU continues to dedicate additional resources in critical skills areas as they play a large role in the future success of the university and the state.

#### Outcomes under the Performance Formula

The majority of CMU freshmen cite science as a primary area of interest. This reflects CMU's high-quality programs and vast opportunities to work closely with faculty on their research, and their interest will enhance CMU's performance under this metric. The proportion of critical skills majors increased from 36 to 46 percent from 2015 to 2017.

Overall, the additional emphasis in this growth area over the next 10 years will continue to enhance CMU's critical skills completions. CMU's performance on this metric was based on FY 2014 data resulting in 1,310 critical skills area completions. In FY2015, CMU increased to 1,415 completions. This number also rose in FY2016 to 1,574 completions. While these figures do not place CMU in the top 20 percent nationally, this is significant growth and reflects our added emphasis in this area.

## **2) Research & Development**

CMU has shown significant growth in its research enterprise. CMU recently advanced from a Carnegie classification of "Doctoral Universities - Moderate Research Activity (R3)" to the classification of "Doctoral Universities - Higher Research Activity (R2)". This added emphasis on research is apparent with our 20 percent growth from 2011 to 2014 in research expenditures.

Operational Changes to Improve Performance within this Metric Category

During the last several years, CMU has initiated efforts to hire several cohorts of faculty who will collaborate in a single research area. CMU has hired Great Lakes research faculty, a rare isotope research group in physics, a cohort focused on neuroscience, and a sustainable energy cohort. Overall, CMU faculty and staff were published last year in 475 peer-reviewed journal articles.

The deans at CMU have been increasing start-up packages to enable the university to compete for high-quality faculty, and their ability to hire first-choice candidates has increased. As a result, junior faculty have been more successful in competing for federal grants – a trend we expect to continue.

The university also has added research facilities in the biological and biomedical areas to enhance the rate of productivity. These expenditures include a 13,000 GSF laboratory facility (\$7 million) that will advance the biology and medical disciplines in CMU's recently completed Biosciences Building (\$89.4 million, \$30 million of which was state funding). This was the single largest capital project in CMU's history, and two-thirds of its space is dedicated to research.

In addition to the \$20 million in EPA grants for Great lakes research, CMU recently received a \$4.8 million U.S. Department of Energy research grant in physics, and a \$2.25 million National Institutes of Health grant to study the use of bioluminescent light to control and repair damaged brain cells. CMU's investment in research and scholarly activity is raising our profile on a national level.

CMU's primary commitment continues to focus on quality undergraduate education, professional masters degrees, and a cohort of carefully focused professional and doctoral programs. As part of its educational process, CMU involves students – including those at the undergraduate level – in research with faculty members. This research provides real-world experience, enables students to learn the process of discovery and put theory into practice – all of which ensure their success in the state and global marketplace.

Outcomes under the Performance Formula

CMU is proud to have achieved R2 Carnegie classification through research efforts that serve our students and the state extraordinarily well. Yet, the methodology of the state's performance funding penalizes us for this achievement. We ask that you thoughtfully consider an amendment to this metric. In FY 2015, the national median research expenditure for R2 institutions was \$42 million. The median research expenditure for R3 institutions was \$9 million. CMU's research expenditures were \$12 million. This would have resulted in a higher ranking on this metric, if compared to R3 peers. Although we have grown those expenditures now to nearly \$15 million, the state's performance funding formula penalizes us for this growth – unless we nearly triple our current spending in this area.

## Performance Funding Scored vs. National Carnegie Peers

### 3) Six-Year Graduation Rate

#### Operational Changes to Improve Performance within this Metric Category

Nurturing student success is CMU's No. 1 strategic imperative. To help more students in the attainment of their academic goals, CMU has expanded strategic initiatives that enhance academic support services and improve progression to degree. These initiatives promote earlier identification of potential struggles and provide outreach, support and monitoring of student progress including credits earned each term, year-to-year persistence and progression toward graduation. Specific initiatives include the following:

- Expansion of advising and student support services that help students solidify their academic priorities and development of study habits, academic integration and the management of finances. Success coaches, for example, work with new students in support of their academic and personal goals. CMU is a leader in providing Success Centers in both residence life facilities and the academic colleges. Students have access to advisors, success coaches and counseling.
- Leveraging data and predictive technologies of success markers that aid faculty and staff in the identification of and outreach to students who may need additional support to remain on track for timely graduation. These systems improve the tracking of individual student progress and provide advisors with alerts regarding course completion and progress. Intensive outreach then is directed to students with academic, financial and/or adjustment issues.
- Re-engineered financial assistance through (a) expansion of aid to more students with demonstrated need or hardship throughout the four or five-year degree program, (b) increased merit-based awards to incentivize the completion of 15 credit hours a semester, and (c) revised merit-based awards for transfer students, as increasing numbers of students are choosing to complete degrees through courses completed at multiple institutions. CMU continues to strategically and thoughtfully invest financial support in recognition of academic achievement and opportunity, diversity and financial need. Over the past four years, CMU has increased its base funding for scholarships by more than 50 percent, from \$34 million to \$51.3 million

#### Outcomes under the Performance Formula

In FY2014, the median six-year graduation rate for R2 institutions was 54.7 percent while the top 20 percent of R3 universities achieved 53.1 percent. CMU's six-year rate of 55.5 percent would have earned three points for being in the top 20 percent of R3 universities, yet gained only two points in the R2 category. In FY2015, CMU experienced growth in our six-year rate, with 59 percent of

students graduating in six years. CMU will remain above the national average and continue efforts to improve this figure each year.

#### **4) Total Degree Completions**

##### *Operational Changes to Improve Performance within this Metric Category*

The total degree completions metric is based on the number of degrees earned annually. CMU is the 98th largest of four-year public institutions in America and offers more than 200 academic programs at the undergraduate, masters, specialist and doctoral levels. CMU places tremendous emphasis on assisting students in attaining their degrees and devotes significant resources to the support services noted above, as well as a dedicated faculty to educate and mentor students.

##### *Outcomes under the Performance Formula*

CMU ranked in the top 20 percent nationally against our R2 national Carnegie peers with 6,068 degree completions in 2014. This includes the fact that reporting years were 2011-2014 while CMU was an R3 institution. CMU's performance in this area will continue to rank in the top 20 percent nationally. This ranking reflects the interest in CMU programs, as well as the quality of CMU students, faculty and staff.

#### **5) Institutional Support as Percentage of Core Expenditures**

##### *Operational Changes to Improve Performance within this Metric Category*

CMU prides itself on being good stewards of public funds. While our percentage of institutional support as a percentage of core expenditures was slightly outside of the R2 median, CMU has subsequently invested substantial funding into scholarships, student support services and instruction. This metric utilized IPEDS data from 2011- 2014. Over the past four years, CMU has increased base funding for student scholarships by more than 50 percent, from \$34 million to \$51.3 million. CMU closely monitors where dollars are allocated and will place continued emphasis on academic and student success.

##### *Outcomes under the Performance Formula*

In FY2014, the median percentage of institutional support as a percentage of core expenditures for R2 institutions was 9 percent, while the median percentage for R3 was 10.6 percent. CMU's institutional support as a percentage of core expenditures was 9.3 percent. If compared to R3 national peers, CMU would have received two points. Based on the recently released BLM scorecard with FY2015 data, all Michigan public R2 institutions will fall short of reaching the national average in this metric next year. CMU would have exceeded the national average for R3 institutions. Recent efforts to align more resources in instructional and student service areas will be realized in future years.



## 6) Percentage of Students Receiving a Pell Grant

### Operational Changes to Improve Performance within this Metric Category

Access and opportunity underpin Central Michigan University recruiting practices. CMU serves students from every county in Michigan and its multicultural student population increased by nearly 15 percent over the past decade. CMU develops impactful services to promote student success and prepare them for meaningful careers and productive lives. In addition, CMU continues to thoughtfully invest in need-based packages to assist students in realizing their academic goals.

CMU also prides itself on affordability, as is seen in the fact that we have had the lowest cumulative undergraduate tuition increase of all 15 public institutions over the last eight years. It is notable that CMU's self-constrained tuition increases are significantly more stringent than what the state would allow, totaling 29 percent below the state-mandated tuition restraint caps of the past six years. CMU ensures a positive impact on the residents and communities of our state through our efforts to increase access, affordability, individualized support, outreach to Michigan K-12 students and partnerships with Michigan community colleges.

While the State of Michigan continues to be the university's principal market, CMU also exerts nimble recruitment strategies for identifying and attracting out-of-state students.

### Outcomes under the Performance Formula

CMU scores well in this metric with 36.3 percent of students qualifying as Pell-eligible. The national peer average is 34.8 percent. If this metric were based on the number of students who are Pell-eligible, CMU would have scored in the top 20 percent nationally. These figures reflect CMU's continued commitment to serving all students.

### Strategic Planning

CMU has carefully analyzed our university and the changing demographics in our state. We believe that our mission, as stated, is responsive to declining K-12 enrollments and to the workforce transformation that reflects a more digital world regardless of the field. As our mission states, Central Michigan University is "a community committed to the pursuit of knowledge, wisdom, discovery and creativity. We provide student-centered education and foster personal and intellectual growth to prepare students for productive careers, meaningful lives and responsible citizenship." This mission is bolstered by our newly revised strategic plan, Advancing Excellence, 2017-2022, that designates three imperatives:

- Nurturing student success;
- Fostering scholarly activity; and
- Strengthening partnerships in Michigan and beyond.

Our mission and strategic plan guide us in our response to the declining K-12 enrollments and workforce transformation. Some of the actions we have taken:

- Creation of graduate and professional programs to meet state needs. This includes:
  - CMU's Master of Science in information systems, which has expanded to an online format with three tracks, including one in cybersecurity;
  - Our new Masters of Entrepreneurial Transactions and 3-year-old MS in Engineering; and
  - Our MD program in the College of Medicine.

Our future plans include:

- Adding more engineering disciplines; and
  - Growing more programs in the healthcare industry, especially at the intersection of business and healthcare, such as health informatics and healthcare administration.
- Strategic expansion of external partnerships. Central Michigan University has launched a premier partner program that will designate and nourish mutually beneficial relationships. These will increase funding, internships and job placements for students, and give elite partners access to future employees, research capabilities and educational opportunities for their existing employees. Ford Motor Co. and the Quicken Loans family of companies have been announced as the first two premier partners.
  - Increased external research funding from federal and corporate sources. CMU faculty and students in the past fiscal year were awarded \$13.6 million. Just three months into FY2018, two CMU physics researchers already have earned a \$4.8 million grant from the U.S. Department of Energy and will lead the way on a molecular modeling project involving five universities and 10 senior scientists.
    - We have improved our research processes and extended our compliance operations to prepare us for continued expansion in external funding. Growth of faculty in the engineering and healthcare areas is beginning to garner increased funding from the National Institutes of Health and other federal agencies. Additionally, several major corporations are increasingly supporting research and scholarly activities in business, engineering and science. Interesting niche growth areas include the design of clothing to meet healthcare or environmental needs, with support from the health industry and the automotive industry. For example, support from Spectrum Health has led a team of entrepreneurship, fashion merchandising and design, and apparel product development and merchandising students to develop an insulated bra for mastectomy patients.
  - Expansion of leadership opportunities for students. CMU has long been recognized nationally for its Leadership Safari program that serves more than 2,000 incoming students a year. CMU already has more leadership programming than any university in the state –

and likely in the country – through Safari, its leadership camps, leadership scholarships and leadership minor. In his Sept. 13 State of the University address, President George E. Ross announced Central's leadership efforts will expand significantly. All students will be immersed in leadership experiences as part of their educational journey at CMU, identifying personal values, exploring diverse viewpoints, participating in volunteer activities and developing their sense of purpose.

- Attraction of students nationally and internationally, for both undergraduate and graduate disciplines. We are increasing the number of students from other states as well as other countries. This is important because industry, including healthcare, requires more workers than can be supplied by Michigan high school graduates. About 80 percent of all CMU graduates remain here in Michigan. We believe job opportunities from traditional employers, coupled with our emphasis on entrepreneurship, will continue to fuel retention of CMU graduates supporting the local economy. We can already see this in our medical school graduates, approximately 50 percent of whom are in Michigan-based residencies. The expansion of degree-holding Michigan residents is critical, as was recently reinforced through the competition among 238 cities for the \$5 billion second Amazon headquarters.
- Increased external funding through the enhancement of our Advancement efforts. These funds are ever more necessary with the decline of the K-12 high school graduate population, the rising costs of high-quality academic programs and the State of Michigan's relatively limited higher education appropriation. CMU is in the quiet phase of its second major capital campaign, and in the past year secured more million-dollar individual gifts than throughout its history combined.
- Continued quality improvement initiatives, such as:
  - Increased hiring in academic growth areas and reduced hiring in areas of declining student and employer demand.
  - Continued use of automated systems to improve the productivity of faculty and staff across the university.
  - Management realignment. For example, by restructuring our online and off-campus Global Campus operations, functions such as student recruitment, advising and financial aid are handled by the appropriate offices on our main campus. This creates operational efficiencies and assures all CMU students are treated equally.