

**MICHIGAN STATE**  
**UNIVERSITY**

October 16, 2017

**MEMORANDUM**

**To:** Trustee Finance Committee

**From:** June Pierce Youatt  
Satish Udpa

**Subject:** 2018-19 Appropriation Request and Capital Outlay

**RECOMMENDATION**

The Trustee Finance Committee recommends that the Board of Trustees adopt Michigan State University's 2018-19 Operating and Capital Outlay Request, including components for the University General Fund, AgBioResearch, and the Michigan State University Extension.

**RESOLUTION**

BE IT RESOLVED, that the Board of Trustees of Michigan State University hereby adopts the attached 2018-19 Appropriation Request and Capital Outlay.

**BACKGROUND**

The Appropriation Request provides parameters that will guide development of MSU requests through the 2018-19 appropriation cycle. Action on the request authorizes the Administration to respond to the State of Michigan Department of Technology Management and Budget reporting requirements.

Attachments

cc: Trustee Policy Committee, L. Simon, B. Beekman, M. Burnham, R. Noto,  
D. Byelich, B. Johnston, B. Kranz



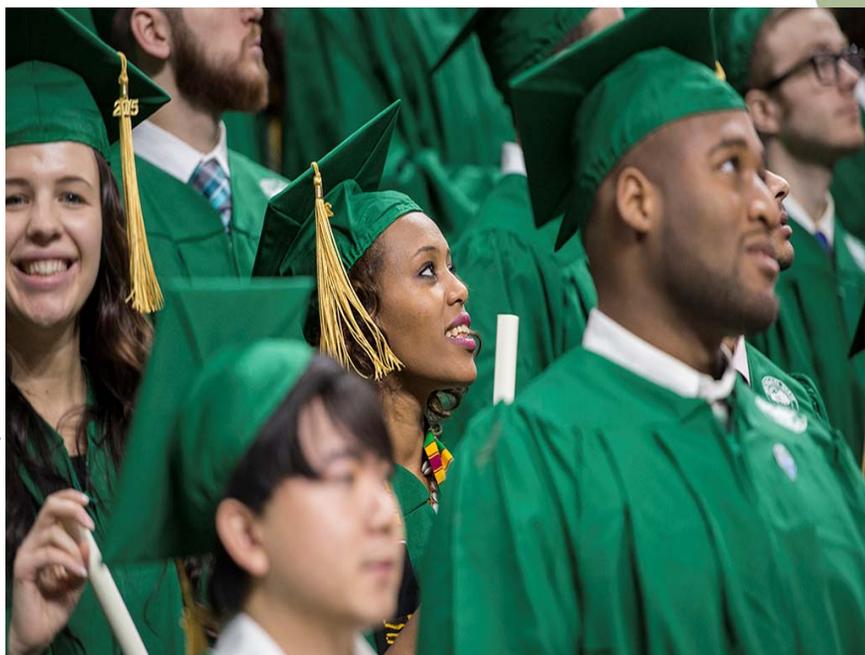
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OFFICE OF THE  
EXECUTIVE  
VICE PRESIDENT FOR  
ADMINISTRATIVE  
SERVICES

# 2018-19 Appropriation Request

## MSU PERSPECTIVE

Michigan State University is recognized around the world as a leading academic institution with world-class faculty, top graduate study programs, a powerful research portfolio, and an engaged, entrepreneurial spirit. MSU is ranked among the top 100 global universities by *Times Higher Education* and *U.S. News and World Report*, and among the top 40 in the United States by *Washington Monthly*. MSU is among 53 “international powerhouses” named by *Times Higher Education* as institutions with exceptional research output and the best chance of overtaking the world’s best universities. A member of the Association of American Universities, a group of 62 elite research institutions in the U.S. and Canada, MSU



nonetheless honors its heritage as the nation’s pioneer land grant university by maintaining especially close connections to the people of Michigan. Enrolling more Michigan students than any other university (even while maintaining leadership in international enrollment and study abroad), MSU’s value proposition is to ensure the opportunity for high-quality education for qualified students, enhancing Michigan’s future through knowledge discovery and talent development. MSU excels at its mission despite an active and prolonged disinvestment from the State of Michigan. MSU’s appropriation per student mirrors that of 1991 without adjusting for inflation and predates 1970 levels when accounting for inflation. Additionally, when compared to its Carnegie peer group, MSU receives approximately \$3,000 less in appropriations per student, equivalent to approximately \$130M in total appropriations. Finally, MSU ranks second in the Big Ten for proportion of resident undergraduate students, forgoing over \$100M annually in non-resident tuition when compared to the average.

## A Top Value

Ranked among the top 30 best college values by *Money* magazine, MSU is a vital engine of prosperity for Michigan families across the generations. It is also a recognized innovator in promoting student success, committed to improving its already respectable six-year graduation rate to 82 percent through curricular and instructional reforms and a growing network for student support in the residential setting.

MSU’s programmatic investments seek to improve technology and teaching, prioritize interdisciplinary study, the narrowing of graduation gaps amongst various student groups, and fostering a healthier campus.

A *Wall Street Journal/Times Higher Education* 2016 ranking, moreover, put MSU at the top of America’s public research universities in its measure of student engagement. That is a quality including academic rigor and student connectedness to the school, each other and the outside world. Engagement is a positive factor in student success and such ranking, the report noted, is more typical of smaller, denomination-affiliated colleges.

Approximately two-thirds of recent MSU graduates reported participating in an internship, co-op, field placement, student teaching, or clinical placement during their degree program. In addition, approximately 18,500 students work on campus.



A spirit of entrepreneurialism permeates the university at all levels, through numerous direct opportunities for students or the extensive efforts and impact the university's outreach efforts make across the state. Examples of student opportunities include experience and faculty laboratories, business plan competitions, the entrepreneurship minor available to all undergraduates, student business incubators, and numerous additional opportunities through education abroad resources.

The university's entrepreneurial ethos fits hand-in-glove with our progressive pedagogy and approach to developing "citizen scholars" and what we and our partners at IBM call "T-shaped" scholars: students who are prepared for real-world careers demanding technical and disciplinary expertise along with connective soft skills

## According to *The Wall Street Journal*, MSU leads the nation's public research universities in student engagement

### A Close Community Partner

It is no surprise that more than 90 percent of MSU's graduates were employed or continuing their education within nine months of graduation, and a similar percentage rated their educational experience as excellent and would choose MSU again if starting their experience over. Of 2015 graduates with employment, more than 62 percent remained in Michigan, with an additional 15 percent employed in other regional states.

Michigan State University has an annual economic impact of more than \$5 billion and seeks to instill an entrepreneurial and high-performance mindset in its students, faculty, and staff.

MSU Extension's presence touches all 83 Michigan counties,

availing all Michigan residents to the resources and expertise they need to advance the state and its economy. One example; the MSU Product Center's efforts have resulted in 543 new businesses since 2004 with increased first-year sales of \$379 million and more than 1,500 jobs created.

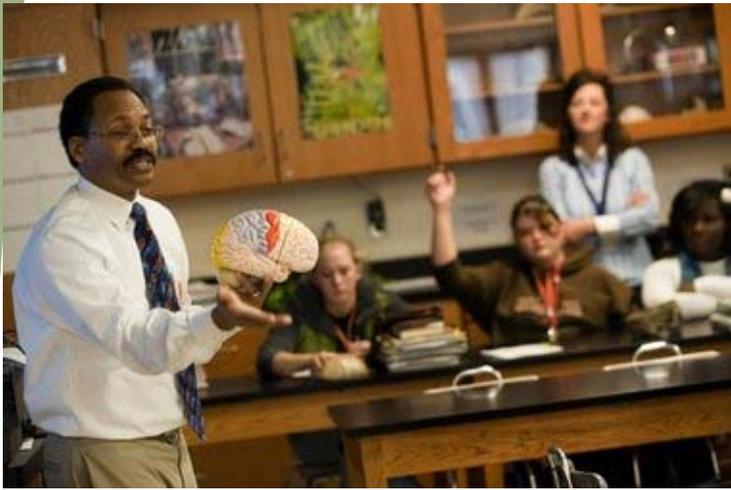
MSU is deeply engaged in the cities of Flint, Detroit, and Grand Rapids, working collaboratively to provide expertise and a network of resources in education, food, water, health, and sustainability. *Outside* magazine in July cited the university's medical school facilities among the knowledge economy assets qualifying Grand Rapids as its "Best River Town" for 2017.

# MSU Programmatic and Strategic Commitment

MSU's programmatic strategy is premised on the Bolder by Design strategic framework and seeks to further education and research in Science, Technology, Engineering, and Math as well as other curricular priorities in order to expand economic impact locally, regionally, and internationally advancing the common global good.

MSU routinely receives in excess of \$600 million in sponsored awards annually, focused in areas such as food systems; plant sciences; health sciences; computational sciences emphasizing biology and food/food-chain; and population and the environment, including food, water, and energy.

Additionally, MSU's programmatic investments seek to improve technology and teaching, prioritize interdisciplinary study, the narrowing of graduation gaps amongst various student groups, and fostering a healthier campus.



At MSU, student credit hours in Science, Technology, Engineering and Math have increased by more than 37 percent over ten years, representing an additional \$30 million in additional instructional costs.

MSU is consistently ranked as one of the top institutions nationally for internationalization while also enrolling a larger percentage of resident students than Big Ten peers.

**At MSU, student credit hours in Science, Technology, Engineering, and Math have increased by more than 37% over ten years, representing an additional \$30 million in costs**

In fact, MSU's approximately 75 percent resident undergraduate population exceeds the Big Ten average by 10 percent, making it among the most home-state centric in the conference.

MSU's success is evidenced by its consistent inclusion among the top 100 universities in the world and in its acclaimed programs with 35 featured in the top 25 nationally, including eight rated number one. Additionally, MSU's graduation rate exceeds the *U.S. News & World Report* predicted rate by 10 percentage points, an indicator of educational quality and high performance.

MSU also routinely enrolls in excess of 8,500 Pell Grant recipients, representing more than 22 percent of the undergraduate population while at the same time keeping both the average debt amount and the proportion of students graduating with debt below state and national averages. MSU administers in excess of \$680 million in financial aid annually, with more than 59 percent of students receiving some form of aid. Budgetary increases to financial aid routinely outpace increases to tuition as MSU carefully monitors family income distribution, financial aid distribution, debt measures, and other financial aid metrics.

It is no surprise that more than 90 percent of MSU's graduates were employed or continuing their education within nine months of graduation, and a similar percentage rated their educational experience as excellent and would choose MSU again if starting their experience over. Of 2015 graduates with employment, more than 62 percent remained in Michigan, with an additional 15 percent employed in other regional states.



# MSU Resources and Performance Funding Model

MSU's reputation as a renowned public research university despite the most difficult financial circumstances ever experienced in higher education, with significant reductions in state support for its students and programs. In fact, Michigan ranks 45th of 49 states reporting for rate of change to higher education appropriations for the ten-year period ending fiscal 2017. Additionally, MSU operates with approximately \$3,000 less per student in state appropriations support than its Big Ten peers, an amount that represents approximately \$130 million in lost resources across the institution. When adjusted for inflation, MSU's appropriation per student has declined by more than 40 percent since 2000-01.

Further, since the inception of the performance funding model in 2011, MSU's appropriations have been more adversely impacted than any other state institution that complied with all tuition restraint provisions over the period, a loss of approximately \$2.5 million. However, at the same time, MSU enrolls more resident students and total undergraduates than any state institution, conducts approximately half of the total research and development activity in the state, and produces the second most critical skills degrees annually next to the University of Michigan. As a result, it is imperative that new incremental funding appropriated to higher education this coming year goes to restoring the funding of complying institutions to at least the 2011 levels. In addition, it is important that the model be modified to better reflect the performance of all institutions. This would include addition of the IPEDS marker for community engagement, proportion of undergraduates graduating with debt, and the number of Pell students, or combinations of the above.

**Michigan ranks 45th  
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Finally, additional consideration should be provided to those institutions that feature the combination of significant numbers of Pell students, high graduation rates, and a low proportion of students graduating with debt.

MSU continues to do more with less for public higher education, despite the disinvestment by state legislators. MSU expends approximately \$6,300 less per student than

its AAU peers, making MSU among the most efficient institutions in the group. Additionally, MSU is among the most efficient in the Big Ten as measured by the number of students per employee while simultaneously approximating the Big Ten average for student-to-faculty ratio.

MSU also ranks among peer leaders for grounds maintenance and custodial efficiency. The university has reduced greenhouse gas emissions by 25 percent since 2010 and uses 10 percent less heating units (BTU) per person than it did in 2006.

MSU has successfully navigated the most challenging economic reality in higher education history. As a result of MSU's efficient and high-performing focus, we have been able to maintain our leading-edge faculty and research enterprise while also improving innovation, entrepreneurship, and state economics. In order to assure ongoing and improving performance, MSU continually assesses itself against relevant industry metrics and benchmarks as well as understanding best practices from other industries to inform operations, processes, and systems.

# MSU AgBioResearch & MSU Extension

As the nation's pioneer land-grant university, MSU is especially committed to working with Michigan stakeholders to meet the needs of agriculture and natural resources stakeholders through a variety of means, including a programmatic presence in communities across the state. With annual economic impact of more than \$102 billion, Michigan's food and agriculture sectors are a leading force for economic stability in Michigan. Agribusiness is among the fastest growing economic sectors in the state, and MSU AgBioResearch and MSU Extension contribute to Michigan's economy with significant research, educational programs and a community presence to boost economic development and growth related to agriculture and natural resources, community vitality, entrepreneurship, and career preparation for young people. Therefore, it is essential that full recurring support be provided to both MSU AgBioResearch and MSU Extension, including inflationary increases.

MSU AgBioResearch is focusing on key research areas in:

- Food, energy, and the environment
- Natural resources policy and management
- Enhanced profitability in agriculture and natural resources
- Secure and safe food systems
- Families and community vitality
- Making the most of Michigan's natural assets
- Supporting food and agriculture



MSU Extension is focusing on:

- Developing youth and communities
- Ensuring safe and secure food
- Ensuring strong communities
- Keeping businesses strong
- Keeping people healthy
- Making the most of Michigan's natural assets
- Supporting food and agriculture

To maximize its impact and fiscal responsibility, MSU continues to build on its partnerships with local, state and federal government agencies and with the private sector while maintaining its core values and commitments. Leadership continues to balance increasing the value of MSU's work and ensuring it matches the high quality expected of MSU. We engage our partners, our students, our faculty and the stakeholders and communities we serve, both locally and globally, to shape a shared future of sustainable prosperity.





# Capital Outlay Request

The capital outlay request and capital priorities support programs that have strong national reputations, expanding research bases, and high enrollment demand that will sustain the university and its contributions to Michigan. Funding of these requests will provide economic development in the state, now and in the long term.

Our capital outlay request is the construction of a STEM teaching and learning facility that aligns with state and national priorities.

Over the past 10 years, student credit hours in STEM have increased approximately 37 percent. Construction of a new instructional facility focused on supporting education in science, technology, engineering, and mathematics (STEM) disciplines is necessary to continue this programmatic direction. Such a facility would address the continued state and national priority to educate increasing numbers of students in STEM disciplines. A new STEM teaching and learning facility would include modern wet bench teaching laboratories that incorporate active learning principles, foster cross-disciplinary teaching and learning, and support developing and evolving changes in curriculum and its delivery. The facility would bring together a number of teaching laboratories that are currently dispersed across campus to create a central hub for STEM teaching and learning.

## New construction

New construction is needed to support high-priority instructional and research programs. The facilities are necessary to support current and future programmatic initiatives in the STEM disciplines including, biomedical, biological, and engineering sciences; computation and data sciences;

## New construction is needed to support high priority instructional and research programs

water and energy; and economic development of Michigan.

## Renovations and additions

Renovations and/or additions address extensive programmatic and maintenance improvements required by buildings previously funded by the state.

Renovations and/or additions are necessary to reconfigure and or expand space in order to support the work of the programs housed in those facilities; create core/shared research support facilities and modern learning spaces; and in some instances, adaptive re-use or modernization of aging buildings including alignment with current codes and provisions for accessibility.

Major renovations and/or additions include the plant sciences-bioeconomy, biological and biomedical sciences, music and learning facilities.

## Major systems replacement

Current forecasts anticipate general fund capital renewal (deferred maintenance) and utility needs of approximately \$342.9 million over the next five years. In view of the extensive facility needs it faces, MSU has drawn upon an increasing amount of internal university resources to address the most critical facility maintenance and programmatic requirements. Self-funding these capital improvements is not sustainable without negative impacts on other programs.

The university seeks funding for more targeted and specific building systems maintenance and utilities. Examples of systems in need of repair or replacement include roofing, windows, electrical, mechanical, chiller, refrigeration, steam, fire, security, and barrier-free access.