

## Board of Curators Meeting - Public Session

University of Missouri System

Student Union, Multipurpose Room 401 A&D, University of Missouri - Kansas City

2025-02-06 08:00 - 2025-02-06 18:00 CST

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approximate)

Location: Student Union, Multipurpose Room 402 The Board of Curators will hold an executive session of the February 6, 2025 meeting, pursuant to Sections 610.021(1), 610.021(2), 610.021(3), 610.021(12), 610.021(13) and 610.021(17) RSMo, for consideration of certain confidential or privileged communications with university counsel, real estate, personnel, litigation, contract items and confidential or privileged communications between a public governmental body and its auditor, all as authorized by law and upon approval by resolution of the Board of Curators.

## V. AUDIT, COMPLIANCE AND ETHICS COMMITTEE MEETING - EXECUTIVE SESSION

(8:15 AM, time is approximate)

Location: Student Union, Multipurpose Room 402 (8:15 AM, time is approximate) The Audit, Compliance and Ethics Committee will hold an executive session of the February 6, 2025 meeting, pursuant to Section 610.021(1), 610.021(3), 610.021(12), 610.021(13) and 610.021(17) RSMo, for consideration of certain confidential or privileged communications with university counsel, contract, personnel items and confidential or privileged communications between a public governmental body and its auditor as authorized by law and upon approval

by resolution of the Audit, Compliance and Ethics Committee.

**VI. LUNCHEON BY INVITATION FOR THE BOARD OF CURATORS, PRESIDENT,  
UNIVERSITY OF MISSOURI SYSTEM LEADERS**

Time: 12:00 PM, time is approximate Location: Student Union Multipurpose Room, 401 B&C

**VII. RECONVENE PUBLIC SESSION - 1:00 PM (time is approximate)**

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<b>XVIII. BOARD OF CURATORS MEETING - EXECUTIVE SESSION</b>	
Location: Student Union, Room 402 The Board of Curators will hold an executive session of the February 6, 2025 meeting, pursuant to Sections 610.021(1), 610.021(2), 610.021(3), 610.021(12), 610.021(13) and 610.021(17) RSMo, for consideration of certain confidential or privileged communications with university counsel, real estate, personnel, litigation, contract items and confidential or privileged communications between a public governmental body and its auditor, all as authorized by law and upon approval by resolution of the Board of Curators.	
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# University of Missouri Board of Curators Meeting

February 6, 2025 - Public Session

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————— University of Missouri System —————



## Vision

To advance the opportunities for success and well-being for Missouri, our nation and the world through transformative teaching, research, innovation, engagement and inclusion.

## Mission

To achieve excellence in the discovery, dissemination, preservation and application of knowledge. With an unwavering commitment to academic freedom and freedom of expression, the university educates students to become leaders, promotes lifelong learning by Missouri's citizens, fosters meaningful research and creative works, and serves as a catalyst for innovation, thereby advancing the educational, health, cultural, social and economic interests to benefit the people of Missouri, the nation, and the world.

## Missouri Compacts for Achieving Excellence

The Missouri Compacts for Achieving Excellence provide unifying principles that inform and guide the four universities and their strategic plans. Learn more about the compacts, below, at <http://umurl.us/prespri>.



Excellence in  
Student Success



Excellence in  
Research and  
Creative Works



Excellence in  
Engagement and  
Outreach



Inclusive  
Excellence



Excellence in  
Planning, Operations  
and Stewardship

## Core Values

Our institution collectively embraces a series of core values that serve as the foundation upon which we build new knowledge and provide outstanding programs for students and citizens of our state and beyond.



- Academic freedom
- Access
- Accountability
- Civility
- Collaboration
- Creativity
- Discovery
- Engagement
- Excellence
- Freedom of expression
- Inclusion
- Innovation
- Integrity
- Respect
- Responsibility
- Transparency

## Guiding Principles

1. Support courageous and proactive leadership that is articulate, unified and committed to excellence in carrying out our existing core missions of teaching, research, engagement and economic development and in meeting the changing needs of the world and the state.
2. Establish a collaborative environment in which UM System universities work together to achieve collective results that cannot be achieved individually and are committed to each other and our mutual success.
3. Exercise central authority that recognizes and respects institutional distinctiveness, appropriate deference and accountability.
4. Enact informed decisions based on collaboratively developed strategic directions and planning.
5. Identify and promote systemwide core values, including respect for all people, transparency, accountability, stewardship and purposeful self-assessment of performance.

## Board Value Statement

Board of Curators of the University of Missouri establish the following statement of values to guide members in the governance of the University of Missouri pursuant to the Constitution and the Revised Statutes of the State of Missouri:

1. **Trustworthy & Transparent Communication.** We value an environment of openness, collaboration and honesty with each other above all else, and support open communication and the free expression of ideas. We will endeavor to communicate with each other and with all University stakeholders with honesty and integrity. We will perform our duties ethically and avoid conflicts of interest.
2. **Respect.** We are respectful of each other and all University stakeholders in our interactions. We believe that civility, courtesy, decency and tolerance are critical when engaging in discussions with others with whom we may not agree. We encourage independent judgment and the sharing of a diversity of thoughts, and accept others' unique perspectives as valuable contributions to governing discussions.
3. **Healthy Board Governance.** We are committed to a healthy culture of board governance, one that is dedicated to sustaining the trust and support for the University of Missouri. We will devote time and effort needed to responsibly and capably perform our duties. We will exercise responsible stewardship and uphold our fiduciary duties as Curators. We will fully prepare for, attend and participate in board meetings, and seek to continually increase our understanding of, and adherence to, the standards for effective board governance.
4. **Support and Hold Accountable Leadership.** We are committed to supporting the leadership throughout the University of Missouri, while also holding that leadership accountable for the effective management of the University. We will establish, communicate and monitor clear performance expectations for leadership directly reporting to the Board, and will hold such leadership accountable to maintain the highest standard of ethical behavior. In supporting University leadership, we will endeavor to avoid involvement in matters delegated to the Administration.
5. **Strategic Vision.** We are committed to fully understanding, supporting and, when appropriate, challenging the short and long-term strategic priorities of the University of Missouri's constituents. We will challenge University leadership to continually develop and assess strategic plans that will be effective in supporting the Missouri Compacts for Achieving Excellence: Excellence in Student Success, Excellence in Research and Creative Works, Excellence in Engagement and Outreach, Inclusive Excellence and Excellence in Operations, Planning and Stewardship.

No. 1

Recommended Action – Resolution for Executive Session of the Board of Curators  
Meeting February 6, 2025

It was moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that  
there shall be an executive session with a closed record and closed vote of the Board of  
Curators meeting February 6, 2025 for consideration of:

- **Section 610.021(1), RSMo**, relating to matters identified in that provision, which include legal actions, causes of action or litigation, and confidential or privileged communications with counsel; and
- **Section 610.021(2), RSMo**, relating to matters identified in that provision, which include leasing, purchase, or sale of real estate; and
- **Section 610.021(3), RSMo**, relating to matters identified in that provision, which include hiring, firing, disciplining, or promoting of particular employees; and
- **Section 610.021(12), RSMo**, relating to matters identified in that provision, which include sealed bids and related documents and sealed proposals and related documents or documents related to a negotiated contract; and
- **Section 610.021 (13), RSMo**, relating to matters identified in that provision, which include individually identifiable personnel records, performance ratings, or records pertaining to employees or applicants for employment; and
- **Section 610.021(17), RSMo**, relating to matters identified in that provision, which include confidential or privileged communications between a public governmental body and its auditor.

Roll call vote of the Board:

YES

NO

Curator Blitz

Curator Fry

Curator Graves

Curator Holloway

Curator Kreswon

Curator Layman

Curator Sinuefield

Curator Wenneker

Curator Williams

The motion \_\_\_\_\_.

February 6, 2025



# AUDIT, COMPLIANCE AND ETHICS COMMITTEE

Keith A. Holloway, Chair

Lyda Krewson

Jeanne C. Sinuefield

The Audit, Compliance and Ethics Committee (“Committee”) will review and recommend policies to enhance the quality and effectiveness of the University’s financial reporting, internal control structure and compliance and ethics programs.

**I. Scope**

In carrying out its responsibilities, the Committee monitors and assesses the University’s financial reporting systems and controls, internal and external audit functions, and compliance and ethics programs.

**II. Executive Liaison**

The Chief Audit and Compliance Officer of the University or some other person(s) designated by the President of the University, with the concurrence of the Board Chair and the Committee Chair, shall be the executive liaison to the committee and responsible for transmitting committee recommendations.

**III. Responsibilities**

In addition to the overall responsibilities of the Committee described above and in carrying out its responsibilities, the charge of the Committee shall include:

A. Reviewing and making recommendations to the Board in the following matters:

1. the University risk assessment, audit plan and compliance plan; and
2. the appointment, compensation, and termination of the university’s external auditors.

B. Providing governance oversight regarding:

1. development and monitoring a University code of conduct;
2. effectiveness of the internal control framework;
3. ensuring that the significant findings and recommendations are received, discussed and appropriately resolved;
4. procedures for reporting misconduct without the fear of retaliation;
5. university compliance with applicable laws, regulations, and policies that govern all aspects of University operations including but not limited to the following:
  - a. Administrative compliance risks
  - b. Healthcare compliance risks
  - c. Research compliance risks
  - d. Information security compliance risks
  - e. Privacy compliance risks

6. those additional matters customarily addressed by the audit, compliance and ethics committee of a governing board for an institution of higher education.

C. Reviewing periodic reports regarding:

1. the independence, performance, resources and structure of the internal audit, compliance and ethics functions;
2. audit reports and open audit issue status updates;
3. management's written responses to significant findings and recommendations by the auditors;
4. the adequacy of the University's information technology methodology with regards to security, internal controls and data integrity assurance;
5. annual external audit reports, including audited financial statements, single audit and required procedures;
6. the effectiveness of the compliance and ethics program ensuring it has appropriate standing and visibility across the system.

No. 1

Recommended Action - Resolution for Executive Session of the Audit, Compliance and Ethics Committee, February 6, 2025

It was moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that there shall be an executive session with a closed record and closed vote of the Board Audit, Compliance and Ethics Committee meeting February 6, 2025, for consideration of:

- **Section 610.021(1), RSMo**, relating to matters identified in that provision, which include legal actions, causes of action or litigation, and confidential or privileged communications with counsel; and
- **Section 610.021(3), RSMo**, relating to matters identified in that provision, which include hiring, firing, disciplining, or promoting of particular employees; and
- **Section 610.021(12), RSMo**, relating to matters identified in that provision, which include sealed bids and related documents and sealed proposals and related documents or documents related to a negotiated contract; and
- **Section 610.021(13), RSMo**, relating to matters identified in that provision, which include individually identifiable personnel records, performance ratings, or records pertaining to employees or applicants for employment; and
- **Section 610.021 (17), RSMo**, relating to matters identified in that provision, which include confidential or privileged communications between a public governmental body and its auditor.

Roll call vote of the Committee: YES NO

Curator Holloway

Curator Krewson

Curator Sinquefield

The motion \_\_\_\_\_.

# Board Chair Report

Feb. 6, 2025



UMKC

MISSOURI  
S&T

UMSL

University of Missouri System

# Remington R. Williams Award Criteria

To be eligible for the award, recipients must:

- Inspire growth in their peers
- Advocate for the whole of the college experience
- Make a positive impact on their university
- Exhibit outstanding character
- Have a minimum 3.0 GPA
- Be a member of at least two student organization, and have held a leadership position in at least one of those organizations





# Remington R. Williams Award Recipient



## Vishvi Aurora

*College of Arts and Science*

- “As a leader, Vishvi has seemingly endless stores of energy and an unwavering commitment to improve processes and recognition. She also actively asks for critical feedback on how she is performing in her roles and how she can improve. And she wants this not for her own selfish ends, but to make the best and biggest impact she can for others and for campus writ large.”



# Curators' Distinguished Teaching Professors

This distinction is in recognition of a professor's outstanding teaching and reputation within their field.

It's board's highest honor to recognize outstanding research, scholarship and service to the University by awarding esteemed faculty the distinction of being a Curators' Distinguished Professor.





## Sean O'Brien

*Professor*

*School of Law*

- O'Brien's teaching focuses on criminal law, criminal procedures, sentencing mitigation and post-conviction remedies.
- Awarded UMKC's Alumnus of the Year in 2023.
- Directly responsible for the freedom of eight wrongly convicted individuals and has assisted in nine other freedoms.
- Directly responsible for removing 14 individuals, who were unconstitutionally sentenced to death row, in MO and across the U.S, has assisted in nine other removals.





# Curators' Distinguished Teaching Professor



## Yugyung Lee

*Professor*

*School of Science and Engineering*

- Lee's research and teaching focuses on artificial intelligence, data science and other emerging technologies.
- Current total grant funding is nearly \$14.5 million.
- Awarded UMKC Provost's Award for Excellence in Graduate Mentoring
- Served on more than NSF panels.
- Her publications include over 200 peer-reviewed papers and 5,735 citations.



UMKC

MISSOURI  
S&T

UMSL



UMKC

MISSOURI  
S&T

UMSL

————— University of Missouri System —————

# PRESIDENT'S REPORT

Mun Y. Choi

*Board of Curators Meeting*

Feb. 6, 2025



UMKC

MISSOURI  
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UMSL

University of Missouri System



## **Governor Kehoe's Budget Recommendations**

- **1.5%** Increase to Core Budget (**\$509M**)
- **\$50M** New Capital Funding for Radio-Isotope Research Center for NextGen MURR
- **\$313M+** Capital Funding for Continuing Projects at all 4 Universities

# USN&WR Top 25 Online Rankings

## University of Missouri System Review Commission Report

Jeanne Sinquefield, Ph.D. Chairperson  
Gary Forsee, Vice Chairperson  
Neal Bredehoeft  
Robert Duncan, Ph.D.  
Renee Hulshof  
Dave Spence  
Pam Washington, Ph.D.  
Michael Williams, J.D.

December 31, 2016

*“[Expand] distance learning, with a focus on degree and certificate-based programs in addition to individual classes”*



# USN&WR Top 25 Online Rankings

## Mizzou

- **#25** Overall Rank – Best Bachelor's (**#159** in 2016)
- **#6** – Best Master's Nursing Education
- **#14** – Best Bachelor's for Veterans
- **#14** – Best Master's in Special Education (tied)
- **#14** – Best Master's in Education for Veterans
- **#17** – Best Undergraduate in Business



## Missouri S&T

- **#5** – Best Graduate Programs in Engineering Management



# First Time College Applicants

2/3/25	2023	2024	2025
MU	19,678	22,365	25,256 (13%)
UMKC	5,226	5,435	6,328 (16%)
S&T	6,651	6,388	6,989 (9%)
UMSL	3,203	4,485	5,336 (19%)

# First Time College Active Acceptances

2/3/25	2023	2024	2025
MU	4,214	4,395	4,325 (-2%)
UMKC	496	521	591 (13%)
S&T	600	616	806 (31%)
UMSL	198	200	365 (83%)



# Student Success Highlights



**Johnathan Martinez**  
*Omicron Delta Kappa President,  
2024 President, Interfraternity  
Council*

2024 Outstanding Interfraternity  
Council President - North  
American Interfraternity  
Conference.



**Carmen Gassaway**  
*Electrical Engineering*

2024 IEEE Power & Energy Society  
Scholarship.



**Soren Johnson**  
*Ph.D. student in Biology*

2024 recipient of the R. C.  
Lewontin Early Award - Society for  
the Study of Evolution.



**Gilman Scholars**

**Elaina Cronin**, *Health Science*; **Denny  
Mosby**, *Earth & Environmental Science*;  
**Mahmoud Diallo**, *Economics*; **Sarah  
Chang**, *Biology*

# Faculty Success Highlights



**Dr. Utku Asuroglu**, *Asst. Professor,  
Composition, School of Music*

2024 Guggenheim Fellow in music composition. Only 2024 Guggenheim fellow from the state of Missouri. Hired through MizzouForward.



**Dr. Richard K. Brow**, *Curators' Dist.  
Professor of Materials Science & Eng*

2024 National Academy of Inventors (NAI) Fellow



**Magen Rooney-Kron**, *Assistant  
Professor of Education*

2024 Research Award from TASH, a national organization that advances opportunities for people with disabilities.

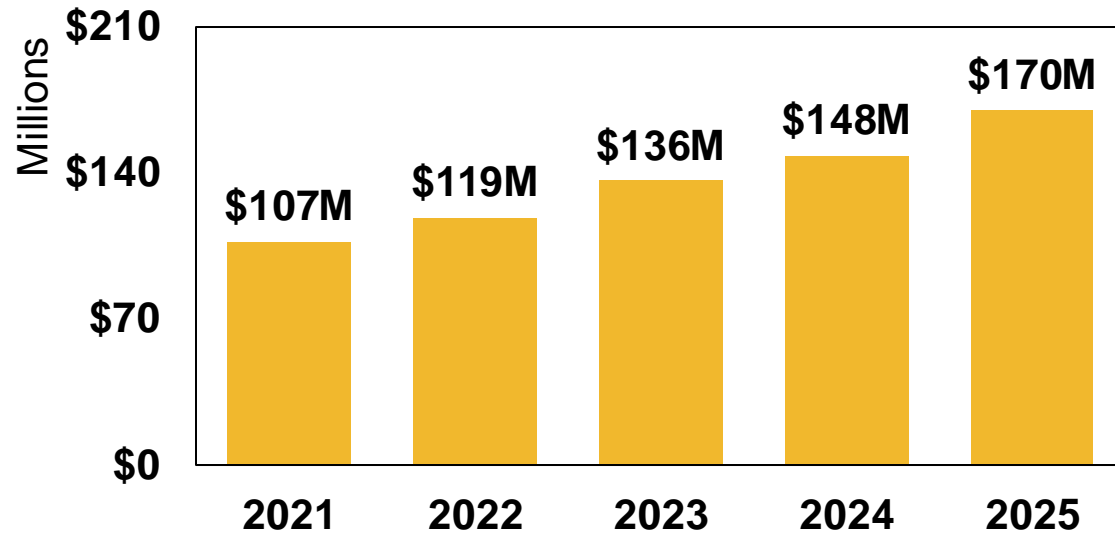


**Dr. Mark Hoffman**, *Professor,  
Pediatrics, Biomedical & Health  
Informatics*

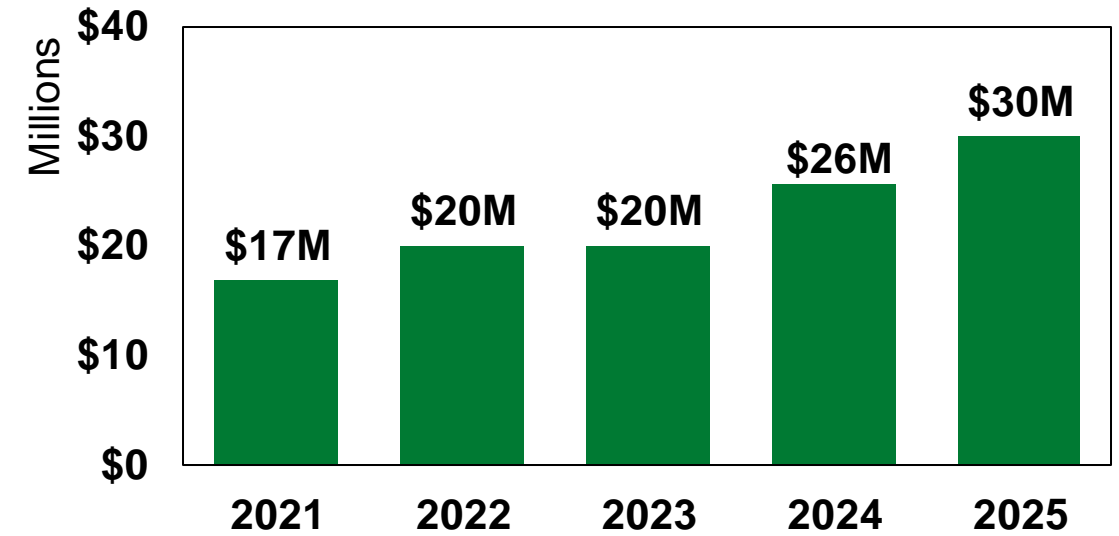
2024 National Academy of Inventors (NAI) Fellow

# FYTD Sponsored R&D Expenditures

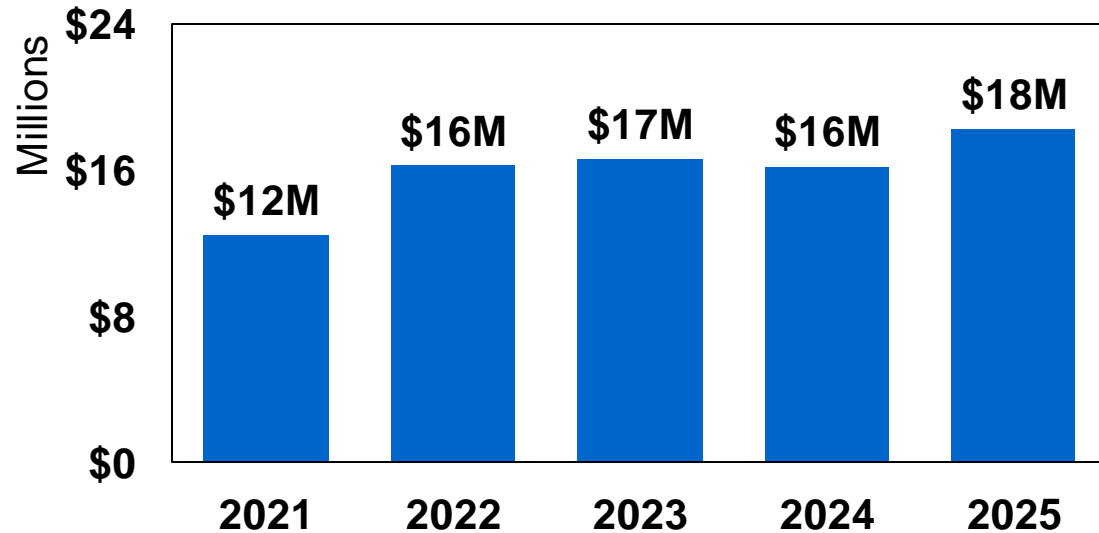
## MU



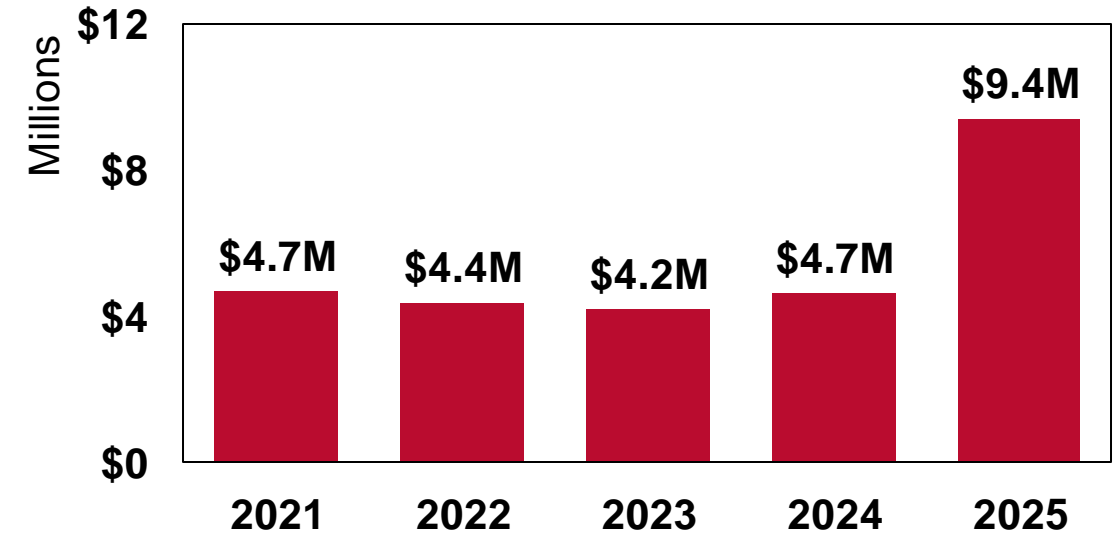
## S&T



## UMKC



## UMSL



# S&T Major Grant



## Critical Minerals and Materials for Advanced Energy (CM2AE) Tech Hub

**PI:** Dr. Kwame Awuah-Offei, *Chair and Union Pacific/Rocky Mountain Energy Professor in Mining Engineering*

**\$28.5M | Sponsor:** U.S. Economic Development Administration

The Critical Minerals and Materials for Advanced Energy (CM2AE) Tech Hub will build on the region's mineral rich geography, expertise in hydrometallurgical refining and existing assets.

Project will increase processing capacity to convert minerals into materials necessary for advanced energy and critical goods, including lithium-ion and primary-lead-acid batteries.

*Project will meet the demand of U.S. advanced energy manufacturers and reduce dependence on foreign critical minerals while creating thousands of well-paying jobs.*





# MU Major Grant



**Rejuvenate a River Basin Community Disadvantaged by Climate-Change Induced Extreme Weather Conditions**

**PI:** Dr. Baolin Deng, *Curators' Distinguished Professor*

**Co-PIs:** Dr. Patrick Market, *Director, School of Natural Resources & others*

**\$20M | Sponsor:** Environmental Protection Agency

This project will enhance the flood resilience of Brunswick and Chariton counties through research, training and community partnership.

Mr. Bill Jackson and Agri Services of Brunswick LLC are key partners.



# UMSL Major Grant

UMSL

## Missouri Comprehensive State Literacy Development

### Co-PIs:

Dr. Katie O'Daniels, *Associate Teaching Professor and Director of Gateway Writing Project*

Dr. Shea Kerkhoff, *Associate Professor of Literacy and Secondary Education*

Dr. Nancy Singer, *Interim Dean*

**\$5M | Sponsor:** MO Department of Elementary and Secondary Education  
(U.S. Department of Education)

This project will support effective literacy instruction for 40 schools in Missouri focusing on grades 6-12 and Career and Technical Education (CTE) centers statewide in the areas of:

- literacy development
- implementation of curriculum
- instruction and assessment
- school needs

*The Show Me Literacies Collaborative (SMLC) aims to increase knowledge for educators and pre-service teachers to advance evidence-based literacy practices.*



# UMKC Major Grant



## Kansas City Monuments Coalition

**PI:** Dr. Diane Mutti-Burke, *Professor of History*

### **Co-Is:**

Dr. Sandra Enriquez, *Associate Professor of History*

Dr. David Trowbridge, *William T. Kemper Associate Research Professor in Digital and Public Humanities*

**\$4M | Sponsor:** Andrew W. Mellon Foundation

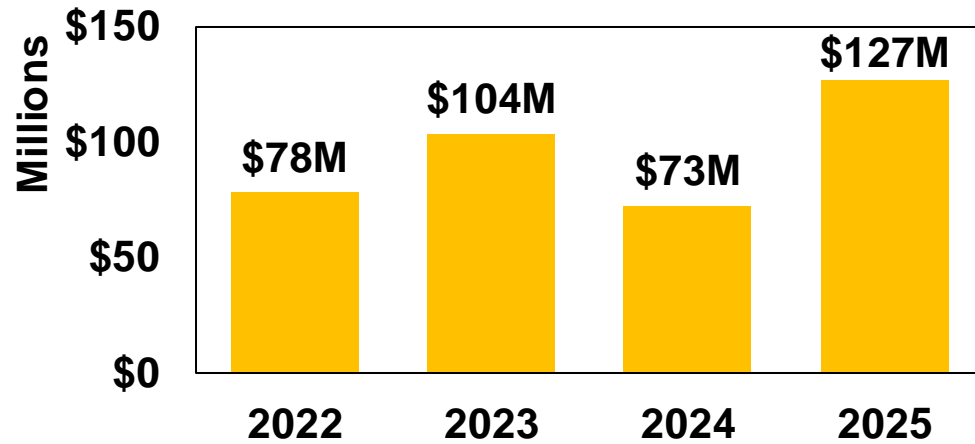
This project will work with numerous civic organizations to preserve and commemorate the history of Kansas City.

*This grant also expands internships for UMKC students exploring careers in the humanities.*

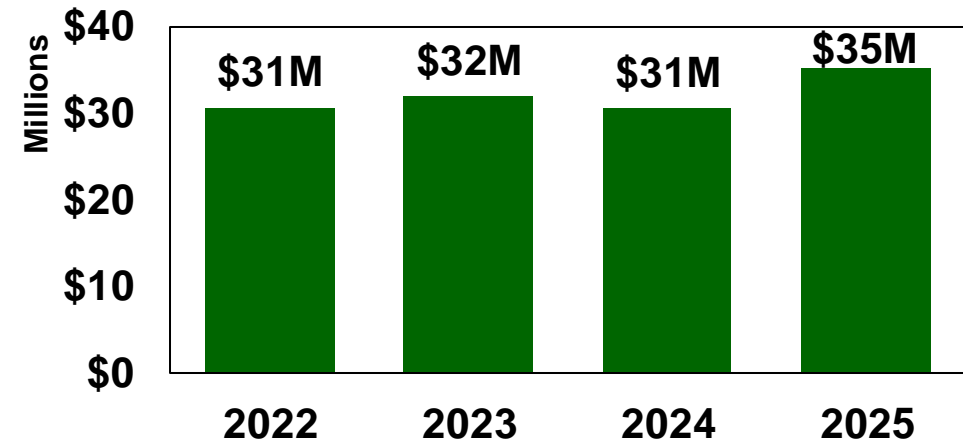


# FYTD Philanthropy

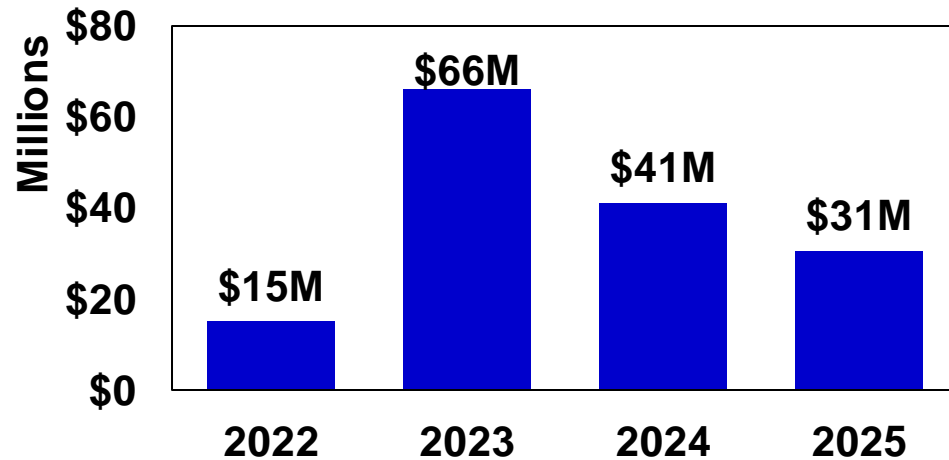
**MU (Goal \$215M)**



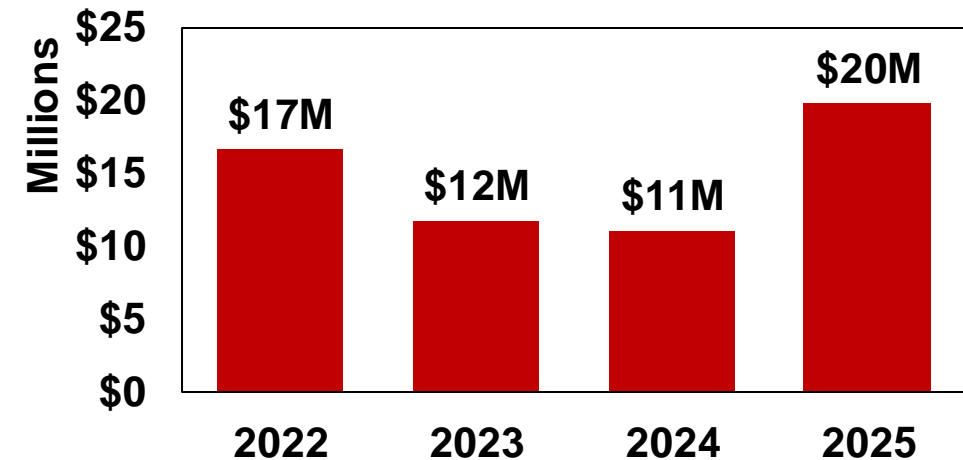
**S&T (Goal \$49M)**



**UMKC (Goal \$55M)**



**UMSL (Goal \$25M)**







————— University of Missouri System —————

# UMKC

## 2025 Updates

Chancellor Mauli Agrawal



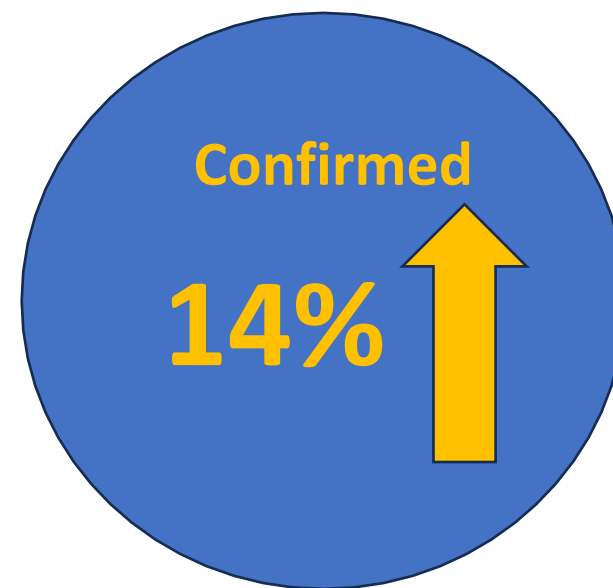
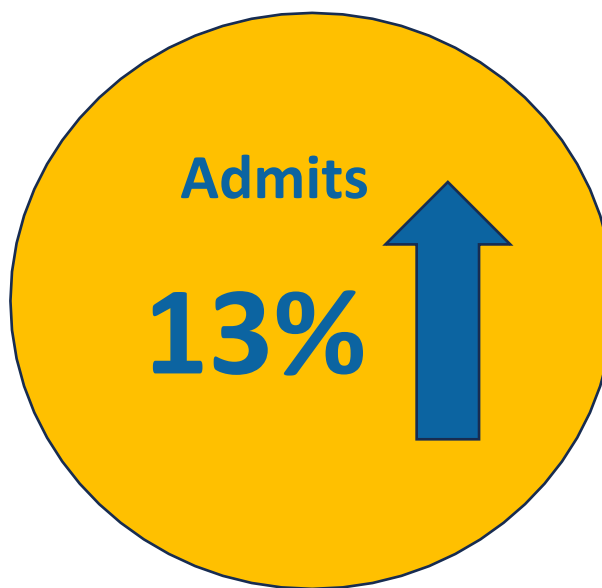
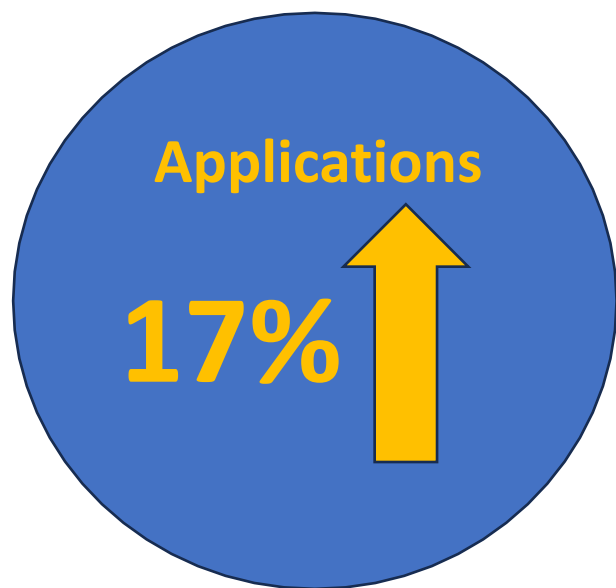
# UMKC defying enrollment cliff

- Breaking records:
  - In Fall 2023, UMKC broke the record for largest FTC class in its history, increasing 11%
  - In Fall 2024, UMKC did it again, growing another 4%.
- Total UG enrollment up second year in a row (Up 3% Fall 24)
- This year's freshman class was 58% FirstGen (52% of all UG)
- 52% of FTC are Pell-eligible



# Looking to break records again in Fall 2025

- Applications and admits up almost across the board in all categories for Fall 2025 (as of 1/27/25)

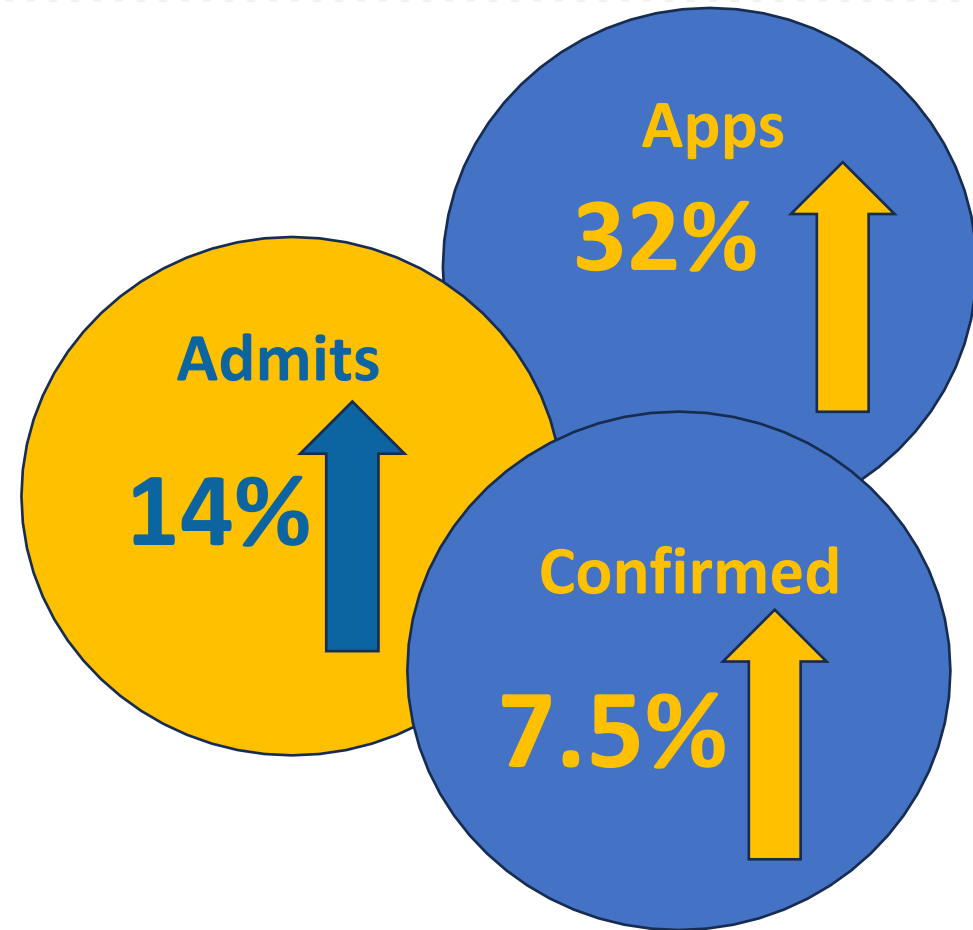


**First-Time College**



# Transfer enrollment going strong

- Transfer enrollment trending up across the board for Fall 2025.
- Added Roomentum transfer programs with:
  - Metropolitan Community College-KC
  - Johnson County Community College
  - Kansas City Kansas Community College, and
  - North Central Missouri College
- For Fall 2024, Transfers were up 6%, and Fall 2025 appears headed for another increase



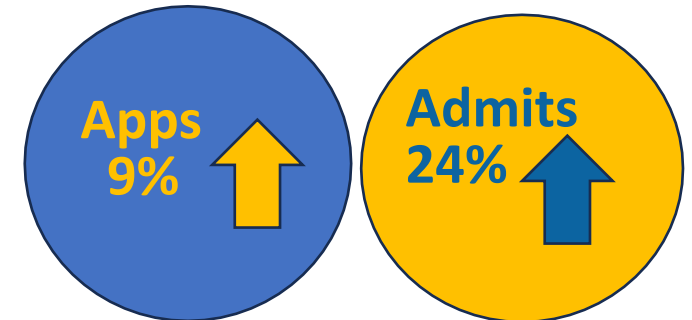


# Grad student admissions on the rise

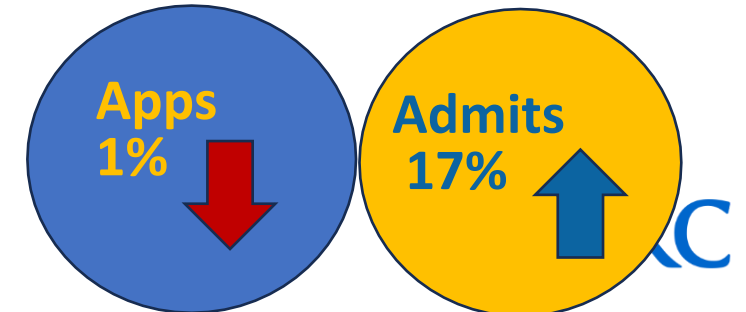


- Graduate apps and admits up across the board
- New PhDs approved by Curators in 2024 attracting new attention

**Domestic  
Graduate**



**International  
Graduate**



# UMKC earns top accolades



- UMKC climbed 25 spots in overall ranking
- Grad programs earned Top 50 honors for Law, Medicine, Pharmacy, Nursing
- Ranked 33<sup>rd</sup> for Online Nursing Degree program

February 6, 2025 OPEN -- GB VIII A -- INFO3-Slide 5

WALL STREET JOURNAL  
RANKS UMKC

**#1 Student Experience**

**#1 Social Mobility**

**#2 Starting Salaries**

**#2 Best Value**

AMONG PUBLIC  
UNIVERSITIES IN MISSOURI  
AND KANSAS



# Conservatory fundraiser breaks all-time record





# December 2024 commencement



Mayra Aguirre, president of the Hall  
Family Foundation, gives keynote



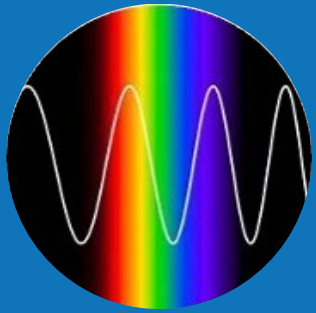


# December: First cohort of physicians graduates from rural medical campus



# UMKC poised to receive Carnegie R1 research designation

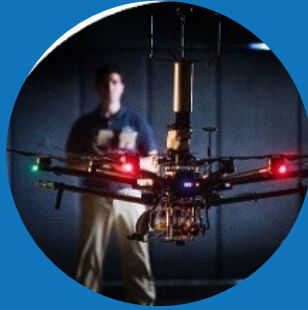
UMKC's top areas of research:



Electro-  
magnetic  
radiation  
and energy



Advanced  
and critical  
materials



Unmanned  
platforms



AI,  
cybersecurity  
and data  
science



Digital  
humanities

**Healthcare**

**Defense**



# Faculty earn top accolades

**John Spertus, School of Medicine: Four-year, \$8.3 million NIH grant largest in UMKC history**



**Clancy Martin, School of Humanities and Social Sciences**



# Big year ahead for UMKC Foundation

- FY25 fundraising production at 54% of goal
- 2025 Giving Day set for March 4-5
- Blue & Bold comprehensive campaign set to kick off Fall 2025
  - \$500 million goal, currently at 37% raised.
  - Background: UMKC's last campaign ended in 2016 and exceeded \$250M goal.





# Student Success Renovations Phase 1 – Miller Nichols Library

## Library space for:

- First Gen Roos
- Bloch Scholars & KC Scholars
- Academic Support & Mentoring
- Writing Studio

## Timing:

- Late May move-in
- Open for business fall semester
- Grand opening TBA



# Student Success Center Renovations Phase 2 – Atterbury

**Renovated space in Atterbury will support:**

- Admissions and Welcome Center
- Career Services and Roo Advising
- Financial Wellness
- Graduate Studies
- International Student Affairs

**Timing:**

- Construction begins May 2025.
- Move-in May 2026.
- Fully operational by July 2026.



WELCOME CENTER





# Atterbury Current





# Atterbury Proposed



NEW NORTH ENTRY

February 6, 2025 OPEN -- GB VIII A -- INFO3-Slide 15



# UMKC School of Medicine St. Joseph Medical Education Building

- Completion slated for Fall 2025





# Progress report: Healthcare Delivery and Innovation Building in Kansas City





# Epperson House: Beloved campus building to get new life

NEWS > LOCAL NEWS

## UMKC announces plans for historic Epperson House





# KC Streetcar begins test runs to UMKC, set to launch service summer 2025



# KC Roos make headlines

- Men's Soccer
  - Made top 16 in NCAA tournament
  - High rankings in several national preseason polls, ranging from 13<sup>th</sup> to 18<sup>th</sup>
- New partnership brings Roos basketball to local TV: KCMH/KSHB





# Go Chiefs!



**Carly Hays and Laney Duchene: UMKC students and Kansas City Chiefs cheerleaders**



# Roo up!



No. 1

Recommended Action - Approval of Board of Curators Executive Committee and  
Standing Committees Appointments, 2025

It was recommended by Chair Graves, moved by Curator \_\_\_\_\_ and  
seconded by Curator \_\_\_\_\_, that the following Board of Curators Executive  
Committee, Standing Committees and Mizzou Intercollegiate Athletics Special Committee  
appointments be approved for 2025:

**Executive Committee**

Todd P. Graves, Chair  
Michael A. Williams, Vice-Chair  
Robin R. Wenneker, Past Chair

**Academic, Student Affairs, Research and Economic Development Committee**

Jeanne C. Sinquefield, Chair  
Robert D. Blitz  
Michael A. Williams  
Jeff L. Layman

**Audit, Compliance and Ethics Committee**

Keith A. Holloway, Chair  
Lyda Krewson  
Jeanne C. Sinquefield

**Finance Committee**

Robin Wenneker, Chair  
Robert D. Blitz  
Robert W. Fry  
Keith A. Holloway  
Lyda Krewson

**Governance, Compensation and Human Resources Committee**

Lyda Krewson, Chair  
Robert W. Fry  
Jeff L. Layman  
Robin R. Wenneker

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**Health Affairs Committee**

Michael A. Williams, Chair

Robert W. Fry

Keith A. Holloway

Jeff L. Layman

Ronald G. Ashworth (non-curator)

Phillip Burger (non-curator)

Dan P. Devers (non-curator)

Dr. James H. Whitaker (non-curator)

**Mizzou Intercollegiate Athletics Special Committee**

Robert D. Blitz, Chair

Todd P. Graves

Jeff L. Layman

Robin R. Wenneker

Roll call vote:

YES

NO

Curator Blitz

Curator Fry

Curator Graves

Curator Holloway

Curator Krewson

Curator Layman

Curator Sinuefield

Curator Wenneker

Curator Williams

The motion \_\_\_\_\_.

February 6, 2025

## REVIEW CONSENT AGENDA

There are no materials for this information item.

## CONSENT

### Recommended Action - Consent Agenda

It was endorsed by President Choi, moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that the following items be approved by consent agenda:

### CONSENT AGENDA

#### Action

- A. Minutes, October 29, 2024 Board of Curators Finance Committee Special Meeting
- B. Minutes, November 6, 2024 Board of Curators Special Meeting
- C. Minutes, November 8, 2024 Mizzou Intercollegiate Athletics Committee Meeting
- D. Minutes, November 20, 2024 Board of Curators Meeting - UMSL
- E. Minutes, December 3, 2024 Academic, Student Affairs, Research and Economic Development Committee Meeting
- F. Minutes, December 20, 2024 Board of Curators Special Meeting
- G. Project Approval, Phase II Student Success, Atterbury and Miller Nichols Library Renovation, UMKC
- H. Spinal Cord Injuries and Congenital or Acquired Disease Processes Research Program
- I. Security Resolution, February 2025
- J. A/E Hire, Olson Performing Arts Center Renovation and Addition, UMKC

Roll call vote of the Board:                      YES                      NO

Curator Blitz  
Curator Fry  
Curator Graves  
Curator Holloway  
Curator Krewson  
Curator Layman  
Curator Sinuefield  
Curator Wenneker  
Curator Williams

The motion \_\_\_\_\_.

Consent A

Recommended Action - Minutes, October 29, 2024 Board of Curators Meeting

It was moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that the minutes of the October 29, 2024 Board of Curators meeting be approved as presented.

Roll call vote:	YES	NO
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Curator Blitz		
Curator Fry		
Curator Graves		
Curator Holloway		
Curator Krewson		
Curator Layman		
Curator Sinquefield		
Curator Wenneker		
Curator Williams		

The motion \_\_\_\_\_.

Consent B

Recommended Action - Minutes, November 6, 2024 Board of Curators Special Meeting

It was moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that the minutes of the November 6, 2024 Board of Curators Special meeting be approved as presented.

Roll call vote:

YES

NO

Curator Blitz

Curator Fry

Curator Graves

Curator Holloway

Curator Krewson

Curator Layman

Curator Sinquefield

Curator Wenneker

Curator Williams

The motion \_\_\_\_\_.

Consent C

Recommended Action - Minutes, November 8, 2024 Board of Curators Mizzou  
Intercollegiate Athletics Committee Meeting

It was moved by Curator \_\_\_\_\_ and seconded by Curator  
\_\_\_\_\_, that the minutes of the November 8, 2024 Board of Curators Mizzou  
Intercollegiate Athletics Special Committee meeting be approved as presented.

Roll call vote:	YES	NO
-----------------	-----	----

Curator Blitz  
Curator Fry  
Curator Graves  
Curator Holloway  
Curator Krewson  
Curator Layman  
Curator Sinquefield  
Curator Wenneker  
Curator Williams

The motion \_\_\_\_\_.

Consent D

Recommended Action - Minutes, November 20, 2024 Board of Curators - UMSL

It was moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that the minutes of the November 20, 2024 Board of Curators meeting be approved as presented.

Roll call vote:	YES	NO
-----------------	-----	----

Curator Blitz		
Curator Fry		
Curator Graves		
Curator Holloway		
Curator Krewson		
Curator Layman		
Curator Sinquefield		
Curator Wenneker		
Curator Williams		

The motion \_\_\_\_\_.

February 6, 2025

OPEN – CONSENT – D-1



Consent E

Recommended Action - Minutes, December 3, 2024 Board of Curators  
Academic, Student Affairs, Research and Economic  
Development Committee

It was moved by Curator \_\_\_\_\_ and seconded by Curator  
\_\_\_\_\_, that the minutes of the December 3, 2024 Board of Curators Academic,  
Student Affairs, Research and Economic Development committee meetings be approved  
as presented.

Roll call vote:	YES	NO
-----------------	-----	----

Curator Blitz		
Curator Fry		
Curator Graves		
Curator Holloway		
Curator Krewson		
Curator Layman		
Curator Sinquefield		
Curator Wenneker		
Curator Williams		

The motion \_\_\_\_\_.

February 6, 2025

Consent F

Recommended Action - Minutes, December 20, 2024 Board of Curators Special Meeting

It was moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that the minutes of the December 20, 2024 Board of Curators Special meeting be approved as presented.

Roll call vote:

YES

NO

Curator Blitz  
Curator Fry  
Curator Graves  
Curator Holloway  
Curator Krewson  
Curator Layman  
Curator Sinquefield  
Curator Wenneker  
Curator Williams

The motion \_\_\_\_\_.

February 6, 2025

Project Reapproval  
Student Success, Atterbury and Miller Nichols Library Renovations  
UMKC

University of Missouri – Kansas City requests reapproval of the Student Success, Atterbury, and Millers Nichols Library Renovations project to incorporate the Phase Two portion for Atterbury Renovations. Phase One was the Miller Nichols Library Renovation, and Phase Two is the Atterbury Renovation. The total cost of both phases is \$30,000,000.

In September 2023, the Board approved Phase One of the project at a cost of \$11,500,000. The funding sources were \$3,992,000 from MoExcels and \$7,508,000 from gifts. The Board also approved the A/E Hire for Phase Two of the project, with the campus to seek Phase Two funding approval at a later date.

UMKC now requests project reapproval with additional funding for Phase Two included. The project budget has been updated to include \$20,000,000 from internal debt through the university's central bank. The new internal debt will be serviced with capacity created by the payoff of a prior debt on a former auxiliary project. Gifts for the project will be reduced by \$1,500,000 due to the reallocation of unrestricted gifts to other campus priorities.

Phase One of this project renovated 31,300 SF of space on the fourth floor of Miller Nichols Library. The renovated space will support student success functions, including Undergraduate Research, Escalators Program, Bloch Scholars/Scholars, Academic Support Mentoring, Peer Academic Leaders, Shared Common Space, and Long-term storage. Renovations in the Miller Nichols Library also consolidated existing library functions on the fourth floor to free up space for student success functions.

Phase Two will renovate approximately 44,400 SF of space on the basement, first, and second floors of Atterbury Student Success Center. The renovated space will house student success functions, including Admissions and Welcome Center, UMKC Central, Roo Advising, Financial Wellness, Career Services, University College, School Of Medicine, International Student Affairs, and Graduate Studies.

These renovations are intended to create a transformative student success experience by strategically collocating student services for improved delivery. The plan will positively impact student success by fostering exploration, collaboration, innovation, and discovery while more effectively providing the resources and support they need to achieve their academic goals.

This project is expected to be completed in August 2026 and will be delivered using the traditional Design-Bid-Build method.

February 6, 2025

OPEN – CONSENT – G-1

No. G

Recommended Action – Project Reapproval, Student Success, Atterbury, and Miller Nichols Library Renovations, UMKC

It was recommended by Chancellor Agrawal, endorsed President Choi, recommended by the Finance Committee, moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that the following action be approved:

the project reapproval for the Student Success, Atterbury, and Miller Nichols Library Renovations, UMKC

Funding of the project budget is from:

State Appropriation	\$3,992,000
Gifts	\$6,008,000
<u>Internal Debt</u>	<u>\$20,000,000</u>
Total Funding	\$30,000,000

Roll call vote Finance Committee                      YES                      NO

Curator Blitz

Curator Fry

Curator Holloway

Curator Krewson

Curator Wenneker

The motion \_\_\_\_\_.

Roll call vote Full Board:                      YES                      NO

Curator Blitz

Curator Fry

Curator Graves

Curator Holloway

Curator Krewson

Curator Layman

Curator Siquefield

Curator Wenneker

Curator Williams

The motion \_\_\_\_\_.

February 6, 2025

## **Spinal Cord Injuries and Congenital or Acquired Disease Processes Research Program**

The 91<sup>st</sup> General Assembly enacted legislation (HB 218 and HB 302, 2001) to provide support for a program of research projects that promote and advance knowledge in the areas of spinal cord injuries and congenital or acquired disease processes. As part of this legislation, there was created in the state treasury a “Spinal Cord Injury Fund” from which annual appropriations are to be made for the use of the Board of Curators of the University of Missouri. The primary source of money for this fund is a surcharge of two dollars levied on certain costs in criminal cases including violations of any county ordinance or any violation of criminal or traffic laws of the state.

The research grants funded by these appropriations are to be awarded by the Board of Curators to investigators who are affiliated with a public or private educational, health care, voluntary health association or research institution, based on the recommendations of an Advisory Board appointed by the Board of Curators for this purpose. Individual awards (\$100,000 per year) shall expire at the end of one year. The objective of the grants is to obtain preliminary data to test hypotheses and to enable investigators to develop subsequent competitive applications for long-term funding from other sources. The research projects are to be conducted in Missouri.

“Congenital” spinal cord abnormalities include birth defects affecting the spinal cord such as spina bifida. In addition to traumatic injuries to the spinal cord that lead to paralysis, “acquired” abnormalities could include Friedreich’s ataxia, which manifests itself in teenage years and appears to run in families, and paralysis due to multiple sclerosis, polio, etc. Approximately 450,000 people in the United States have sustained traumatic spinal cord injuries (SCI), with approximately 11,000 new cases of SCI in the US every year. The majority (78%) of SCI victims are males. Most of the injuries result from motor vehicle accidents (50%), falls (24%), violence (11%), or sports injuries (9%).

The action requested of the Board is to approve funding for six research proposals approved by the Spinal Cord Injury Advisory Board.

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OPEN – CONSENT –H

Consent H

Recommended Action - Spinal Cord Injuries and Congenital or Acquired Disease  
Processes Research Program Proposals

It was recommended by vice chancellor for research and economic development, Thomas Spencer, Ph.D., endorsed by President Mun Y. Choi, recommended by the Academic, Student Affairs and Research and Economic Development Committee, moved by Curator \_\_\_\_\_, and seconded by Curator \_\_\_\_\_, that the following action be approved:

that the research proposals approved by the Spinal Cord Injuries Research Program Advisory Board be approved as presented on the following pages.

Roll call vote of the Committee:                      YES                      NO

Robert D. Blitz  
Todd P. Graves  
Jeanne C. Sinquefield  
Michael A. Williams

The motion \_\_\_\_\_.

Roll call vote of the Board:                      YES                      NO

Curator Blitz  
Curator Fry  
Curator Graves  
Curator Holloway  
Curator Krewson  
Curator Layman  
Curator Sinquefield  
Curator Wenneker  
Curator Williams

The motion \_\_\_\_\_.

February 6, 2025

OPEN – CONSENT –H

**SPINAL CORD INJURIES AND CONGENITAL OR ACQUIRED DISEASE  
PROCESSES RESEARCH PROGRAM**

*PROPOSALS RECOMMENDED FOR FUNDING  
2025*

- I. Development and testing of a precision siRNA therapy for CMT1E human-variant mutations

Daniel Davis, PhD  
Assistant Research Professor, Veterinary Pathobiology  
University of Missouri

Total funding recommended      \$100,000

- II. Role of ZPR1 in R-loop-mediated DNA damage and motor neuron degeneration

Laxman Gangwani, MSc, MTech, PhD  
Professor, Veterinary Pathobiology  
University of Missouri

Total funding recommended      \$100,000

- III. Elucidating translational aberrations resulting from IGHMBP2 mutations

Sarah Hurt, PhD  
Postdoctoral Fellow, Life Sciences  
University of Missouri

Total funding recommended      \$100,000

- IV. Elucidating the impact of unilateral dorsal and ventral quadrant lesions on upper airway and swallow function

Kimberly Iceman, PhD  
Assistant Research Professor, Speech, Language & Hearing  
University of Missouri

Total funding recommended      \$100,000

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OPEN – CONSENT –H

V. Optimization of AAV9 gene therapy vector for CMT2E

Dennis Perez-Lopez, BS  
Doctoral Candidate, Microbiology and Immunology  
University of Missouri

Total funding recommended      \$100,000

VI. Assessing the Translational Potential of Neuro-Ophthalmic Biomarkers in ALS

Rebecca Whiting, PhD  
Assistant Professor, Ophthalmology  
University of Missouri

Total funding recommended      \$100,000



## I. ABSTRACT:

***Daniel Davis, PhD***

*Development and testing of a precision siRNA therapy for CMT1E  
human-variant mutations*

Charcot-Marie-Tooth disease (CMT) is a group of disorders that cause damage to peripheral nerves. Peripheral nerves are the nerves that transmit information and signals from the brain and spinal cord to and from the rest of the body, including information such as touch and muscle movement. CMT is the most common inherited neuromuscular disorder, affecting an estimated 1 in 2500 people worldwide. Charcot-Marie-Tooth type 1E (CMT1E) is one of the most severe subtypes of CMT. CMT1E results in a rapidly progressive neuropathy often becoming apparent as early as 5 years of age. Clinical symptoms include muscle weakness, atrophy, and sensory loss in the feet and hands. There is no cure for CMT1E, only treatments in attempt to help manage the symptoms and improve quality of life. Mutations that cause CMT1E are inherited in an autosomal dominant manner. Autosomal dominant disorders present with unique challenges, as therapeutics must distinguish between healthy and mutant versions of the protein while maintaining high efficiency, specificity, and safety. Our research plan is to use RNA interference technology to reduce the amount of mutant protein being produced which causes CMT1E symptoms, while regulating the amount of healthy protein present. We will first use an in vitro assay to screen the efficiency and specificity of our therapeutics. Next, we will test the efficiency, specificity, and safety of our therapeutics in CMT1E-engineered mouse models. Together, the results from this study will have a significant impact for using the RNA interference platform as an effective therapeutic intervention for CMT1E.

## II. ABSTRACT:

***Laxman Gangwani, MSc, MTech, PhD***

*Role of ZPR1 in R-loop-mediated DNA damage and motor neuron degeneration*

In this research study, we will examine the role of zinc finger protein 1 (ZPR1) deficiency in degeneration of spinal cord motor neurons associated with the pathogenesis of neuromuscular disorders, including spinal muscular atrophy (SMA) and amyotrophic lateral sclerosis 4 (ALS4). SMA is caused by mutation of the *survival motor neuron 1 (SMN1)* gene and ALS4 is caused by a mutation in the *Senataxin (SETX)* gene and is characterized by the degeneration of the spinal cord motor neurons. Motor neuron degeneration causes progressive muscle atrophy and impaired voluntary limb movement. There are treatments for SMA, but these are sufficient to cure the disease. There is no treatment or cure for ALS4 disease. Although the causing gene and mutation has been identified but the biochemical defects leading motor neuron degeneration remains to be investigated. However, we have demonstrated that ZPR1 interacts with SMN and SETX but the interaction of ZPR1 with SMN and SETX is disrupted in SMA and ALS4 patients that have mutations in SMN1

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and SETX gene, respectively. Notably, increase in the ZPR1 protein levels rescue disease condition in SMA and ALS4 patient cells. These findings suggest that formation of ZPR1-protein complexes is important for preventing motor neuron degeneration. Further characterization of understanding the function of ZPR1 and ZPR1 protein complexes in preventing motor neuron degeneration will provide basis for developing novel therapeutic strategies for treating motor neuron diseases, including SMA and ALS.

### III. ABSTRACT:

***Sarah Hurt, PhD***

*Elucidating translational aberrations resulting from IGHMBP2 mutations*

Spinal Muscular Atrophy with Respiratory Distress type I (SMARD1) is a devastating pediatric disease associated with nerve degeneration, muscle weakness, sensory defects and respiratory failure due to diaphragm paralysis. Patients without ventilation support suffer premature death. SMARD1 results from mutations to immunoglobulin mu-binding protein 2 (*IGHMBP2*) that has proposed roles in many cellular processes. *IGHMBP2* mutations are also implicated in Charcot Marie Tooth type 2S (CMT2S), a disease associated with slow, progressive limb weakness but no respiratory distress. There are currently no available therapeutics for SMARD1 or CMT2S. While CMT2S and SMARD1 result from mutations to *IGHMBP2*, what processes are disrupted and how these mutations lead to disease is not understood. Multiple studies have implicated *IGHMBP2* in protein synthesis, a fundamental process that is spatially and temporally specialized in neurons but is also necessary in every cell. Therefore, it is not surprising that a disruption to protein synthesis would lead to disease. This project aims to better understand the consequences of abnormal protein synthesis in association with *IGHMBP2* mutations utilizing mouse models our lab developed based on *IGHMBP2* mutations found in patients. This project will allow us to further understand what pathways are being disrupted due to translational errors from *IGHMBP2* mutations and whether the incorrect translation can be improved by administering an *IGHMBP2* gene therapy. Understanding the translational consequences of *IGHMBP2* mutations will allow for further efforts towards therapeutics for these devastating diseases.

### IV. ABSTRACT:

***Kimberly Iceman, PhD***

*Elucidating the impact of unilateral dorsal and ventral quadrant lesions on upper airway and swallow function*

Swallow dysfunction can lead to devastating bouts of pneumonia and death by allowing food/liquid to enter the lungs. This is an understudied and often “invisible” consequence of cervical spinal cord injury. A key to understanding why this occurs is study of the larynx (i.e., voice box), which acts as a valve controlling entrance to the lungs. We recently reported that activity of the larynx is affected in the very short term (immediately and over several

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hours) after spinal cord injury. This current proposal focuses on how injuries focused to the front (ventral) or back (dorsal) parts of the spinal cord in the neck produce different swallow disorder patterns over time. We will use the gold-standard of clinical assessments for swallow function (x-ray video) and vocal fold function (scope video), combined with state-of-the-art electrophysiological experiments to align clinical deficits with underlying neurophysiology functions. With funding support from SCIDRP, we will be able to describe distinct swallow and laryngeal impairments that result from specific spinal cord injury types. This will provide clinicians with reliable information that can directly and immediately inform patient care and will spur future investigations to develop therapeutic treatments for swallow dysfunction after spinal cord injury.

V. ABSTRACT:

***Dennis Perez-Lopez, BS***

*Optimization of AAV9 gene therapy vector for CMT2E*

Charcot-Marie-Tooth (CMT) is the most common hereditary peripheral neuropathy with an incidence of 1:2,500. CMT patients present a wide range of disease onset and severity. CMT2 clinical symptoms include distal muscle weakness and atrophy and reduced nerve conduction velocity. Charcot-Marie-Tooth 2E (CMT2E) disease is a slowly developing yet unrelentingly progressive axonopathy. To date no therapeutics currently exist for CMT2E patients and many other types of CMT. CMT2E is caused by mutations in the neurofilament light gene chain (*NEFL*). Mutations in *NEFL* leads to the formation of neurofilament aggregates in the spinal cord, cerebellum, and neuromuscular junctions leading to an impaired axonal transport. To better understand disease progression and to evaluate gene therapies for CMT2E, we have generated two mouse models with the E396K mutation in the neurofilament light gene that present a severe and consistent phenotype. CMT2E models shows a muscle weakness, muscle atrophy, and electrophysiological defects similar to the patients. Additionally, we have generated a novel therapeutic approach (AAV9 gene therapy). In a proof-of-concept, we have shown that this novel AAV9 gene therapy vector have rescue disease phenotype. Our goal is to optimize this gene therapy vector to advance its movement to the clinic and help patients with this disease. For that reason, we propose to optimize this vector to improve tissue targeting, identify the optimal dosage to achieve a therapeutic effect, and to identify the therapeutic window. This proposal aligns with the objectives of SCIDRP to develop gene therapy approach for an inherited disease (CMT).

VI. ABSTRACT:

***Rebecca Whiting, PhD***

*Assessing the Translational Potential of Neuro-Ophthalmic Biomarkers in ALS*

Development of treatments for neurological diseases such as amyotrophic lateral sclerosis (ALS) would be greatly enhanced by the identification of biomarkers of disease progression

February 6, 2025

that can be collected noninvasively. ALS is the most common group of adult-onset motor neuron diseases, but variation in how the disease progresses in each person is a major obstacle to the development of effective therapies. Biomarkers that are specific to each form of ALS could greatly strengthen the ability to develop new therapies. In addition to the hallmark motor symptoms, ocular abnormalities occur in some ALS patients. Most notably, deficits have been found in neurons of the retina. Studies have also found that disease-related protein changes in the fluid surrounding the central nervous system also occur in tear fluid from the eye. Since tears can be easily collected, this fluid holds promise as a source of information about ALS disease progression. In the proposed study, we will evaluate potential disease biomarkers in both ALS patients and in dogs with degenerative myelopathy (DM), a naturally occurring canine model of ALS. We will correlate findings in the canine model with similar measures in ALS patients. Identifying novel biomarkers in both DM dogs and ALS patients would improve the likelihood of finding treatments in the dog model that can be used successfully to benefit people with ALS.

It was endorsed by President Choi, moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that the following resolution be approved:

#### Resolution

The Curators of the University of Missouri agree that the following individuals occupying the designated offices shall constitute a Security Executive Committee with full authority and responsibility for the negotiation, execution and administration of Department of Defense, Department of Energy, or User Agency classified contracts as described in 32 CFR §117, National Industrial Security Program Operating Manual (NISPOM):

The members of this Security Executive Committee have been processed for a personnel security clearance for access to classified information up to the level of the facility security clearance granted to this institution, as provided for under the aforementioned security program.

- Mun Y. Choi, Ph.D., President, University of Missouri System, and Chancellor, University of Missouri-Columbia
- Todd P. Graves, Curator, University of Missouri System
- Matthew P. Martens, Ph.D., Provost, University of Missouri-Columbia
- Thomas E. Spencer, Ph.D., Vice Chancellor, University of Missouri-Columbia
- C. Mauli Agrawal, Ph.D., Chancellor, University of Missouri-Kansas City
- Jennifer Lundgren, Ph.D., Provost, University of Missouri-Kansas City
- Sumeet Dua, Ph.D., Vice Chancellor, University of Missouri-Kansas City
- Mohammad Dehghani, Ph.D., Chancellor, Missouri University of Science and Technology

The Security Executive Committee is hereby delegated all the Board's duties and responsibilities pertaining to the protection of classified information under classified contracts of the Department of Defense, Department of Energy, or User Agencies awarded to the Curators of the University of Missouri.

University of Missouri-Columbia will utilize the University of Missouri System facility security clearance. As such, the following members of the Security Executive Committee are delegated all the Board's duties and responsibilities pertaining to the protection of classified information under classified contracts of the Department of Defense, Department of Energy, or User Agencies awarded to the University of Missouri-Columbia.

- Mun Y. Choi, Ph.D., President, University of Missouri System, and Chancellor, University of Missouri-Columbia
- Matthew P. Martens, Ph.D., Provost, University of Missouri-Columbia

February 06, 2025

- Thomas E. Spencer, Ph.D., Vice Chancellor, University of Missouri-Columbia

University of Missouri-Kansas City has established a subsidiary of the University of Missouri System facility security clearance. As such, the following members of the Security Executive Committee are delegated all the Board's duties and responsibilities pertaining to the protection of classified information under classified contracts of the Department of Defense, Department of Energy, or User Agencies awarded to the University of Missouri-Kansas City.

- Mun Y. Choi, Ph.D., President, University of Missouri System, and Chancellor, University of Missouri-Columbia
- C. Mauli Agrawal, Ph.D., Chancellor, University of Missouri-Kansas City
- Jennifer Lundgren, Ph.D., Provost, University of Missouri-Kansas City
- Sumeet Dua, PhD., Vice Chancellor, University of Missouri-Kansas City

The following members of the Board of Curators and UM General Officers shall not be required, shall not have, and can be effectively excluded from access to all classified information in the possession of the Curators of the University of Missouri and its subsidiaries, and do not occupy positions that would enable them to affect adversely the policies and practices of the Curators of the University of Missouri and its subsidiaries in the performance of classified contracts for the Department of Defense, Department of Energy, or User Agencies awarded to the Curators of the University of Missouri and/or its subsidiaries, and need not be processed for a personnel security clearance:

All members of the Board of Curators, except the designated member of the Security Executive Committee:

- Robert D. Blitz
- Robert W. Fry
- Keith A. Holloway
- Lyda Krewson
- Jeffrey L. Layman
- Jeanne Cairns Sinquefield
- Robin R. Wenneker
- Michael A. Williams

Officers:

- Ben Canlas, Vice President, Information Technology
- Marsha Fischer, Vice President, Human Resources and Chief Human Resources Officer
- Mark A. Menghini, J.D., General Counsel
- Ryan Rapp, Executive Vice President, Finance & Operations, and Chief Financial Officer
- Kristin Sobolik, Ph.D., Chancellor, University of Missouri-St. Louis
- Deena King, Interim Chief Audit and Compliance Officer

February 06, 2025

Roll Call Vote of the Board:

YES

NO

Curator Blitz

Curator Fry

Curator Graves

Curator Holloway

Curator Krewson

Curator Layman

Curator Sinquefield

Curator Wenneker

Curator Williams

The motion \_\_\_\_\_.

Architect/Engineer Approval  
Olson Performing Arts Center Addition and Renovations  
UMKC

The University of Missouri – Kansas City requests Architect/Engineer Hiring approval for the Olson Performing Arts Center Addition and Renovations. The project will be split into a \$40,000,000 Phase I and a \$20,000,000 Phase II and funded with a combination of philanthropy and internal sources. UMKC will seek project funding approval at a later date for both Phase I and II budgets.

Olson Performing Arts Center (OPAC) is home to UMKC’s renowned Conservatory of Music. This project will expand the facility and renovate spaces that significantly improve student experiences, enhance recruitment efforts, and grow student enrollment. Phase I involves the construction of a new approximate 49,800-square-foot addition on the east side of OPAC that addresses critical educational needs. Phase II will focus on existing building renovations of approximately 35,500 GSF. This phase includes reimagining and enhancing White Recital Hall and reconfiguring administrative offices to consolidate the leadership team into a single suite that enables greater collaboration.

The team of Helix Architecture + Design, Kansas City, Missouri is recommended as the architect/engineer for this project. The team is supplemented by Branch Pattern, Kansas City, Missouri, for Mechanical/Electrical/Plumbing Engineering, Bob D. Campbell, Kansas City, Missouri, for Structural Engineering, and SK Design, Overland Park, Kansas, for Civil Engineering. Also, part of the A/E team is Landscape Architecture, MCLV, of Kansas City, Missouri.

The selection committee also interviewed Slattery, Kansas City, Missouri and HGA, Minneapolis, Minnesota; BNIM, Kansas City, Missouri; Clark and Enersen, Kansas City, Missouri, and Perkins-Eastman/Pfeiffer, Los Angeles, California; and PGAV, Kansas City, Missouri, and Steinberg Hart, New York, New York.

The fee for basic architectural and engineering services has been determined by interpolating the University of Missouri’s “Architectural and Engineering Basic Services Fee Estimating Guidelines” with UM Facilities Planning & Development Office. The project is a Type IV (More Than Average Complexity) with a mix of New Construction and Renovation for a fee of 7% of the estimated \$45,000,000 construction cost, equating to \$3,150,000. Additional services for acoustical, theatre, AV/IT, and Security design are anticipated at \$1,930,400 for a total design fee of \$5,080,400.

The entire project will be delivered using the traditional Design-Bid-Build method. Phase One of the project is targeted for completion in March 2027, and Phase Two is targeted for completion in 2028.

February 6, 2025

OPEN – CONSENT – J-1



No. J

Recommended Action – Architect/Engineer Hiring Approval, Olson Performing Arts Center Addition and Renovations, UMKC

It was recommended by Chancellor Agrawal, endorsed President Choi, recommended by the Finance Committee, moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that the following action be approved:

the Architect/Engineer hire approval for the Olson Performing Arts Center Addition and Renovations project for the Conservatory of Music, UMKC at the maximum amount of \$5,080,400.

Roll call vote Finance Committee	YES	NO
Curator Blitz		
Curator Fry		
Curator Holloway		
Curator Krewson		
Curator Wenneker		

The motion \_\_\_\_\_.

Roll call vote Full Board:	YES	NO
Curator Blitz		
Curator Fry		
Curator Graves		
Curator Holloway		
Curator Krewson		
Curator Layman		
Curator Sinuefield		
Curator Wenneker		
Curator Williams		

The motion \_\_\_\_\_.

# FINANCE COMMITTEE

Robin R. Wenneker, Chair

Robert D. Blitz

Robert W. Fry

Keith A. Holloway

Lyda Krewson

The Finance Committee ("Committee") oversees the fiscal stability and long-term economic health of the University. The Committee will review and recommend policies to enhance quality and effectiveness of the finance functions of the University.

## **I. Scope**

In carrying out its responsibilities, the Committee monitors the University's financial operations, fundraising performance, debt level, capital priorities and investment performance; requires the maintenance of accurate and complete financial records; and maintains open lines of communication with the Board about the University's financial condition.

## **II. Executive Liaison**

The Vice President for Finance of the University or some other person(s) designated by the President of the University, with the concurrence of the Board Chair and the Committee Chair, shall be the executive liaison to the Committee and responsible for transmitting committee recommendations.

## **III. Responsibilities**

In addition to the overall responsibilities of the Committee described above and in carrying out its responsibilities, the charge of the Committee shall include

- A. Reviewing and making recommendations to the Board on the following matters:
  - 1. University operating budget and financial plan;
  - 2. University capital budget and master facility plans;
  - 3. capital projects;
  - 4. tuition, fees and housing rates;
  - 5. state appropriation requests;
  - 6. pursuant to applicable Collected Rules and Regulations, contracts and reports;
  - 7. insurance brokers and self-insurance programs;
  - 8. pursuant to applicable Collected Rules and Regulations, real estate sales, purchases, leases, easements and right-of-way agreements;
  - 9. the issuance of debt;
  - 10. asset allocation guidelines and other policies related to the University's investment management function; and
  - 11. additional matters customarily addressed by the finance committee of a governing board for an institution of higher education.
- B. Providing governance oversight to:
  - 1. long-range financial planning strategies;
  - 2. fundraising and development strategies;
  - 3. total indebtedness and debt capacity of the University;
  - 4. the investment portfolio performance; and
  - 5. the financial condition of the pension fund.

- C. Reviewing periodic reports including:
1. quarterly and year-end financial reports that measure the University's fiscal condition;
  2. annual purchasing reports on bids and equipment leases;
  3. quarterly debt-management reports;
  4. quarterly and year-end investment performance reports;
  5. semi-annual reports on development and fundraising activities; and
  6. other financial reports as requested by the Committee.

<b>Meeting Date</b>	February 6, 2025
<b>Action Title</b>	Fiscal Year 2025 Financial Performance Targets, UM
<b>Action Type</b>	Approval of Recommended Financial Performance Targets

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### ***Executive Summary***

The University of Missouri is well-positioned with a stable credit outlook in the higher education sector. Key risks that could adversely the credit position include substantial declines in demand, cash flow margins falling below 10%, or significant weakening in financial leverage and reserves. Maintaining positive operating performance is crucial for sustaining the credit rating.

### **Key Strategies and Funding Sources included in Financial Plan**

- **MU, UMKC, and Missouri S&T:** strategies focus on maintaining AAU institution status or R-1 classification. **UMSL** focuses on achieving enrollment growth and establishing the new School of Engineering.
- **Funding Sources:** The strategies are supported by stable enrollments and tuition revenues, continued growth in grants and contracts revenues, philanthropy, and the successful delivery and execution of a large capital plan.

### **Key Risks**

- **Enrollment Goals:** Achieving enrollment goals in a shrinking higher education market.
- **Research Growth:** Continuing to grow research amidst state and federal budget pressures.
- **Auxiliary Operations:** Ensuring auxiliary operations generate sufficient operating cash flow to cover debt service and capital needs.
- **Capital Investment:** Prioritizing capital needs within available resources.

The financial planning process sets the financial goals and targets. The financial goals and targets reflect the necessary level of performance to achieve each institution’s strategic objectives and maintain the consolidated credit rating.

### ***Table of Contents***

#### **1. Executive Summary**

- *Provides a high-level overview of the current five-year plan and recommended financial goals and targets for the consolidated enterprise, universities and MU Healthcare.*

#### **2. Recommended Action & Roll Call Vote [OPEN – FIN – 1 - 1-2]**

- *The formal resolution to be voted upon by the Board to provide approval of financial goals and targets for the University of Missouri, MU, UMKC, Missouri S&T, UMSL and MU Healthcare.*

#### **3. Five-year Financial Plan and Recommended Targets Presentation Deck [OPEN – FIN – 1 - 3-5]**

- *Slides to be presented at the February Board of Curators Meeting*

### ***Appendix***

#### **4. Five-year Financial Narrative & Recommended Targets [OPEN – FIN 1 – 8-19]**

- *Narrative detail of the assumptions, strategic and capital initiatives included in the financial plan and the underlying risks and outcomes supporting the action.*

## **FY2025 Five-year Financial Plan and Recommended Financial Performance Targets UM**

At the February Board of Curators Meeting, Executive Vice President Ryan Rapp will present the University's five-year financial plan and targets for Board Action. The financial plan connects annual performance, debt and capital into a comprehensive plan linked to institutional strategies. The plan identifies the key assumptions and revenue streams that underwrite financial performance and strategy attainment. The University utilizes the financial planning process to set financial performance targets as defined in Collected Rule 140.025.

### **EXECUTIVE SUMMARY**

The University of Missouri is well-positioned with a stable credit outlook in the higher education sector. The University remains within the scorecard range of a Aa1 institution for the credit, and the financial plan provides a roadmap to achieve strategic objectives while maintaining a strong financial profile. Key risks that could adversely financial position include substantial declines in demand, cash flow margins falling below 10%, or significant weakening in financial leverage and reserves. Maintaining positive operating performance is crucial for sustaining the credit rating and financial profile.

#### **Key Strategies and Funding Sources included in Financial Plan**

- **MU, UMKC, and Missouri S&T:** strategies focus on maintaining AAU institution status or R-1 classification. **UMSL** focuses on achieving enrollment growth and establishing the new School of Engineering.
- **Funding Sources:** The strategies are supported by stable enrollments and tuition revenues, continued growth in grants and contracts revenues, philanthropy, and the successful delivery and execution of a large capital plan.

#### **Key Risks**

- **Enrollment Goals:** Achieving enrollment goals in a shrinking higher education market.
- **Research Growth:** Continuing to grow research amidst state and federal budget pressures.
- **Auxiliary Operations:** Ensuring auxiliary operations generate sufficient operating cash flow to cover debt service and capital needs.
- **Capital Investment:** Prioritizing capital needs within available resources.

The financial planning process sets the financial goals and targets for the consolidated enterprise and the individual operating units. The financial goals and targets reflect the necessary level of financial performance to achieve each institution's objectives and maintain the consolidated credit rating.

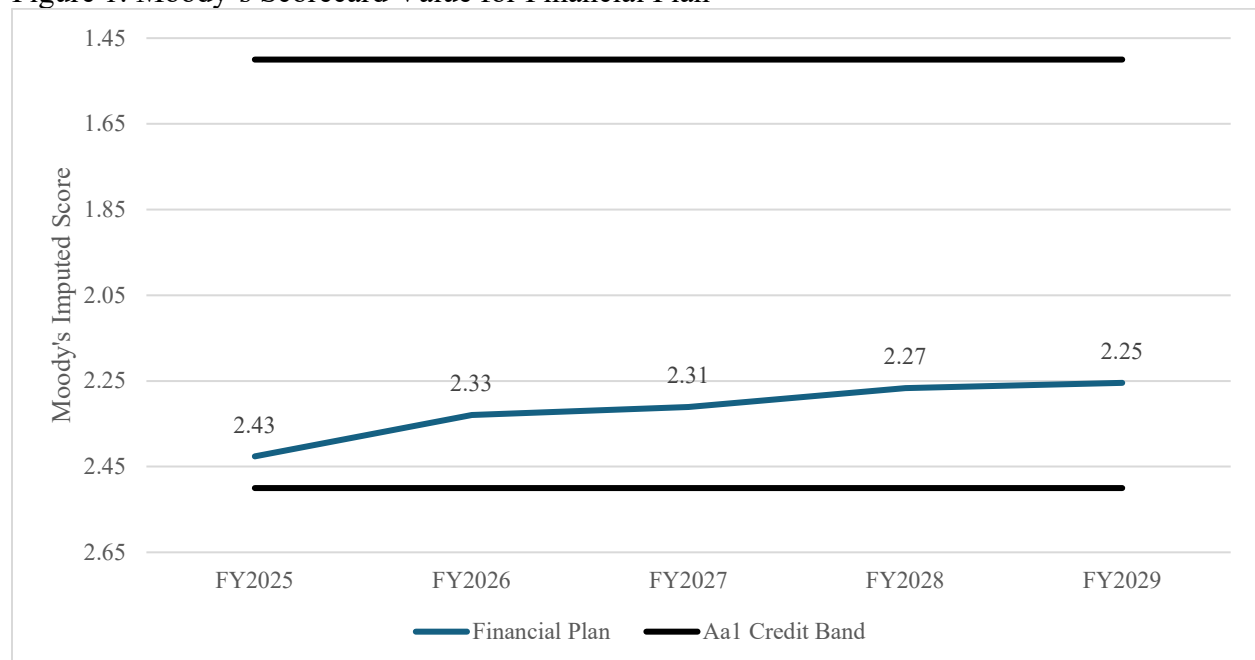
Table 1: Financial Accountability Targets by Unit

Metric	Consolidated	MU	UMKC	Missouri S&T	UMSL	MU Healthcare
Operating Margin	>3.0%	>2.5%	>1.5%	>3.0%	>1.0%	>4.5%
Spendable Cash to Operations	>0.90	>0.80	>0.75	>0.80	>0.70	200 DCOH
Spendable Cash to Debt	>3.00	>2.00	>1.75	>2.00	>1.50	>1.50
Debt Service Coverage*		>3.00	>3.00	>3.00	>3.00	>3.00

*\*Metric used to determine if unit can afford to take on additional debt service. Consolidated target is Debt to Cash flow instead of debt service coverage to account for bullet payments.*

The four metrics used for accountability relate to the scorecard model utilized by Moody's to determine the quantitative portion of the University's credit rating. Underperformance on one metric can be balanced by overperformance on another metric. The University's financial plan maintains performance within the Aa1 credit band of performance for the Moody's scorecard.

Figure 1: Moody's Scorecard Value for Financial Plan



Note: Debt bullet maturities are smoothed over the planning period.

#### Next Steps:

- Review of FY2027 State Appropriation Request – April 2025
- Review of FY2026 Budget Assumptions – April 2025
- Approval of Capital Plans – April 2025
- Approval of FY2026 Tuition – May 2025
- Approval of FY2026 Budget – June 2025
- Approval of FY2027 State Appropriations Requests – June 2025.

No. 1

Recommended Action - Financial Performance Targets, UM

It was recommended by President Choi and Executive Vice President Ryan Rapp, recommended by the Finance Committee, moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that the following recommendations be approved:

The financial performance targets for the University of Missouri, MU, UMKC, Missouri S&T, UMSL and MU Healthcare as presented in executive summary.

Roll call vote Finance Committee	YES	NO
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Curator Blitz

Curator Fry

Curator Holloway

Curator Krewson

Curator Wenneker

The motion \_\_\_\_\_.

Roll call vote Full Board:	YES	NO
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Curator Blitz

Curator Fry

Curator Graves

Curator Holloway

Curator Krewson

Curator Layman

Curator Siquefield

Curator Wenneker

Curator Williams

The motion \_\_\_\_\_.

# Fiscal Year 2025 Five-year Plan and Recommended Targets

February 6, 2025



UMKC

MISSOURI  
S&T

UMSL

University of Missouri System

OPEN – FIN – 1 - 4

February 6, 2025



# Purpose of a Financial Plan

- Connects annual budgets, debt utilization, and capital plans into a comprehensive financial plan matched to long-term strategies
- Identifies key assumptions to underwrite financial and strategy attainment
- Serves as the starting point for the budget planning process in the next year and validates the ability to underwrite the capital plan
- Focuses leadership on a longer-term planning horizon



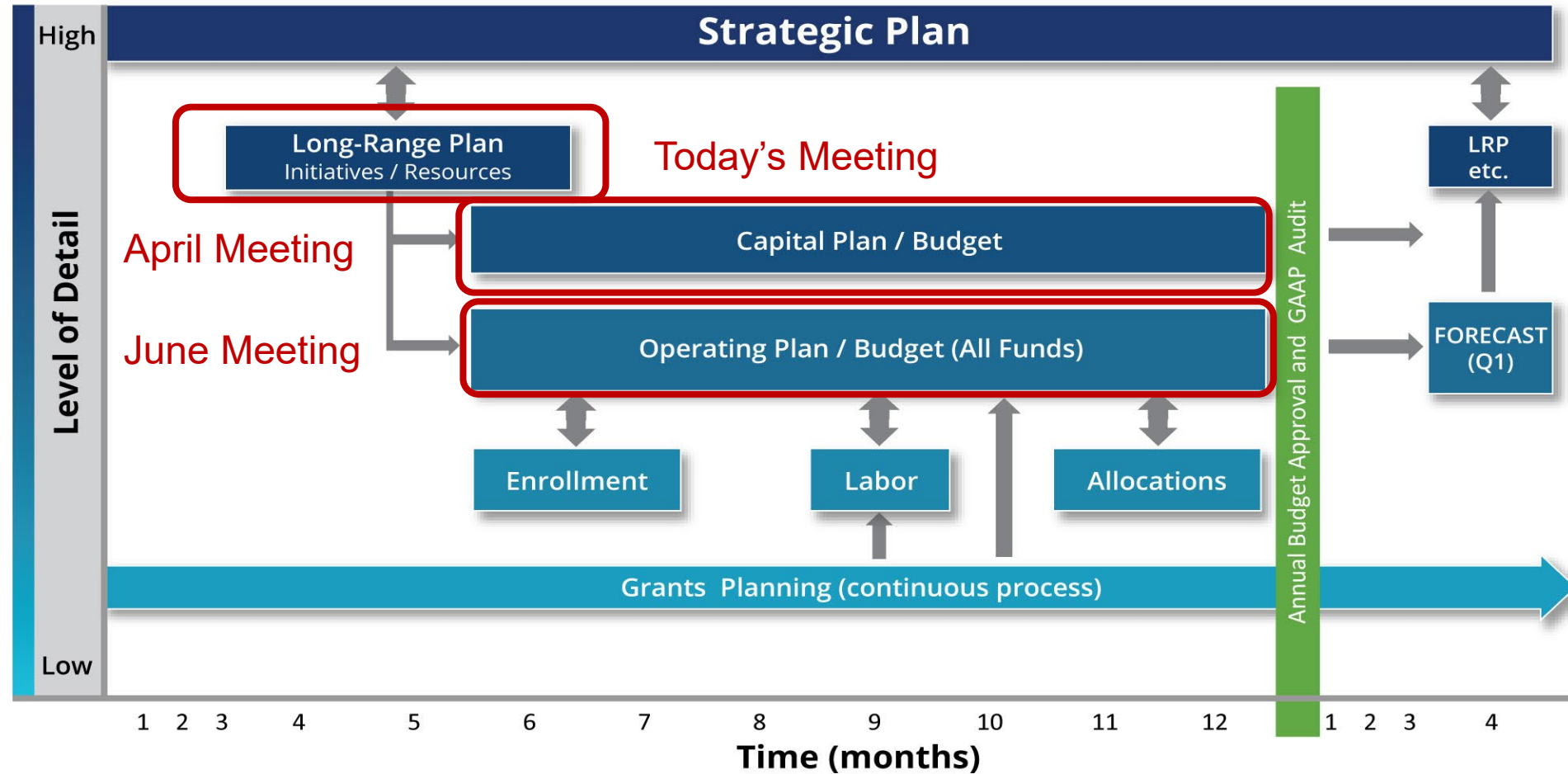
UMKC

MISSOURI  
S&T

UMSL

University of Missouri System

# Financial Plan Used to Define Performance



# Key Themes

- Enrollment, tuition pricing, and state support underwrite the academic enterprise
  - Market pressure in Missouri and surrounding states remains
  - Plan investments will be adjusted based on enrollment outcomes
- Plans for research growth continue
  - S&T and UMKC will both become R-1 institutions with new guidelines
  - Growth continues, but at a lower rate than the past 5 years
- Increased operating cash flow from auxiliary operations must be sufficient to support capital investment
- HealthCare's plan sustains performance evident through first half of FY2025



UMKC

MISSOURI  
S&T

UMSL

University of Missouri System

OPEN – FIN – 1 - 7

February 6, 2025

# Key Risks

- Maintaining enrollment in a competitive environment with falling high school graduates
- Federal and State budgets will likely be more limited than the past five years
  - Potential to impact research grants
  - Capital Plan only includes known appropriations.
- Healthcare is a positive but continues to be in a larger portion of the financial profile and subject to more volatility
- Size of pension remains a key risk for the institution



UMKC

MISSOURI  
S&T

UMSL

University of Missouri System

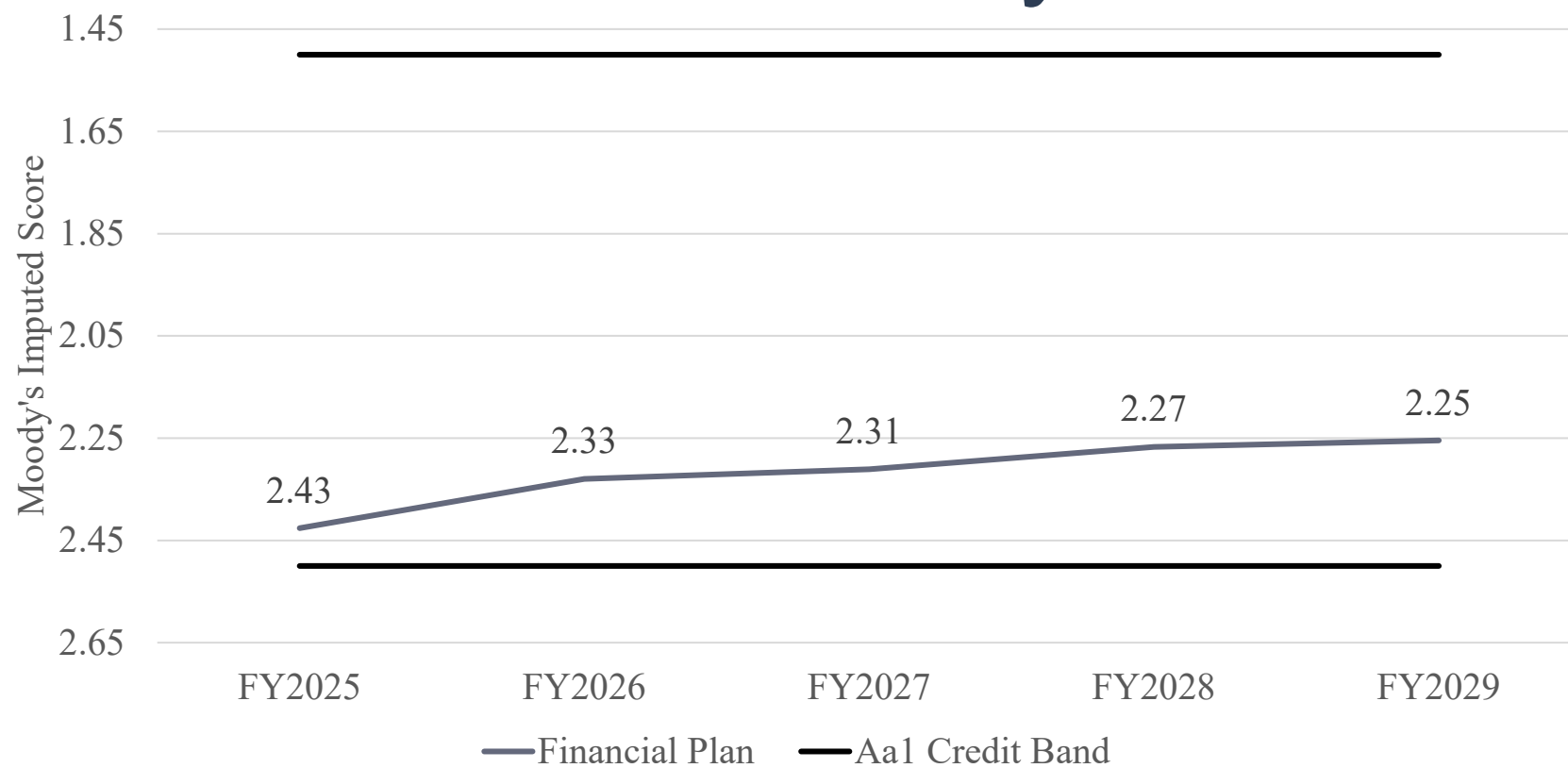
# Recommended Financial Targets

	UM	MU	UMKC	Missouri S&T	UMSL	MU Healthcare
Operating Margin	>3.0%	2.5%	1.5%	3.0%	1.0%	4.5%
Spendable Cash to Operations	>0.90	>0.80	>0.75	>0.80	>0.70	>200 DCOH
Spendable Cash to Debt	>3.00	>2.00	>1.75	>2.00	>1.50	>1.50
Debt to Cash Flow*	<3.50	N/A	N/A	N/A	N/A	N/A
Debt Service Coverage	N/A	>3.00	>3.00	>3.00	>3.00	>3.00
Moody's Imputed Score	<2.50	N/A	N/A	N/A	N/A	N/A
<i>*Debt to Cash Flow is utilized for consolidated target instead of debt service coverage for debt affordability to account for bullet maturities</i>						





# Performance to Moody's Scorecard



Note: Debt bullet maturities are smoothed over the planning period.



University of Missouri System

# Consolidated Financial Performance against Recommended Targets

	Proposed Target	FY2025	FY2026	FY2027	FY2028	FY2029
Operating Margin	>3.0%	1.8%	3.2%	3.8%	4.6%	4.5%
Spendable Cash to Operations	>0.90	0.93	0.88	0.85	0.87	0.90
Spendable Cash to Debt	>3.00	2.66	2.89	3.04	3.56	4.01
Debt to Cash Flow*	<3.50	3.77	2.91	2.53	2.08	1.97
Moody's Imputed Score	<2.50	2.43	2.45	2.23	2.37	2.18
*Debt to Cash Flow is utilized for consolidated target instead of debt service coverage for debt affordability to account for bullet maturities						



UMKC

MISSOURI  
S&T

UMSL

University of Missouri System

OPEN – FIN – 1 - 11

February 6, 2025

# Next Steps

- Review of FY2027 State Appropriation Request – April 2025
- Review of FY2026 Budget Assumptions – April 2025
- Approval of Capital Plans – April 2025
- Approval of FY2026 Tuition – May 2025
- Approval of FY2026 Budget – June 2025
- Approval of FY2027 State Appropriations Requests – June 2025





————— University of Missouri System —————

Naming Opportunity  
Naming of the Meat Science Education and Training Laboratory to  
The Michael L. Parson Meat Science Education and Training Laboratory  
MU

*Pursuant to CRR 110.080*, naming and/or recognition for any Exterior Area, University Landmark, Interior Spaces, unit, or program requires Board approval. The University of Missouri - Columbia requests approval to name the new Meat Science Education and Training Laboratory, a new building providing state-of-the-art meat processing and training resources to the Columbia campus and to Missouri farmers, to the "The Michael L. Parson Meat Science Education and Training Laboratory" in recognition of Governor Parson.

Governor Parson's deep roots in the livestock industry and his unwavering commitment to education have helped transform Missouri's leading industry, agriculture. Born into a farm family and having spent his formative years in the agricultural heartland of Missouri, Governor Parson understands the challenges and aspirations of our agricultural community like few others. Throughout his illustrious career in public service, he consistently championed the cause of agriculture, advocating for policies that empower Missouri farmers and strengthen the agricultural economy.

The MU Meat Science Laboratory is the result of years of effort and collaboration with Missouri agricultural industries. By combining the latest innovations in animal health, genetics, nutrition and reproductive science with world-class extension programs, the University of Missouri helped the Missouri livestock industries become the envy of the world.

By naming the Meat Science Education and Training Laboratory in honor of Governor Michael L. Parson, we not only acknowledge his instrumental role in its establishment but also celebrate his enduring legacy as a staunch advocate for agriculture and education in our great state.

President, Mun Y. Choi, Provost Matthew Martens, and Vice Chancellor and Dean Christopher R. Daubert, are in support of this naming.

February 6, 2025



No. 2

Recommended Action - Naming of the Meat Science Education and Training Laboratory to the Michael L. Parson Meat Science Education and Training Laboratory, located at the University of Missouri - Columbia

It was recommended by President Mun Y. Choi, endorsed by Provost Matthew Martens, and Vice Chancellor and Dean Christopher R. Daubert, and moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that the following action be approved:

To name the Meat Science Education and Training Laboratory at MU to the Michael L. Parson Meat Science Education and Training Laboratory

Roll call vote Finance Committee	YES	NO
----------------------------------	-----	----

Curator Blitz  
Curator Fry  
Curator Holloway  
Curator Krewson  
Curator Wenneker

The motion \_\_\_\_\_.

Roll call vote Full Board:	YES	NO
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Curator Blitz  
Curator Fry  
Curator Graves  
Curator Holloway  
Curator Krewson  
Curator Layman  
Curator Sinquefield  
Curator Wenneker  
Curator Williams

The motion \_\_\_\_\_.

February 6, 2025

# CAFNR MOMENTUM

CHRISTOPHER R. DAUBERT  
VICE CHANCELLOR & DEAN



College of Agriculture,  
Food & Natural Resources  
University of Missouri

# MEAT SCIENCES LABORATORY ON CAMPUS



CAFNR  
**MO**  
MENTUM

# MEAT SCIENCES LABORATORY ON CAMPUS



CAFNR  
**MO**  
MENTUM



# MEAT SCIENCES LABORATORY



CAFNR  
**MO**  
MENTUM

# THANK YOU!

*Questions*



College of Agriculture,  
Food & Natural Resources  
University of Missouri



# LAND-GRANT CENTER AT GREENLEY RESEARCH FARM



**FRONT ENTRY**



**COLUMNS AT ENTRY**



**TIGER STATUE AT ENTRY**



**HIGH BAY BANQUET**



**HIGH BAY EQUIPMENT**

CAFNR  
**MO**  
MENTUM

# LAND-GRANT CENTER AT GREENLEY RESEARCH FARM



**AERIAL VIEW**

CAFNR  
**MO**  
MENTUM

# THANK YOU!

*Questions*



College of Agriculture,  
Food & Natural Resources  
University of Missouri



Architect/Engineer Approval  
Greenley Research Farm New Learning Center  
MU

The University of Missouri – Columbia requests approval to hire an Architect/Engineer for the Greenley Research Farm New Learning Center project. Design work will be funded by a MoExcels grant. A funding plan for the total project budget of \$15,000,000 will be presented as part of a later request for project approval.

The University of Missouri Northern Missouri Research, Extension, & Education Center (NM-REEC) oversees the Lee Greenley Jr. Memorial Research Farm, Cornett Research Farm, and Thompson Research Farm, which operates approximately 4,190 acres. The Lee Greenley Jr Memorial Farm does not have a centralized facility to support the College of Agriculture, Food and Natural Resources (CAFNR) and MU Extension programs. This facility could host events such as agricultural field days, expositions, and community engagement gatherings that showcase how NM-REEC research transitions to practical real-world farming applications.

The University of Missouri NM-REEC Headquarters & Land Grant Center is proposed to be a 23,700 gross square foot structure located on the Grace Greenley Farm (part of the Lee Greenley Jr Memorial Research Farm) near Novelty, Missouri. Located on University property, the building would be a single-story, slab-on-grade structure organized into two areas: Agricultural Education Space, and Agricultural Multipurpose High Bay Space. The state-of-the-art facility would support current and emerging agricultural innovations while showcasing rural America with the preservation of the farmhouse and agricultural structures.

Clark & Enersen is the recommended architect/engineer. Their Kansas City team completed the concept study for this facility in 2023. Clark and Enersen will perform the architectural and engineering discipline for mechanical, plumbing, and electrical. Fire protection, code, and life safety will be completed by FSC. The team will utilize Foodlines for food service equipment planning. Clark and Enersen presented a focused and well-balanced team of experts with in-depth knowledge of agricultural and higher-education design. Clark and Enersen have completed multiple large relevant projects similar to this center. The selection committee also interviewed BSA Life Structures, St. Louis, and SFS Architecture, Kansas City, Missouri.

The fee was determined from the University of Missouri's "Architectural and Engineering Basic Services Fee Estimating Guidelines" with the UM Facilities Planning and Development Office. The project is a Type III – New Construction (average complexity project), and the maximum basic services calculated fee permitted is 6.3% of the \$10,460,600 construction cost, for \$659,000. Additional services include a food service equipment planner and additional site design coordination with local utilities. A total of \$157,300 in additional services was added to the basic services fee to arrive at a total maximum fee of \$816,300.

The project will utilize a traditional Design-Bid-Build delivery method and does not yet have an expected completion date.

February 6, 2025

No. 3

Recommended Action – Project Approval, Greenley Research Farm New Learning Center, MU

It was recommended by President Choi, recommended by the Finance Committee, moved by Curator \_\_\_\_\_ and seconded by Curator \_\_\_\_\_, that the following action be approved:

the Architect/Engineer Hire for the Greenley Research Farm New Learning Center, MU at the maximum amount \$816,300.

Roll call vote Finance Committee	YES	NO
Curator Blitz		
Curator Fry		
Curator Holloway		
Curator Krewson		
Curator Wenneker		

The motion \_\_\_\_\_.

Roll call vote Full Board:	YES	NO
Curator Blitz		
Curator Fry		
Curator Graves		
Curator Holloway		
Curator Krewson		
Curator Layman		
Curator Sinuefield		
Curator Wenneker		
Curator Williams		

The motion \_\_\_\_\_.



# ACADEMIC, STUDENT AFFAIRS, RESEARCH AND ECONOMIC DEVELOPMENT COMMITTEE

Jeanne C. Sinquefield, Chair

Robert D. Blitz

Jeff Layman

Michael A. Williams

The Academic, Student Affairs, Research and Economic Development Committee ("Committee") will review and recommend policies to enhance quality and effectiveness of academic, student affairs, research and economic development and align the available resources with the University's academic mission.

## **I. Scope**

In carrying out its responsibilities, the Committee reviews and makes recommendations to the Board of Curators on strategies and policies relating to student and faculty welfare, academic standards, educational and instructional quality, intercollegiate athletics, degree programs, economic development, research initiatives, and associated programs.

## **II. Executive Liaison**

The Associate Vice President for Academic Affairs of the University, or some other person(s) designated by the President of the University, with the concurrence of the Board Chair and the Committee Chair, shall be the executive liaison to the committee and responsible for transmitting committee recommendations.

## **III. Ex Officio Member**

The Student Representative to the Board of Curators shall be an ex officio member of the Committee.

## **IV. Responsibilities**

In addition to the overall responsibilities of the Committee described above and in carrying out its responsibilities, the charge of the Committee shall include reviewing and making recommendations to the Board on the following matters:

- A. Selection of Curators' Distinguished Professors;
- B. Approval and review of new degree programs;
- C. Intercollegiate athletics, as specifically outlined in Section 270.060 of the Collected Rules and Regulations with a commitment to the academic success, and physical and social development of student-athletes;
- D. Changes to university-level admissions requirements, academic standards, student services, and graduation requirements;
- E. Quarterly and annual reports providing information on academic programs that have been added, deactivated, or deleted;
- F. Provide oversight over the University of Missouri System's diversity, equity and inclusion programs;
- G. Highlight successful research and economic development efforts and partnerships; linking research and commercialization from the University with business and industry across the state and around the world.
- H. Additional matters customarily addressed by the academic, student affairs, research & economic development committee of a governing board for an institution of higher education.

**BOARD OF CURATORS**  
*Cover Page*

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**Meeting Date**      February 06, 2025

**Action Title**        School of Dentistry Clinical Program Expansion, UMKC

**Action Type**        Information Item

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***Summary***

This update provides information on the expansion of the UMKC School of Dentistry's clinical training programs to the St. Joseph area. This is not an action item for the Board. Further information and a request for approval will be sought at a future Board meeting.

***Table of Contents***

**1. Executive Summary [OPEN – ASARED – INFO – 1-1]**

- *Provides background on the expansion of UMKC School of Dentistry's clinical training programs to the St. Joseph area.*

**2. UMKC Dental School Expansion – PowerPoint [OPEN – ASARED – INFO – 1-2-7]**

***Appendix***

**1. UMKC Dental School Expansion Report [OPEN – ASARED – INFO – 1-8-13]**

- *Provides a detailed summary which includes background, curriculum, needs assessment, and pro forma among other details. Chancellor Agrawal will provide details of this project.*

## **Executive Summary**

### **UMKC School of Dentistry St. Joseph Dental Satellite Training Program Expansion**

UMKC's School of Dentistry, the only public dental school in Missouri, providing 63% of the state's dentists, aims to open a satellite dental training program in northwestern Missouri to answer the region's need for more rural dental healthcare practitioners. UMKC has had proven success in creating satellite campuses in the healthcare professions to meet rural healthcare needs, including two satellite pharmacy campuses (Columbia and Springfield) and one satellite medical campus in St. Joseph. The project brings together UMKC's academic and clinical excellence in dentistry with a cost-efficient way to solve the state's need for more dentists and dental hygienists in rural areas.

#### **Key points:**

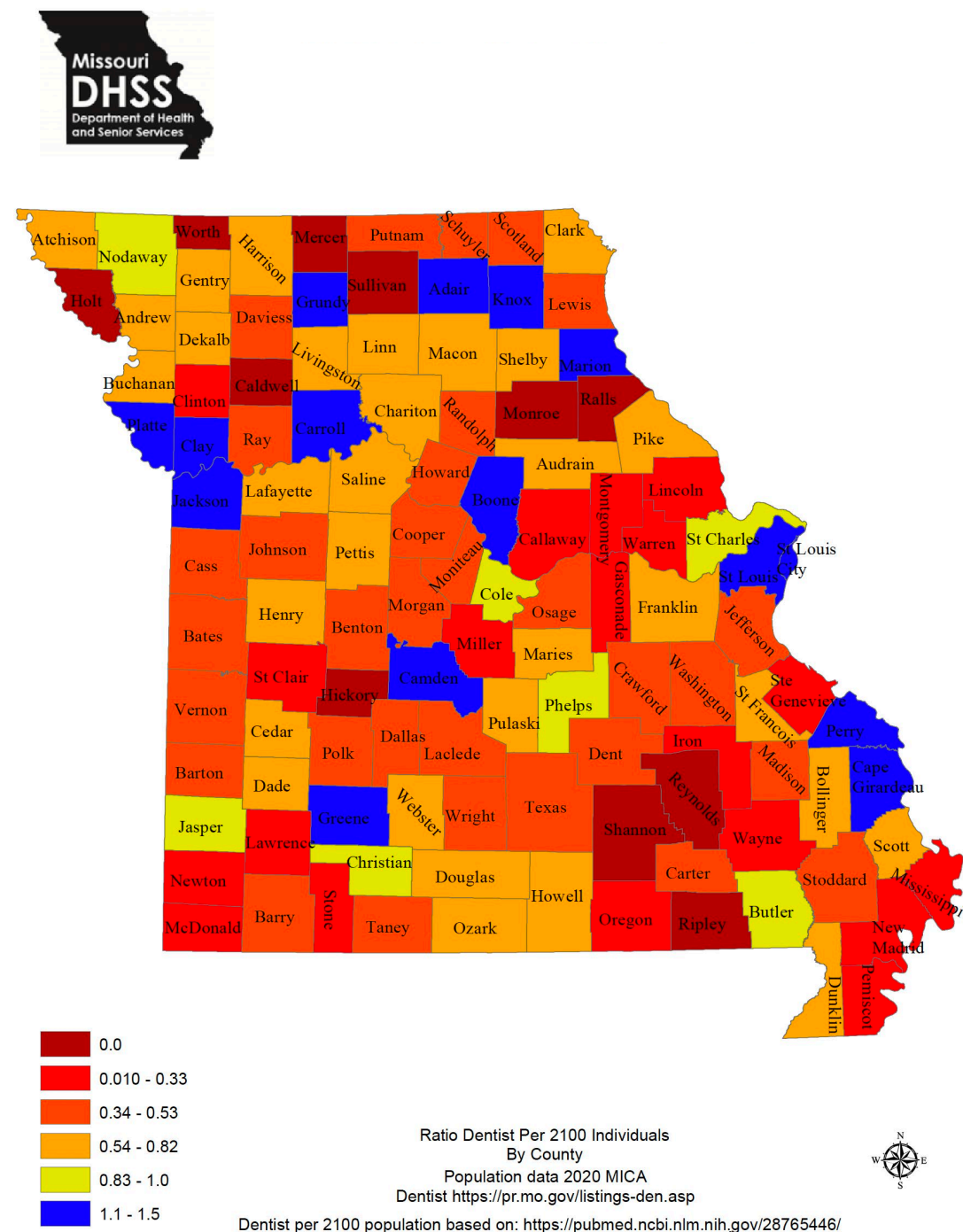
- The satellite program will train students in Buchanan County, which is a federally designated Dental Health Professional Shortage Area. We expect the training clinic to service patients from counties across the northwest area of Missouri.
- UMKC has engaged Missouri Western State University about co-locating the new dental satellite program on their campus.
- The proximity of the existing UMKC School of Medicine rural campus near Mosaic Life Care in St. Joseph demonstrates UMKC's commitment to leveraging our existing centers of excellence to meet the healthcare needs of rural Missouri.
- The academic program expansion includes the Doctor of Dental Surgery (DDS) and Bachelor of Science in Dental Hygiene (DH) programs. Using a 2+2 academic training model, DDS students will complete their first two years of academic training at UMKC and their second two years at the St. Joseph rural satellite training clinic. DH students will complete their first three years at UMKC and their final year of training at the St. Joseph rural satellite training clinic.
- The curriculum will be identical to the Kansas City DDS and DH programs in content and sequencing, with < 50% being taught at the satellite training clinic.
- A proforma, based on best possible operational data for cost and revenue, has been developed. In addition, Clark & Enersen has provided an assessment of one-time space renovation and clinic set-up costs, totaling \$12M.
- A start date for this satellite program will be set if, and when, necessary approvals and funding are acquired, but UMKC anticipates a proposed start date in FY27.

# UMKC School of Dentistry Rural Health Expansion

February 6, 2025

# Background

- Missouri is home to 18 Health Resources and Services Administration (HRSA) - designated geographic rural dental health professional shortage areas out of 510 nationally
- In northwest Missouri, most counties have less than one dentist per 2,100 people
- The data are similar, if not worse, for dental hygienists





# How Can UMKC Address This Shortage?

- UMKC can leverage our existing academic program infrastructure and experience successfully training rural health practitioners in pharmacy and medicine, through a School of Dentistry satellite program partnership with Missouri Western State University.
- The proposed School of Dentistry satellite program expansion can positively impact the dentist and dental hygiene practitioner shortages in rural Missouri communities, while also delivering high-quality oral healthcare to underserved rural communities through its training clinic.
- Our Doctor of Dental Surgery (DDS) and Bachelor of Science in Dental Hygiene (DH) application data demonstrate student demand, with an increase of over 200 applications across both programs in the 2023 vs. 2024 admission cycle.

# Proposed Training Model: DDS

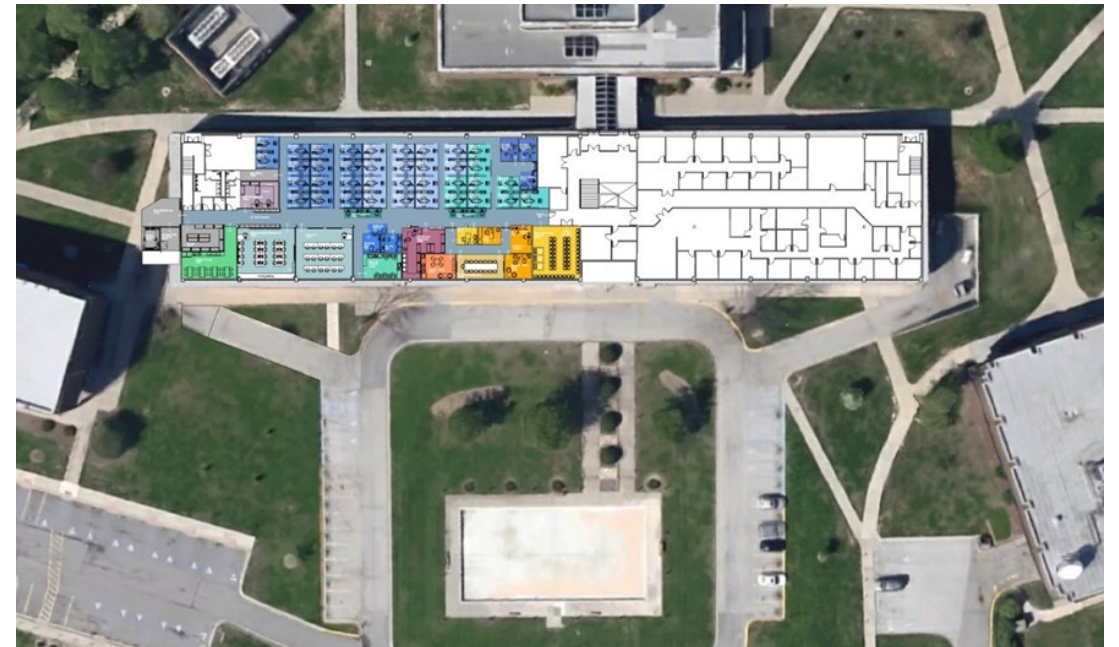
- The DDS is a four-year program. Students enter the program after completing their bachelor's degree.
- Each year the program will admit 10 students, for a total of 40 students when the program is at capacity.
- The existing Kansas City program admits approximately 109 students each year; this rural health-focused expansion will increase the number of dentists graduating from our program by approximately 10% annually.
- The first two years of instruction will be at the Kansas City campus, following the curriculum for all DDS students.
- Clinical training in the third and fourth years will be at the St. Joseph satellite, also following the curriculum of the existing Kansas City program.

# Proposed Training Model: Dental Hygiene

- The Bachelor of Science in Dental Hygiene (DH) is a four-year program, totaling 120 credit hours.
- Admission to the DH program is selective, and students apply after completing approximately two years of undergraduate coursework (general education + pre-requisites) in Kansas City.
- Each year the program will admit 5 students, for a total of 10 students when the program is at capacity.
- The existing Kansas City program admits approximately 30 students each year; this rural health-focused expansion will increase the number of dental hygienists graduating from our program by > 15% annually.
- Once matriculated into the program, students complete two years of major-specific dental hygiene coursework: one year in Kansas City and one year in St. Joseph.

# Physical Infrastructure and Financial Analysis

- UMKC is engaged in discussions with Missouri Western State University (MWSU) to locate the campus on the second floor of one of MWSU's academic buildings.
- Programmatic review indicates approximately \$12M in one-time renovation and equipment start up costs that will be brought forward for review in the April BoC meeting.
- We intend to request funding from state, federal and philanthropic sources.
- The satellite programs will be in a state of net positive revenue generation by Year 2.



<b>Meeting Date</b>	February 6, 2025
<b>Action Title</b>	New Degree Program, BS Semiconductor Engineering , S&T
<b>Action Type</b>	Action Item

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### ***Summary***

This is a request for the approval of a new Bachelor of Science in Semiconductor Engineering to be offered at the Missouri University of Science and Technology.

### ***Table of Contents***

#### **1. Executive Summary [OPEN – ASARED – 1-1]**

- *Provides a high-level overview of the Missouri University of Science and Technology's (S&T) new BS in Semiconductor Engineering.*

#### **2. Recommended Action & Roll Call Vote [OPEN – ASARED – 1-2]**

- *The formal approval of the recommendation for a new BS in Semiconductor Engineering at the Missouri University of Science and Technology.*

### ***Appendix***

#### **1. S&T BS Semiconductor Engineering Proposal [OPEN – ASARED – 1-3-51]**

- *Proposal contains specific details including:*
  - *University Mission and Program Analysis*
  - *Business Related Criteria and Justification*
  - *Institutional Capacity*
  - *Program Characteristics*
  - *Appendices*



## **Executive Summary**

### **New Degree Program, Bachelor of Science in Semiconductor Engineering Missouri University of Science and Technology**

The proposed 128-credit hour Semiconductor Engineering (SEMI ENG) Bachelor of Science (BS) program at Missouri S&T will provide a multidisciplinary education integrating mathematics, physical sciences, and engineering fundamentals with principles of materials science and engineering (MSE), electrical and computer engineering (ECE), and chemical engineering (ChE). Reflecting its multidisciplinary nature, the SEMI ENG BS program will be housed within and administered by the MSE Department at Missouri S&T. Primary goals of the proposed program are:

- (1) To build a highly trained workforce to meet current and emergent needs of the state of Missouri, the Midwest region, and the national semiconductor industry in areas of supply chain/materials, manufacturing/processing, design, assembly, packaging and testing of micro/nano-electronic and photonic devices.
- (2) To provide a strong foundation for students who wish to pursue advanced degrees in Semiconductor Engineering or related fields.
- (3) To equip students with the knowledge and skills to make valuable contributions and to become leaders in semiconductor manufacturing and research.

The SEMI ENG BS program is a unique and timely response to demand signals from the U.S. semiconductor industry. According to the Semiconductor Industry Association, tens of thousands of semiconductor jobs in the U.S. risk going unfilled by 2030, including more than 18,000 engineering positions requiring advanced STEM degrees. The SEMI ENG BS program is designed with strategic focus on undergraduate bachelor's level education and training in areas of opportunity such as advanced substrates and materials, and assembly and packaging, to support a semiconductor and electronic component manufacturing sector whose employment forecast decadal growth of 30.8% nationwide and 18.6% in Missouri far exceeds total employment growth rate of 2.8% for the same period.

The program will extensively leverage existing resources to minimize program start-up costs. About three-quarters of the curriculum is in place with minor modifications anticipated to existing courses and pre-requisite sequencing. Ten new courses need to be developed of which three are cleanroom-based laboratory courses. Revenue is expected to be generated primarily from tuition and fees for new students, though there exists significant potential to grow the campus research portfolio via new cleanroom-based infrastructure, which could create additional, indirect revenue streams.

A comprehensive marketing strategy will be implemented to recruit students from Missouri and beyond that will enhance Missouri S&T's brand recognition. Annual program evaluation will be conducted by a committee comprised of faculty from MSE, ECE, and ChE departments with input from an external advisory panel to assess program health and identify opportunities for growth and success.

The SEMI ENG BS program aligns well with university mission and strategic goals and will position Missouri S&T to be a leading contributor to the occupational outlook for semiconductor engineering at a critical time of national need.

No. 1

Recommended Action – BS in Semiconductor Engineering  
Missouri University of Science and Technology

It was recommended by Chancellor Mohammad Dehghani, endorsed by President of the University of Missouri Mun Y. Choi, recommended by the Academic, Student Affairs and Research & Economic Development Committee, moved by Curator \_\_\_\_\_, seconded by Curator \_\_\_\_\_ that the following action be approved:

that the Missouri University of Science and Technology be authorized to submit the attached proposal for a BS in Semiconductor Engineering to the Coordinating Board for Higher Education for approval.

Roll call vote of the Committee:	YES	NO
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Curator Blitz

Curator Layman

Curator Sinquefield

Curator Williams

The motion \_\_\_\_\_.

Roll call vote of Board:	YES	NO
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Curator Blitz

Curator Fry

Curator Graves

Curator Holloway

Curator Krewson

Curator Layman

Curator Sinquefield

Curator Wenneker

Curator Williams

The motion \_\_\_\_\_.

# HEALTH AFFAIRS COMMITTEE

Michael A. Williams, Chair  
Robert W. Fry  
Keith A. Holloway  
Jeff L. Layman  
Ronald G. Ashworth (non-curator)  
Philip Burger (non-curator)  
Daniel P. Devers (non-curator)  
Dr. James Whitaker (non-curator)

The Health Affairs Committee (“Committee”) assists the Board of Curators in overseeing the clinical health care operations of the University and in coordinating those operations in furtherance of the University’s teaching, research, and clinical missions.

## **I. Scope**

The Committee provides oversight for the University’s clinical health care operations in the areas of:

- Mission, vision, and strategy;
- Governance and operational oversight;
- Quality of care and patient safety;
- Regulatory compliance;
- Financial planning and performance; and
- Coordination of the clinical, teaching, and research missions.
- Specific projects that enable meaningful collaboration among UM universities.

## **II. Executive Liaison**

The Executive Vice Chancellor for Health Affairs of the University of Missouri-Columbia or some other person(s) designated by the President of the University, with the concurrence of the Board Chair and the Committee Chair, shall be the executive liaison to the Committee and responsible for transmitting Committee recommendations.

## **III. Responsibilities**

In addition to the overall responsibilities of the Committee described above and in carrying out its responsibilities regarding clinical health care operations, the charge of the Committee shall include:

- A. Reviewing and making recommendations to the Board regarding:
  1. actions that are appropriate or necessary to assist the Board in overseeing clinical health care operations or coordinating the teaching, research, and clinical missions;
  2. significant actions related to health care which should require advance notice or approval by the Committee or Board; and
  3. other matters referred to it by the Board and University officers.
- B. Requesting, receiving, and reviewing reports and other information from University officers and advisors regarding health care operations, coordination of the teaching, research, and clinical missions, and related matters, including meeting at least quarterly and receiving regular reports from appropriate

officers of University of Missouri Health Care, the MU School of Medicine, and the MU Health Chief Compliance Officer.

- C. Additional matters customarily addressed by the health affairs committee of a governing board for an institution of higher education.

#### **IV. Committee Membership and Quorum Requirements**

The Committee's membership may include non-Curator members in addition to Curator members. Subject to approval of the Board, the Board Chair shall determine the number of Curator and non-Curator members to appoint to the Committee and shall select individuals to serve as members of the Committee; provided that, the number of non-Curator members on the Committee shall not exceed the number of Curator members on the Committee, unless the Committee temporarily has more non-Curator members than Curator members because a Curator member of the Committee has resigned from the Board or the Committee. Non-Curator members may resign their Committee membership by providing written notice to the Board Chair. Non-Curator members of the Committee serve at the pleasure of the Board and may be removed by the Board Chair at any time, subject to approval of the Board.

A quorum for the transaction of any and all business of the Committee shall exist when:

1. Both a majority of all Curator members of the Committee and a majority of all members of the Committee are participating for Committee meetings which are held in conjunction with meetings of the Board; or
2. Both all Curator members of the Committee and a majority of all members of the Committee are participating for Committee meetings which are not held in conjunction with meetings of the Board; or
3. Both a majority of all Curator members of the Committee and a majority of all members of the Committee are participating for Committee meetings which are held solely for the purpose of reviewing and overseeing compliance matters.

# UM Board of Curators

February 6, 2025

**Richard J. Barohn, MD**

Executive Vice Chancellor for Health Affairs

Hugh E. and Sarah D. Stephenson Dean of the MU School of Medicine



UMKC

MISSOURI  
S&T

UMSL

University of Missouri System



# Agenda

- **MU School of Medicine Update**
- **NextGen Update**
- **MU Health Care Update**
- **MU Health Care Financial Update**

# **MU SCHOOL OF MEDICINE UPDATE**

# Three Deans' Lecture Series



## SAVE THE DATE

| February 12, 2025



Dr. J. Bryan Sexton  
Associate Professor  
Director, Duke Center for the Advancement  
of Well-being Science, Duke University Health System

**Bite-Sized Well-Being During Uncertain Times:  
Evidence, Practice and Resources to Share**

February 12, noon - 1 p.m. | Stotler Lounge, Memorial Student Union



University of Missouri

School of Medicine | Sinclair School of Nursing  
College of Health Sciences

# Center for Child Well-Being Outreach



- Mission: To establish itself as the preeminent leader in advancing the social and emotional development and overall well-being of Missouri's children
- Eight programs to serve children, parents, caregivers, providers, educators and more, to support the development and wellbeing of Missouri's children
- \$14.8 million in active funding



*Laine Young-Walker, MD, chair, Department of Psychiatry is the principal investigator overseeing the Center for Child Well-Being, located at 3928 S. Providence Road in Columbia*

# Veterans Law Clinic “Show Me Collaboration”



- MU medical and law school students review medical records and assist veterans in applying for disability benefits and appeals
- Partnership provides invaluable benefits to veterans at no cost
- More than \$16 million secured in benefits for veterans



*Brent Filbert, Director  
Veterans Clinic School of Law*

# Rural/Bryant Scholars Program Turns 30



## Outcomes 1997-2024:

64% practice in Missouri

49% in rural Missouri

43% practice primary care



RURAL SCHOLARS  
**PROGRAM**





# **NEXTGEN PRECISION HEALTH UPDATE**

# NextGen PATHWAYS Symposium Goes to KC



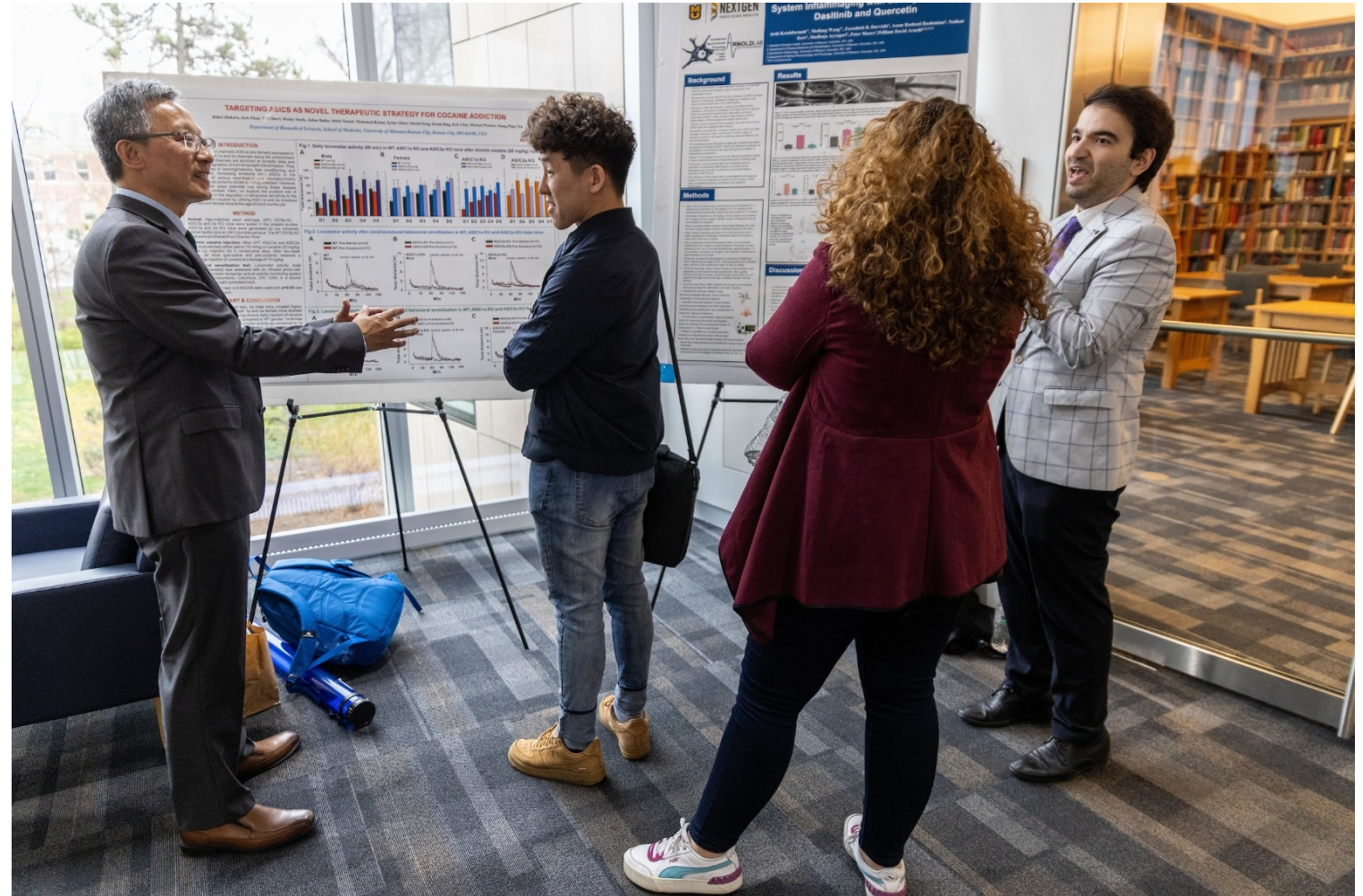
## Pathways 2025

March 13-14

UMKC Student Union

### Goals:

- Foster collaborations
- Jumpstart new projects
- Celebrate research

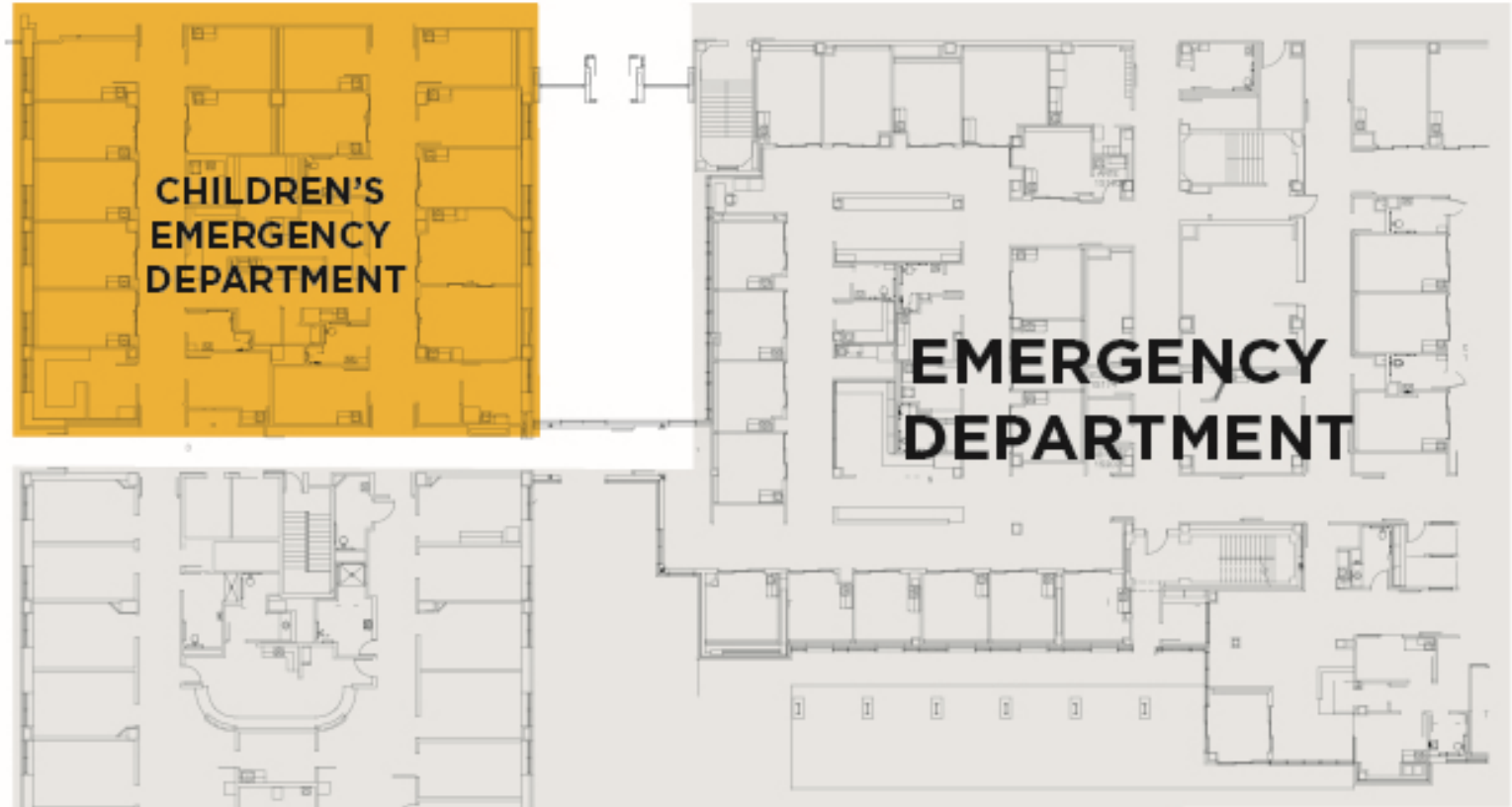


# **MU HEALTH CARE UPDATE**

# Children's Emergency Department Expansion



- Completely new unit, separate from adult Emergency Department (ED) at University Hospital
- Separate parking and waiting areas
- Seven additional beds (16 total)
- Larger rooms feature nature themes and are designed with kids in mind





# Integration Success at CRMC



## Since January 1, 2024:

- Capital Region Medical Center census has increased by more than **60%**
- Number of beds available has increased **20%**

## Joint Commission Accreditation

- Primary Heart Attack Center
- Primary Stroke Center



# FYTD 25 (December) Financials - Consolidated

In Millions	FY25 Actual Jul-Dec	FY25 Budget Jul-Dec	Var		FY24 Jul-Dec	FY24 Actual Full Year
Gross Revenue	\$3,619.1	\$3,282.8	\$336.3		\$2,924.1	\$6,211.3
<i>Collection Rate</i>	24.3%	25.1%			26.0%	24.9%
<b>NET REVENUE</b>	\$962.0	\$932.5	\$29.5		\$864.4	\$1,774.1
Salaries & Benefits	\$382.9	\$385.9	\$3.0		\$377.2	\$779.4
Supplies (less Hospital Drugs)	\$184.2	\$183.6	(\$0.6)		\$170.1	\$348.7
Hospital Drugs	\$77.2	\$74.1	(\$3.2)		\$74.4	\$141.4
Other Expenses	\$270.2	\$261.6	(\$8.6)		\$244.0	\$489.5
<b>TOTAL EXPENSE</b>	\$914.5	\$905.2	(\$9.3)		\$865.8	\$1,759.0
Operating Gain/(Loss)	\$47.4	\$27.3	\$20.1		(\$1.3)	\$15.1
<b>Financial Metrics:</b>						
<i>Operating Margin</i>	4.9%	2.9%			-0.2%	0.9%
<i>EBIDA Margin</i>	11.5%	9.8%			6.7%	7.7%
<i>Days Cash on Hand</i>	125	120			127	120
<i>Cash to Total Debt</i>	103.1%	100.0%			95.4%	92.8%
<i>Debt Service Ratio</i>	3.6	3.0			1.9	4.3

Note: Beginning FY25, interest expense is being reported as operating expense, which impacts total expense and operating gain/(loss) reported in prior periods.



# AUDIT, COMPLIANCE AND ETHICS COMMITTEE

Keith A. Holloway, Chair

Lyda Krewson

Jeanne C. Sinuefield

The Audit, Compliance and Ethics Committee (“Committee”) will review and recommend policies to enhance the quality and effectiveness of the University’s financial reporting, internal control structure and compliance and ethics programs.

## **I. Scope**

In carrying out its responsibilities, the Committee monitors and assesses the University’s financial reporting systems and controls, internal and external audit functions, and compliance and ethics programs.

## **II. Executive Liaison**

The Chief Audit and Compliance Officer of the University or some other person(s) designated by the President of the University, with the concurrence of the Board Chair and the Committee Chair, shall be the executive liaison to the committee and responsible for transmitting committee recommendations.

## **III. Responsibilities**

In addition to the overall responsibilities of the Committee described above and in carrying out its responsibilities, the charge of the Committee shall include:

### **A. Reviewing and making recommendations to the Board in the following matters:**

1. the University risk assessment, audit plan and compliance plan; and
2. the appointment, compensation, and termination of the university’s external auditors.

### **B. Providing governance oversight regarding:**

1. development and monitoring a University code of conduct;
2. effectiveness of the internal control framework;
3. ensuring that the significant findings and recommendations are received, discussed and appropriately resolved;
4. procedures for reporting misconduct without the fear of retaliation;
5. university compliance with applicable laws, regulations, and policies that govern all aspects of University operations including but not limited to the following:
  - a. Administrative compliance risks
  - b. Healthcare compliance risks
  - c. Research compliance risks
  - d. Information security compliance risks
  - e. Privacy compliance risks

6. those additional matters customarily addressed by the audit, compliance and ethics committee of a governing board for an institution of higher education.

C. Reviewing periodic reports regarding:

1. the independence, performance, resources and structure of the internal audit, compliance and ethics functions;
2. audit reports and open audit issue status updates;
3. management's written responses to significant findings and recommendations by the auditors;
4. the adequacy of the University's information technology methodology with regards to security, internal controls and data integrity assurance;
5. annual external audit reports, including audited financial statements, single audit and required procedures;
6. the effectiveness of the compliance and ethics program ensuring it has appropriate standing and visibility across the system.

<b>Meeting Date</b>	February 6, 2025
<b>Information Title</b>	Ethics, Compliance, and Audit Services February 2025 Status Report, UM
<b>Information Type</b>	Review of FY2025 Ethics, Compliance, and Audit Services Annual Plans

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### ***Executive Summary***

Progress is being made in all aspects of the scope and responsibilities of Ethics, Compliance, and Audit Services (ECAS). Internal Audit has completed five projects so far in FY25. In addition, since September, 16 investigations have been completed and five are currently in progress. Compliance completed six FY25 projects. Privacy has completed 18 over the past 12 months.

In October, management made the decision to reorganize Research Security and Compliance (Export Controls and Sanctions). This function was moved into ECAS. Most management actions related to the reorganization are complete; the remainder will be completed by July 2025.

### ***Table of Contents***

- 1. Executive Summary [Page Range: 1, Page Count: 1]**
  - *Provides a high-level overview of the status of the ECAS annual plan (p. 1).*
- 2. Internal Audit Narrative [Page Range: 2-6, Page Count: 5]**
  - *Annual Plan Status (p.2)*
  - *Executive Summaries of Completed Audits (p. 3-5)*
  - *Audits in Progress (p. 5-6)*
- 3. Ethics and Compliance Narrative [Page Range: 7-10, Page Count: 4]**
  - *Compliance Foundations (p. 7-9)*
  - *Compliance High-Risk Area Support (p. 9-10)*
- 4. Privacy Narrative [Page Range: 11-12, Page Count: 2]**
  - *Preventive Privacy Work, HIPAA Update, and Consent Management (p. 11-12)*

# University of Missouri System Board of Curators

February 6, 2025  
Audit, Compliance and Ethics Committee

Ethics, Compliance, and Audit Services (ECAS)  
Quarterly Report  
UM System



UMKC

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University of Missouri System

OPEN – ACE - INFO – 1 - 1

February 6, 2025

# Internal Audit

Deb Till, Director



UMKC

MISSOURI  
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UMSL

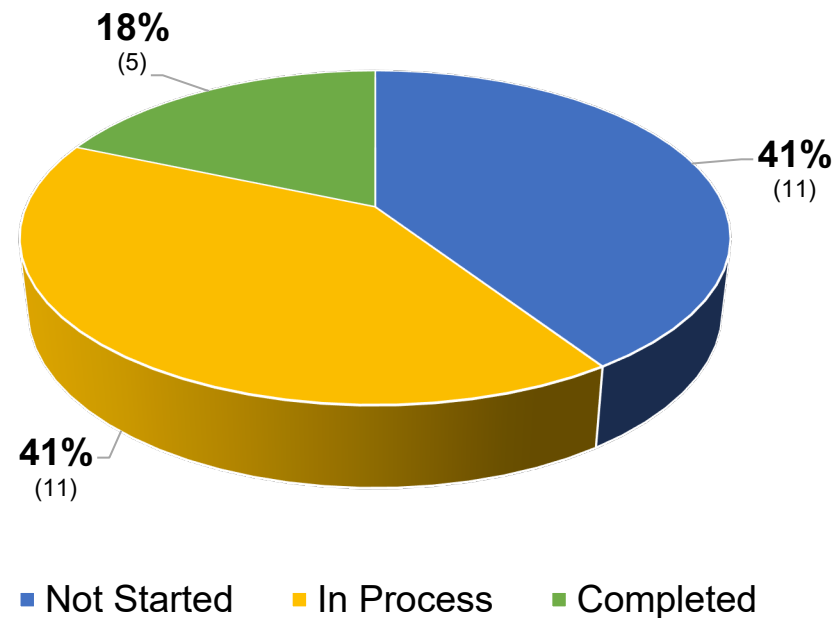
University of Missouri System

OPEN – ACE - INFO – 1 - 2

February 6, 2025

# Summary of Internal Audit & Investigation Activity

FY2025 Rolling Audit Plan Status



Since November 2024	Status
Internal Audits	5 completed; 11 in process; 11 not started
Investigations	16 completed; 5 in process





# Audit Activity Since the November 2024 Audit Committee Meeting



UMKC

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University of Missouri System

OPEN – ACE - INFO – 1 - 4

February 6, 2025

# MU Scholarships

July 2024

Report Risk Rating:				
1	2	3	4	5

## Summary Observations

- Scholarship management at MU is decentralized. Multiple stakeholders but no single stakeholder has overall authority or oversight of the process.
- 85% of donor funded scholarships are under the control of Academic Units. Policy assigns responsibility for compliant fund management to the Academic Units.
- Accounting and awarding knowledge gaps and practice variance in the Academic Units are contributing to scholarship awarding errors and accounting inconsistencies.

## Management Actions

- Financial Aid, MU Finance, and University Advancement will work to develop and provide additional tools, resources and education to the Academic Units to improve awarding and accounting inconsistencies.
- RFP in process to evaluate replacing the current scholarship management system to drive greater consistency and improve scholarship awarding outcomes. Due Dates: March 2025-July 2027



UMKC

MISSOURI  
S&T

UMSL

University of Missouri System

OPEN – ACE - INFO – 1 - 5

February 6, 2025

# MU Standard Financial Controls of the College of Agriculture, Forestry, and Natural Resources (CAFNR)

December 2024

Report Risk Rating:				
1	2	3	4	5

## Summary Observations

- Controls are in place and generally effective.
- Controls can be strengthened by developing a formal policy for prepaid cards, implementing daily reconciliation processes in retail locations, and conducting periodic One Card termination reviews.

## Management Actions

- Management will develop and formalize internal policy, implement retail review and reconciliation procedures, and conduct periodic reviews of One Card terminations. Due Date: June 1, 2025



UMKC

MISSOURI  
S&T

UMSL

University of Missouri System

OPEN – ACE - INFO – 1 - 6

February 6, 2025

# Ethics and Compliance

April Longley, Director



UMKC

MISSOURI  
S&T

UMSL

University of Missouri System

OPEN – ACE - INFO – 1 - 7

February 6, 2025

# Facets of Compliance

- Compliance Program Foundations
- Support High-risk Compliance Areas



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February 6, 2025

# Compliance Foundations Highlights

- Pilot tested the Model
- Model introduced at all UM System Institutions
- Compliance Guidance
  - Prevent. Find. Fix.
  - *Implementing Effective Compliance Programs: Basic Guidance and Tools for Compliance Leaders in the University of Missouri System*

## Nine Element Compliance Model



University of Missouri System

Based on guidance from the U.S. Sentencing Commission Guidelines, §\*B2.1, *Effective Compliance and Ethics Program*; U.S. Department of Justice, *Evaluation of Corporate Compliance Program*; COSO Internal Control - Integrated Framework Principles; and U.S. Department of Health and Human Services Office of the Inspector General, *General Compliance Guidance*.

<sup>1</sup> Quoted in “Embracing simplicity in compliance with prevent, find, and fix,” *CEP Magazine*, October 2024, emphasis added.



# FY25 Mid-year High-risk Highlights

- Research Security and Compliance (Export Controls and Sanctions)
  - Completed the Compliance Program Review
- Clery Act
  - Gap analysis complete, UMKC
  - Other institutions, in progress
- HIPAA Covered Component
- Youth Protection Program
  - Mid-year reports
  - Scores increased from 3.37 to 3.80
- Code of Conduct
  - Communication Campaign Underway
  - Includes focus on Reporting Concerns
- Section 117 and CHIPS



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# Privacy

Jennifer Thorpe, Director



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February 6, 2025

# Privacy Preventative Work

- Privacy Consulting Engagements FY25

Type	Engagements
New Venture	5
Software	8
Process/Policy	2
Prevention/Remediation	3
<b>Total</b>	<b>18</b>



# Privacy Initiative Updates

- Consent Management Update
  - Pilot in progress with youth camps
  - Youth privacy policy implemented
  - Youth camp privacy banner created
  - Prep for main websites on all four campuses in progress
  - Full implementation projected for early FY26
- HIPAA Covered Component Designation reauthorized



# Research Security and Compliance



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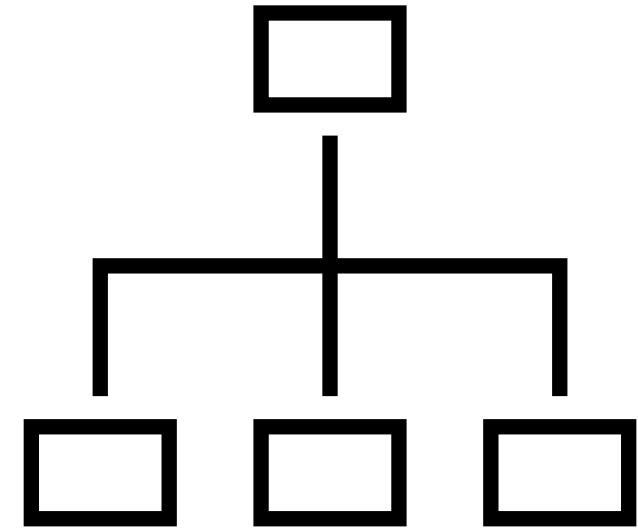
University of Missouri System

OPEN – ACE - INFO – 1 - 14

February 6, 2025

# Reorganization of RSC

- Program was moved to UM System
  - October 2024
- Most management actions related to the reorganization are complete; the remainder will be completed by July 2025
- Currently searching for new director at UM System and new Research Security Officer at MS&T







————— University of Missouri System —————

<b>Meeting Date</b>	February 6, 2025
<b>Information Title</b>	Ethics, Compliance, and Audit Services – Annual Hotline Report 2024, UM System
<b>Information Type</b>	Information Regarding Hotline Activity for 2024

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***Executive Summary***

This annual report incorporates information from the UM System Integrity & Accountability hotline and mail/email reports received and forwarded to the hotline process by System administration. The report contains analytics related to report volume, allegation categories, substantiation rates, and case closure time. It concludes with highlights and opportunities for improvement in 2025.

***Table of Contents***

- 1. Executive Summary [Page Range: 1, Page Count: 1]**
  - *Provides a high-level overview of the contents of the hotline report (p. 1)*
- 2. UM System Hotline - Annual Report 2024 [Page Range: 2-6, Page Count: 5]**
  - *University of Missouri System Reporting Hotline Annual Report 2024*

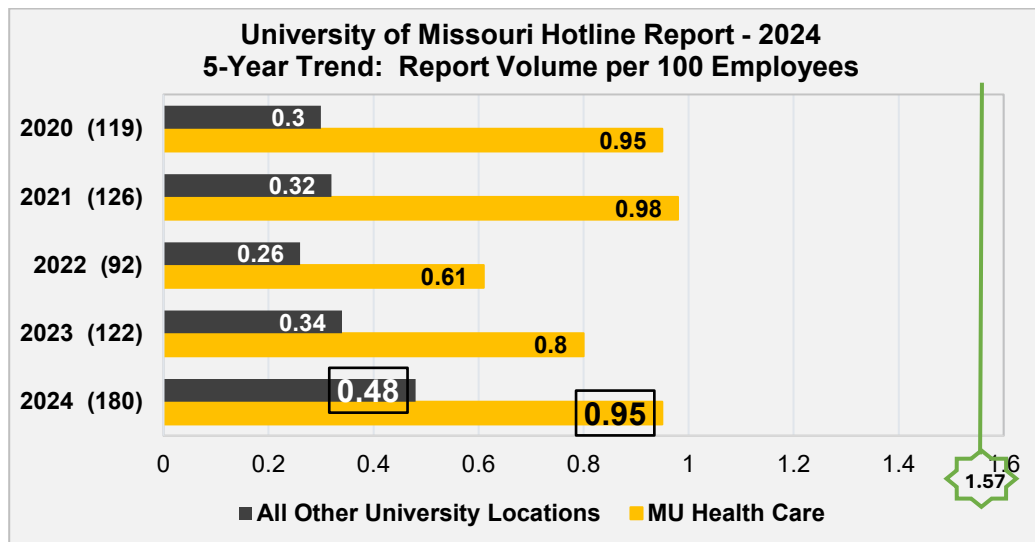
## University of Missouri System Reporting Hotline Annual Report 2024

This annual report incorporates information from the UM System Integrity & Accountability hotline and mail/email reports received and forwarded to the hotline process by System administration. The hotline received 180 reports in the calendar year 2024, a 40% increase in reports over last year. On 12/31/24, 167 reports (93%) had been resolved and closed, and investigation outcomes were still pending for 13 reports.

Analyzing and benchmarking hotline data helps an organization better understand its culture, the effectiveness of employee communications, the quality of investigations, and employee awareness of reporting channels. This report compares data collected through the UM System case management platform with key data benchmarks and trends from the Navex Global database of reports and outcomes, providing context for evaluating program performance and maturation. (The most recent benchmarks available are for 2023; 2024 data will be published in April 2025). To provide a better understanding of university program history and performance, we have included five years of data to illustrate trends. The 2024 results in this report reflect outcomes for cases closed as of 12/31/24, which may change as pending cases are resolved.

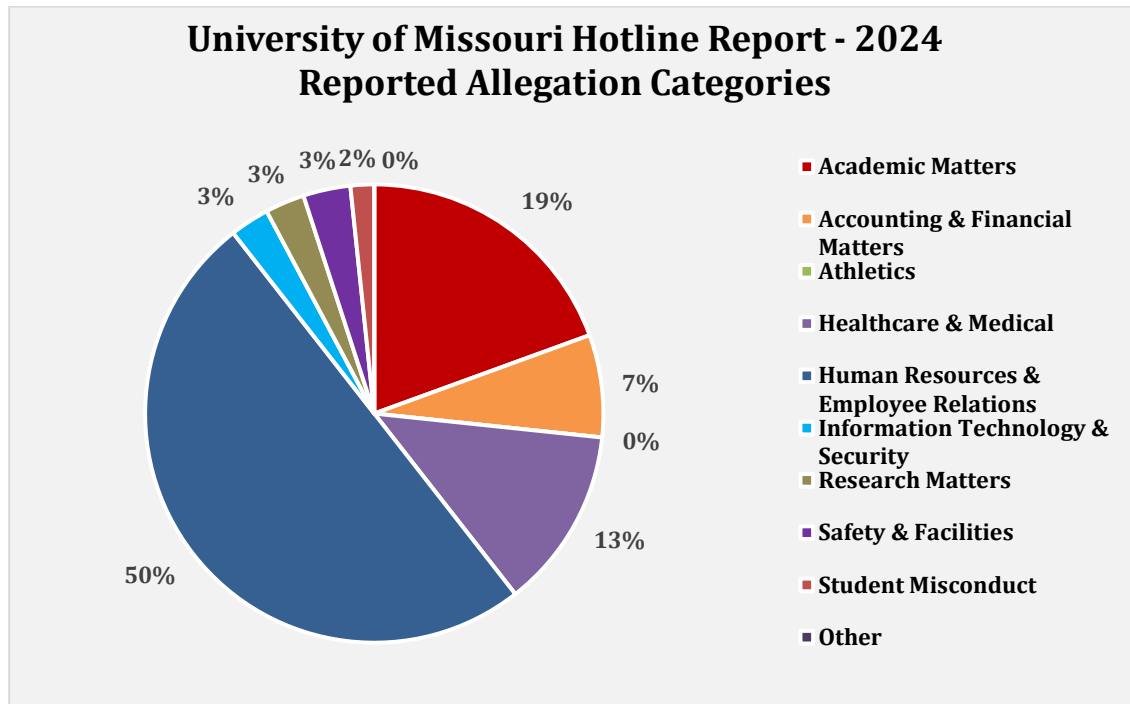
### Report Volume per 100 Employees

This metric enables organizations to compare total numbers of unique reporter contacts. The benchmark for this metric increased last year from 1.47 to 1.57 reports per 100 employees. MU Health Care is consistently identified as the location for 40-50% of reports to the hotlines; therefore, results are graphed to demonstrate this breakdown. “All other locations” includes MU, Missouri S&T, UMKC, UMSL and UM System Central Services.

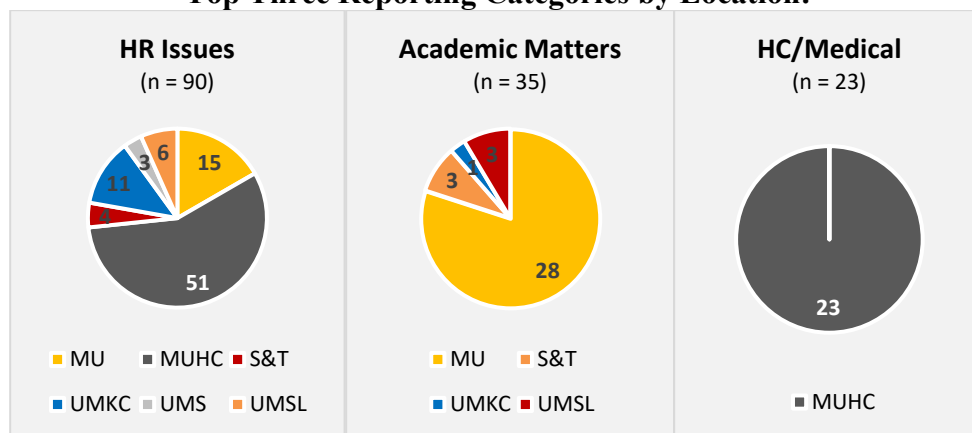


### Reported Allegation Categories

The types of reports an organization receives indicate where resources may be needed and can measure the effectiveness of efforts directed toward previously identified areas of concern. The highest number of reports is consistently HR issues, followed in 2024 by Academic Matters, and HC/Medical. The top three reporting categories together account for 82% of all hotline reports.

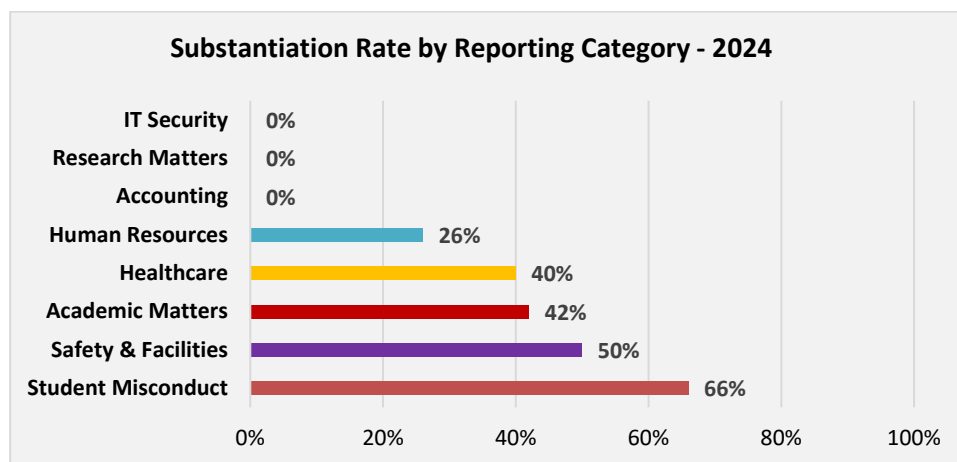
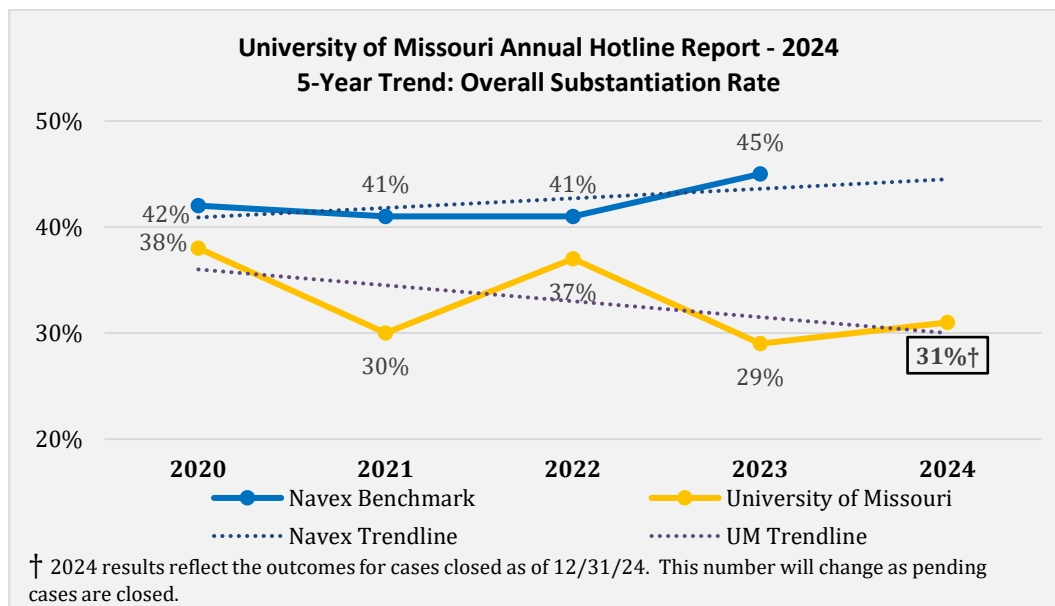


### **Top Three Reporting Categories by Location:**



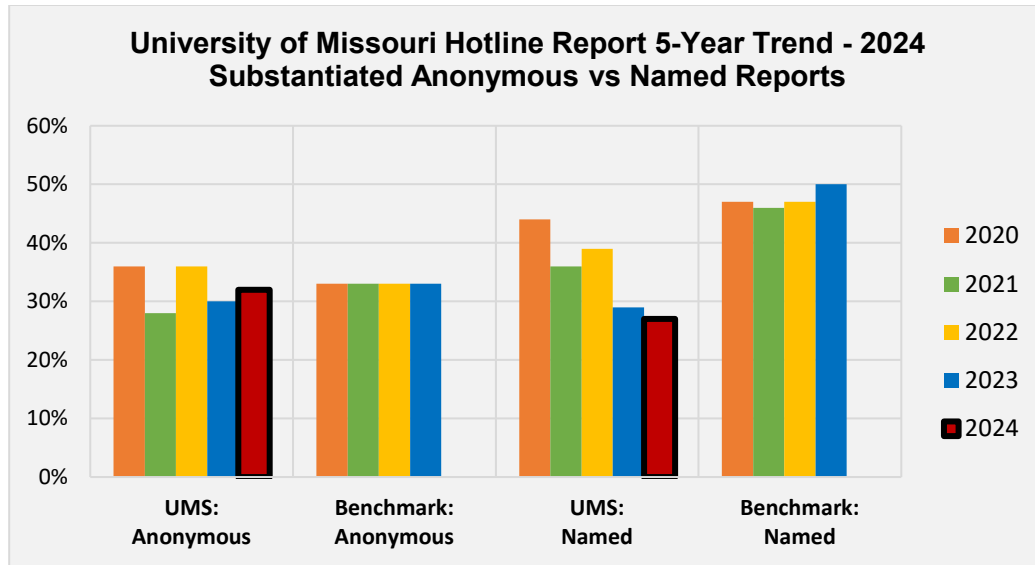
## Overall Substantiation Rate

The overall substantiation rate reflects the percentage of allegations that were investigated and either fully or partially confirmed. A high substantiation rate reflects a well-informed employee base that makes high-quality reports, coupled with effective investigation processes. Overall substantiation rates at UM have been trending down, but average 30-35%.



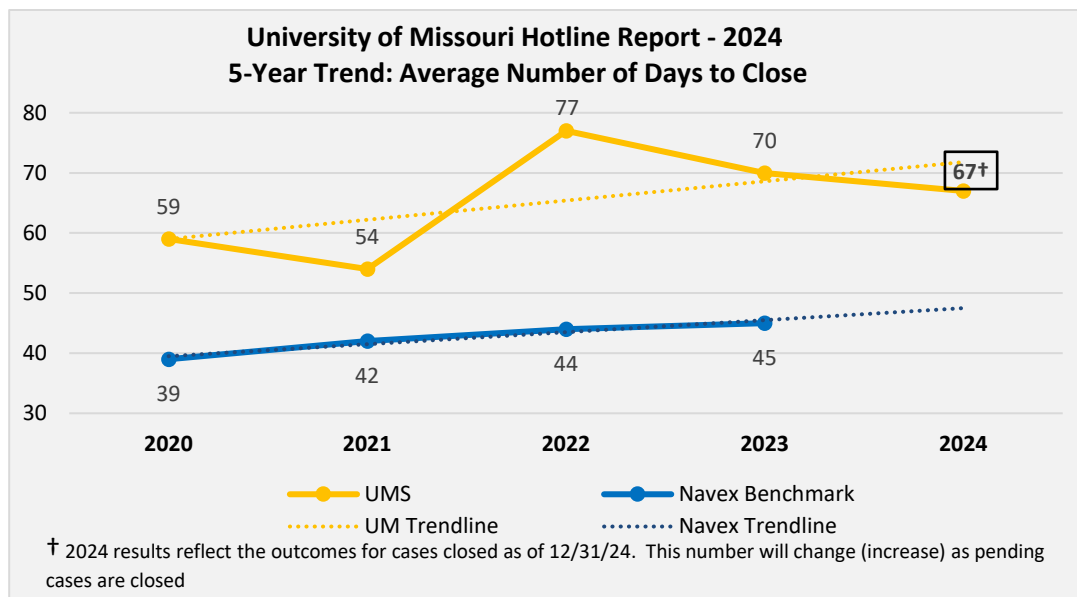
## Substantiation: Anonymous vs. Named Reports

Named reports enable investigators to gather more information directly from reporters, improving effectiveness and potentially increasing substantiation rates. Although anonymous reports may be taken less seriously, they can reveal obscure legal, regulatory, and compliance issues. The ACFE reports that anonymous tips are the most common method for detecting fraud. Promoting anonymous reporting fosters a strong speak-up culture, leading to more reports and deeper insights into organizational risks. Substantiation of anonymous reports in 2024 was 32%, and named reports was 27%.



### Case Closure Time

Case closure time is the number of calendar days to complete an investigation and close the case. Prompt investigations build employee trust. The best-practice average is 30 days, as issues persisting for 40+ days can harm morale, productivity, and culture. Increased trust may lead to more complex reports, requiring additional time and resources. The UM Hotline Committee aims to consider each report individually, allocate appropriate resources, use a standard investigative approach, and resolve matters promptly. Case closure time for reports closed at the end of the calendar year 2024 was 67 days.





## Conclusions and Opportunities for Improvement

### 2024 Highlights

1. On May 11, 2024, transition of the university-wide hotline service to new vendor Ethics Suite was completed. This 6-month conversion included a new reporting website, phone number, QR code reporting, and dissemination of re-branded promotional materials. Hotline reporting was also extended to student workers at all University of Missouri locations, and to Capital Regional Medical Center on January 1, 2024.
2. The volume of hotline reports received in 2024 (n =180) is a 40% increase over the number of reports received in 2023, and at least a 30% increase in reports received in any year since the hotline was implemented at the University (12/2007). We believe awareness of the vendor transition, promotion of the hotline service to student workers, and the launch of the “Reporting Concerns” campaign to supervisors in September 2024 contributed to the increase. Despite an increase in report volume, 93% of all reports received in 2024 were closed by the end of the calendar year. The number of days to close and substantiation rates remained steady but were generally lower than benchmarks in 2024.
3. Report volumes per 100 employees increased for all university locations and the health system for the third year in a row. Despite increases, however, report volumes continue to be low for an organization of our size. Reporting volume would need to increase by nearly 100% from 2024 volumes for the university to approach the benchmark for this statistic.

- [www.EthicsSuite.com/UMSHotline](http://www.EthicsSuite.com/UMSHotline)
- 884-469-6383



### 2025 Focus

- UM Office of Compliance will continue promoting the Code of Conduct and a speak-up culture via the “Reporting Concerns” campaign, which includes:
  - The importance of speaking up and reporting concerns
  - Examples of concerns to report
  - The important details to report so an investigation can be conducted
  - Different ways and resources for reporting concerns
- The next phase of the Reporting Concerns campaign in 2025 will focus on faculty and staff, graduate students, and MU Health Care audiences.
- UM Central Investigations will continue to assist and advise investigative partners across the University, with the goals of improving processes and decreasing days to close reports.

<b>Meeting Date</b>	February 6, 2025
<b>Action Title</b>	Fiscal Year 2024 External Audit Report
<b>Action Type</b>	Information FY24 Audit Results and FY25 Audit Scope

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***Executive Summary***

The University of Missouri engages FORVIS Mazars, LLP as independent auditors to the financial statement audit and NCAA Agreed Upon Procedures. FORVIS Mazars, LLC will present a summary of the two engagements and required communications for fiscal year 2024. Presentation of the scope of the fiscal year 2025 audit services with preliminary risk assessments and new accounting pronouncements is provided.

***Table of Contents***

**1. Executive Summary**

- *Provides a high-level overview of the required audit procedures and communications for the financial statement audit and NCAA Agreed Upon Procedures.*

**2. Information Item on Audit Results [OPEN – ACE – 1 - 1-2]**

- *Overview of the fiscal year 2024 financial statement audit and NCAA Agreed Upon Procedures as well as the audit scope for fiscal year 2025.*

**3. FORVIS Mazars, LLP Audit Presentation [OPEN – ACE – INFO – 3 – 2-26]**

External Auditor's Report  
UM

At the February 6, 2025 Board of Curators meeting, Rachel Dwiggins, Partner with FORVIS Mazars, LLP will present a summary of the FY 2024 Financial Statement Audit, NCAA Agreed Upon Procedures, and the audit scope for fiscal year 2025.

The University of Missouri 2024 financial statement audit was completed on October 18, 2024. The Board of Curators will be provided with an overview of the audit results and the required communication as a part of the audit.

The University of Missouri NCAA Agreed Upon Procedures Reports ("NCAA Reports") for fiscal year 2024 were completed by the January 15<sup>th</sup> deadline. The reports will be provided together to the Board with the Federal Single Audit once complete by the March deadline.

The Fiscal Year 2025 Audit Scope presentation will provide an overview of scope of audit services, audit timeline, preliminary risk assessments and discussion on implementation of new accounting pronouncements effective for fiscal year ended June 30, 2025.

February 6, 2025



# University of Missouri System Board of Curators

Rachel Dwiggins, Jean Nyberg, Michael Flaxbeard



# Agenda

1. 2024 Audit Results
2. NCAA Agreed-Upon Procedures Results
3. 2025 External Audit Scope

# 2024 Audit Results



# Audit Approach

- Financial reporting
  - U.S. Generally Accepted Accounting Principles
- Auditing standards
  - Auditing standards generally accepted in the United States of America
  - *Government Auditing Standards*
- Compliance
  - *Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance)*

# Audit Approach

## Financial Statement Audit

- Audit of financial statements of the University of Missouri System
  - Capital Regions Medical Center no longer received a stand-alone audit
- Objective
  - Express opinion on conformity of financial statements, in all material respects, with accounting principles generally accepted in the United States of America

# Areas of Audit Emphasis

- Significant risks communicated during planning

Risk Area	Results
Management override of controls	No matters are reportable.
Revenue Recognition	No matters are reportable.
Revenue Recognition (health system)	No matters are reportable.
Valuation of investments	No matters are reportable.

# Significant Estimates

- Third-party Reimbursement
- Allowance for Uncollectable Accounts
- Valuation of Investment Securities
- Accruals
  - Malpractice Claims
  - General Liability Claims
  - Health Claims
  - Workers' Compensation Claims
- Defined Benefit Pension & Other Postemployment Benefit Plan Assumptions

# Audit Approach

## *Compliance Audit*

- Audit the compliance of certain major federal programs:
  - Research and Development Cluster
  - Supplemental Nutrition Assistance Program (SNAP)
  - Coronavirus State and Local Fiscal Recovery Funds (CSLFRF)
  - Substance Abuse and Mental Health Services
  - Medical Student Education
  - Partnerships for Climate- Smart Commodities
- Objective
  - Express opinion on compliance for certain major federal programs based on requirements described in the OMB Compliance Supplement

# Required Communications

Area	Comments
Significant Accounting Policies	Described in Note 1 of the financial statements.
Unusual Policies & Alternative Accounting Treatments	No matters are reportable.
Financial Statement Disclosures	<ul style="list-style-type: none"><li>• Fair Value of Assets &amp; Liabilities</li><li>• Retirement, Disability &amp; Death Benefit Plan</li><li>• Other Postemployment Benefits</li></ul>
Auditor's Judgement about the quality of the system's accounting policies	No matters are reportable.



# Required Communications - Continued

- Communicated during planning

Area	Comments
Audit Adjustments	<ul style="list-style-type: none"><li>Proposed audit adjustments not recorded:<ul style="list-style-type: none"><li><u>System</u>:<ul style="list-style-type: none"><li>Reclassify patient refunds and third-party settlements</li><li>Aggregate of other immaterial items</li></ul></li><li><u>Pension Trust Funds</u> (Aggregate Remaining Fund opinion unit):<ul style="list-style-type: none"><li>None</li></ul></li></ul></li></ul>

# Other Deliverables

- Issued
  - NCAA Agreed-Upon Procedures
- To be Issued
  - Single Audit report in accordance with Uniform Guidance

# Report Opinions

Independent  
Auditor's Report –  
Unmodified Opinions

Independent Auditor's Report on Internal Control Over Financial  
Reporting and on Compliance and Other Matters Based on an  
Audit of the Financial Statements Performed in Accordance with  
Government Auditing Standards

# NCAA Agreed-Upon Procedures Results



# NCAA Agreed-Upon Procedures Results

Division I Institutions	Division II Institutions
<ul style="list-style-type: none"><li>Required Annually</li></ul>	<ul style="list-style-type: none"><li>Required every three years</li></ul>

Performed all four campuses in 2024

# 2024 External Audit Scope



# 2024 External Audit Scope

1. Engagements
2. Audit Timeline
3. Audit Approach
4. Appendix: Personnel
5. Questions

# Engagements

- Audit of financial statements of:
  - University of Missouri System
- Single Audit in accordance with OMB Uniform Guidance
- Minimum Agreed-Upon Procedures required by NCAA for
  - Columbia
  - Kansas City

# Audit Timeline

- Preliminary audit work
  - Pre-audit planning meeting – Spring 2025
  - Interim procedures, risk assessment & other planning – May 2025
  - Student financial aid testing – July 2025
- Final audit work
  - Fieldwork procedures – August/September/October 2025
  - Issuance of financial statement audits – October 2025
  - Additional federal program testing – October 2025 – January 2026
- NCAA procedures – November/December 2025

# Audit Approach – Applicable Framework

## Financial Reporting

- U.S. Generally Accepted Accounting Principles

## Auditing Standards

- Auditing standards generally accepted in the United States of America
- *Government Auditing Standards*

## Compliance

- *Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance)*

# Audit Approach - Planning

- Risk assessment
  - Obtain an understanding of business & business environment
    - Interviews with management
    - Review of Board minutes & presentations
  - Evaluate where financial statements might be susceptible to material misstatement or fraud
  - Consider internal controls over financial reporting & whether they have been implemented
    - Perform walkthrough tests of controls
    - Review duties of employees for issues in control structure
  - Assess risk of material misstatement for significant financial statement amounts and disclosures

# Audit Approach – Preliminary Risk Assessment

- Financial Statement Significant Risks
  - Valuation of investments
  - Revenue recognition on student revenues
  - Revenue recognition on health care revenues
  - Valuation of receivables & third-party payors
- Other
  - Compliance
  - Risk management
- Risk assessment procedures may identify others



# Audit Approach – New Standards

- GASB 101, *Compensated Absences*
- GASB 102, *Risk Disclosures*
- New standards referenced above are not expected to have a significant impact on the financial statements

# 2025 Forvis Mazars Team & Roles



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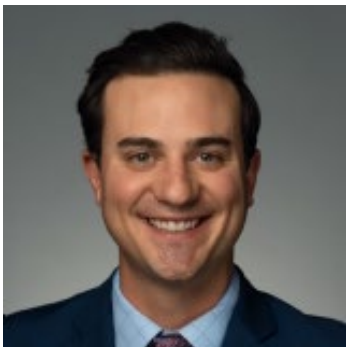


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# Questions?



# Thank You

<b>Meeting Date</b>	February 6, 2025
<b>Action Title</b>	Fiscal Year 2025 Engagement of Independent Auditors and Related Fees
<b>Action Type</b>	Approval of Recommended Engagement of Independent Auditors and Related Fees

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### ***Executive Summary***

The University of Missouri engages independent auditors to perform the following audit services: combined financial statements of the University of Missouri System, compliance audit of the University of Missouri System in accordance with OMB Uniform Guidance; and minimum agreed-upon procedures required by the NCAA for the Intercollegiate Athletics Departments of the Columbia and Kansas City campuses. The Executive Vice President for Finance and CFO recommends that FORVIS Mazars, LLP be employed to provide audit services to the University of Missouri for fiscal year 2025 for fees and expenses of \$675,970.

### ***Table of Contents***

#### **1. Executive Summary**

- *Provides a high-level overview of the independent auditor engagements and related fees.*

#### **2. Recommended Action & Roll Call Vote [OPEN – ACE – 1 - 1-2]**

- *The formal resolution to be voted upon by the Board to provide approval to employ FORVIS Mazars, LLP to provide audit services to the University of Missouri for fiscal year ending June 30, 2025.*

#### **3. Fiscal year 2025 audit fee schedule [OPEN – ACE – 1-3]**

- *Schedule of fiscal year 2025 fees by audit engagement with prior year fees and expenses included.*

## Engagement of Independent Auditors and Related Fees UM

The Executive Vice President for Finance and CFO recommends that FORVIS Mazars, LLP be employed to provide audit services to the University of Missouri for fiscal year 2025 for fees of \$600,087 plus expenses not to exceed \$75,883. The total fees and expenses of \$675,970 represents an overall decrease of 2.1%. The net decrease in fees is a result of a decrease in scope for the NCAA agreed upon procedures for Division II programs, which are performed every three years as well an increase in the Consumer Price Index over the prior year.

Fiscal year 2025 fees cover the following audit services: combined financial statements of the University of Missouri System, compliance audit of the University of Missouri System in accordance with OMB Uniform Guidance; and minimum agreed-upon procedures required by the NCAA for the Intercollegiate Athletics Departments of the Columbia and Kansas City campuses. The contract for audit services was competitively bid in 2020 with services covering audits for fiscal year 2021 through 2025. The University will begin another competitive bid process in the spring of 2025 for audits beginning in fiscal year 2026.

Fees for required NCAA Athletic Department minimum agreed upon procedures decreased by \$34,794 due to the exclusion of the UM-St Louis and Missouri S&T athletic departments in the scope. The NCAA requires that minimum agreed-upon procedures for a Division II university intercollegiate athletic program be performed every three years. These procedures were last performed for the Missouri University of Science and Technology campus and the UM – St. Louis campus in fiscal year 2024 and will be required in fiscal year 2027. As negotiated in the competitive bid process, FORVIS Mazars' rates increase annually by inflation as measured by Consumer Price Index - Urban.

February 6, 2025



No. 1

Recommended Action – Engagement of Independent Auditors and Related Fees, UM

It was recommended by Vice President Rapp, endorsed by President Choi, moved by Curator \_\_\_\_\_, seconded by Curator \_\_\_\_\_, that the following action be approved:

that the Vice President for Finance be authorized to employ the firm of FORVIS Mazars, LLP to provide audit services to the University of Missouri for fiscal year ending June 30, 2025 for fees of \$675,970

Roll call vote of Committee:            YES            NO

Curator Holloway  
Curator Krewson  
Curator Sinquefield

The motion \_\_\_\_\_.

Roll call vote:                            YES            NO

Curator Blitz  
Curator Fry  
Curator Graves  
Curator Holloway  
Curator Krewson  
Curator Layman  
Curator Sinquefield  
Curator Wenneker  
Curator Williams

The motion \_\_\_\_\_.

# University of Missouri System

Audits of Fiscal year ended June 30, 2025

	Fees				Expenses				Total Fees & Expenses FY 2024	Total Fees & Expenses FY 2025
	6/30/2024 Fees	Inflation Adjustment	Known scope change	Total Fees FY 2025	6/30/2024 Expenses	Inflation Adjustment	Known scope change	Total Expenses FY 2025		
Combined financial statements of the University of Missouri System	\$ 261,670	\$ 7,588	\$ -	\$ 269,258	\$ 44,775	\$ 1,298	\$ -	\$ 46,073	\$ 306,445	\$ 315,331
Compliance audit of the University of Missouri System in accordance with OMB Uniform Guidance	\$ 143,826	\$ 4,171	\$ -	\$ 147,997	\$ 12,961	\$ 376	\$ -	\$ 13,337	\$ 156,787	\$ 161,334
Financial statements of the University Health System	\$ 142,791	\$ 4,141	\$ -	\$ 146,932	\$ 14,751	\$ 428	\$ -	\$ 15,179	\$ 157,542	\$ 162,111
Minimum agreed-upon procedures required by the NCAA for the Intercollegiate Athletics Departments of the Columbia and Kansas City campuses	\$ 67,866	\$ 1,968	\$ (33,933)	\$ 35,901	\$ 2,093	\$ 61	\$ (861)	\$ 1,293	\$ 69,959	\$ 37,194
<b>Total</b>	<b>\$ 616,152</b>	<b>\$ 17,868</b>	<b>\$ (33,933)</b>	<b>\$ 600,087</b>	<b>\$ 74,581</b>	<b>\$ 2,163</b>	<b>\$ (861)</b>	<b>\$ 75,883</b>	<b>\$ 690,733</b>	<b>\$ 675,970</b>

Additional audit hours incurred beyond the anticipated normal scope of auditing services will be discussed with UMS management on a timely basis and additional billings will be negotiated at an hourly rate of \$225.00. The following instances are considered a change in the normal scope of the audits: 1) greater than six major federal award programs under OMB Uniform Guidance Single Audit and the effects of requirements imposed on Federal dollars related to the stimulus funding 2) implementation of new Governmental Accounting Standards Board Statements, Accounting Standards Codifications, or AICPA Auditing Standards, 3) scope of audit work changing dramatically, significant difficulties encountered beyond the expected scope of the audits, or inefficiencies caused by delays in PBC's not being completed according to originally agreed upon schedule. The above noted fees assume between 150 and 200 hours of direct audit assistance will be provided from a University Intern.

GOOD AND WELFARE  
OF THE BOARD

There are no materials for this information item.

## **Financial Plan**

The financial plan serves as the bridge between the strategic plan and the annual budget. The financial planning process allows leaders to connect strategy to financial outcomes and make decisions that are in the institution's best long-term interests. The financial plan quantifies operating performance, capital investments and debt utilization to evaluate the impact of strategies on financial standing. The financial plan serves as the foundation for the annual budget and capital plan. Financial planning is an iterative process that allows leadership to quantify future risks, consider alternative scenarios, and determine appropriate responses to changes through the process.

A good financial plan will:

- Link the institution's strategic mission to measurable financial outcomes over a multi-year horizon
- Identify which strategies can be financially supported given the institution's resource capacity
- Connect annual budgets, debt utilization plans, and capital plans
- Identify the key assumptions that underwrite financial performance and develop response plans if those assumptions are not realized.
- Serve as the starting point for the annual budget process and verify the criteria underpinning the capital plan's financing.

The financial planning process is also when the University proposes financial performance targets for each operating unit for the upcoming plan. The performance targets are a function of the both the consolidated credit and the individual strategies for each institution. Per Collected Rule 140.025, primary responsibility for deciding financial performance targets for the enterprise rests with the UM System President and UM System Chief Financial Officer (CFO) and will be approved by the Board of Curators. Each Chancellor and their related CFO are responsible for meeting the financial performance targets over the planning cycle.

## **Plan Maintains Financial Strength**

Absent a strategic reason to reduce financial position, the overarching goal of setting financial targets is to maintain the University's current Aa1/AA+ credit rating. The University's target setting process follows the Moody's Higher Education Methodology. Based on the most recent credit opinion, Moody's industry outlook and credit opinion of the University remain stable:

### ***Higher Education Maintains Stable Outlook***

Moody's maintains a stable outlook for higher education sector in 2025, highlighting several opportunities and challenges:

- Revenue growth is expected to continue, with slower expense growth helping to stabilize operating performance.
- Solid financial reserves provide a buffer for institutions reporting deficits, allowing for budget adjustments.
- Leverage will rise moderately as interest rates fall and capital investment increases.
- Shifting immigration policies will pressure international enrollment at some institutions.

- Federal funding is expected to remain steady, but potential changes could result from federal budget cuts. Universities may need cut expenses if federal funding is reduced.
- Institutions with academic medical centers will benefit from improved revenue growth.
- Inflation and the labor market will continue to pressure operating performance, but half of the public sector is expected to deliver cash flow margins before interest and depreciation of over 10%.

### ***Stable Outlook for the University of Missouri System***

Moody's credit opinion issued in August for the University maintained a stable outlook. The report highlighted the University's strong financial management along with good revenue diversity and consistent favorable operating performance. Moody's cites University's brand strength, its role as a land grant research institution and its importance as a regional healthcare provider as key credit strengths.

The rating agency noted the following as key risks and performance thresholds:

- A substantial decline in demand, leading to operating cash flow margin falling below 10% on a sustained basis. For the University's financial performance, this would be equivalent to an operating margin below zero at the consolidated level.
- Significant weakening in financial leverage or reserves. The University should maintain a balance between reserves and debt.
- Increased debt demand with the inability to service future payments.
- High reliance on patient care revenues, providing elevated exposure to the healthcare sector.
- Significant pension exposure.

### ***Operating Performance Drives Rating***

A consistent theme in both the higher education industry outlook and the University's credit report is the importance of maintaining an operating cash flow margin above 10%. Operating cash flow margin measures the percentage of revenues available for capital investment and repayment of debt. Each institution was given a baseline target to submit a financial plan meeting or exceeding this 10% threshold. Achieving an operating performance above 10% enables institutions to invest in strategic and capital priorities over the planning horizon. Throughout the planning process, leverage and reserves are monitored together to align reserves with the size of operations and debt demand. Institutions requiring less debt can maintain lower reserves relative to their expenditure base.

## **Operating Assumptions in Financial Plans**

Key operating assumptions in the financial plan include:

- Tuition and state support combined will need to grow by inflation. If state appropriations decline lower than historical trends, the University will need to balance with a combination of expenditure reductions and enrollment management strategies.
- Enrollment for FY2025 is based on actual results from Fall 2024. Stable enrollment with growth in key areas remains a key driver of university revenues this will be challenging in the future due to demographic factors in Missouri and the Midwest. Each institution has a unique set of assumptions on enrollment and tuition revenues that reflect their individual

strategies and market position. Enrollment will be discussed separately for each University with a further discussion of the risk in enrollment assumptions under the risks section.

- Student auxiliaries including the bookstore, housing and dining operations have included projected net revenues at historical levels and include resources to cover debt service payments and capital investments.
- The University realized 50% growth in grants and contracts over the past three years. The financial plan assumes this growth will slow over the planning horizon.
- MU Healthcare's plan assumes growth will exceed inflation which is in line with the industry outlook.

### **Initiatives & Key Assumptions by Unit**

*MU* launched Mizzou Forward with the goal of enhancing the university's research and education missions. Mizzou Forward has provided investments to achieve excellence as a public research, AAU institution guided by accountability and ambition. MU will continue with this momentum and has included investments to:

- Recruit targeted tenured/tenure track faculty; providing startup funds to equip laboratory spaces and hire research assistants for new scientific projects. The financial plan includes a total investment of \$50 million over the next five years for compensation and startup funds for new hires.
- Increase support for research core facilities, proposal development, award nominations and compliance. The financial plan includes investments of \$15 million over the planning period to support research growth.
- New resources totaling \$7 million are included in the financial plan to enhance student academic success, increase graduation rates and improve placement outcomes.

Key assumptions driving financial performance include:

#### *Student Revenues*

- Enrollment projections include a first-time college cohort at similar levels to FY2024-FY2025 for FY2026-29 and consistent retention and completion rates.
- Tuition rates increase above inflation over the next two years to support investments in research and student success.

#### *Grants and Contracts*

- Plan includes research growth of 10% annually over the next two fiscal years and 5% annual growth in FY2027-29. Growth rate is in line with goals outlined for AAU.

#### *MU Research Reactor*

- MU's improved operating performance is driven by continued growth in the nuclear pharmaceutical business. The financial plan only includes MURR's continued execution of current contracts. Any additional contracts would represent new growth.

#### *Auxiliary and Medical Enterprises*

- Operational investments to support the changing model for athletics are included in the financial plan. The plan assumes the capital financing for Memorial Stadium Expansion



consistent with project approval, with debt being utilized since capital giving will lag construction costs.

- Patient Medical Services projections align with MU Healthcare's volume growth. Improved operating performance is included in FY2028 and 2029 as operating revenue growth exceeds expense growth.

**UMKC** Forward's overall objective is to provide students with the best educational experience and faculty and staff with the best resources and support to continue world-class work. With new Carnegie classification changes beginning in 2025, UMKC will be classified as R1 institution. The financial plan includes investments to maintain R1 status, expansion of the Physician Assistant program, and hiring staff for the Health Science District. UMKC has included the following investments:

- A \$12 million investment for critical new hires, which includes 20 faculty and 15 staff, to support the opening of the Health Science District.
- An annual \$1 million allocation to attract and retain high-quality, engaged faculty to support maintaining R1 status.

#### *Student Revenues*

- Enrollment projections, except for the Physician Assistant program expansion, are flat for FY2026-29. UMKC's Fall 2024 enrollment declined by 2% compared to Fall 2023, primarily due to a decrease in graduate master's students. The financial plan acknowledges this decline but anticipates that enrollment will stabilize in the remaining fiscal years.

#### *Grants and Contracts*

- The financial plan includes a projected annual research growth of 3% over the next five years. In the previous five years, UMKC's grants and contracts have grown by an average of 23% per year. Given federal budget pressures and the end of pandemic programs, UMKC does not foresee this level of growth continuing. The research growth outlined in the financial plan is intended to support the maintenance of R1 status.

#### *Auxiliary Enterprises*

- Increased operational investments for athletics consistent with non-power four programs are included in the financial plan.

**Missouri S&T's** vision is to be the leading public technological research university for discovery, creativity, and innovation. Achieving R1 classification in 2025, the financial plan includes the following investments for student success and maintaining R1 status:

- An additional 426 students are anticipated with the introduction of new academic programs Bio-innovation and Semi-Conductor, generating \$11 million over the next five years.
- The financial plan includes \$28 million in external funding from grants and gifts for the Bio-innovation and Semi-Conductor programs over the planning period.
- Fourteen new faculty members will be hired to support these programs, with compensation costs totaling \$9 million.

- Operating investments of \$22 million are included to support new academic programs, start-up packages, facility operations for new research buildings, and marketing strategies for enrollment growth.
- The Kummer Foundation will contribute \$78 million over the financial plan to support the Kummer College, scholarships, faculty hires, graduate fellows, and operational support for research centers.

#### *Student Revenues*

- Missouri S&T's overall enrollment for the current fiscal year remains flat compared to the previous year, despite a 6% increase in the incoming freshman cohort. Over the remainder of the financial plan enrollment is projected to grow by 9%, over the next four years, driven by improved retention rates and an average annual increase of 5% in freshman cohorts. Additionally, the two new academic programs are expected to attract an additional 222 students by the end for the planning horizon, representing a 3% increase.

#### *Grants and Contracts*

- The plan includes annual research growth of 6% across the next five years. In the previous five years, Missouri S&T's grants and contracts have grown by an average of 11% per year. This growth is intended to support the maintenance of R1 status.

#### *Kummer Investment*

- The Kummer long-term fund balance is projected to decline as operational and capital contributions will exceed projected investment earnings.

Over the next five years, *UMSL's* strategic objectives will focus on enrollment stabilization, employee retention and space consolidation. The new School of Engineering is included in UMSL's financial plan with building renovations scheduled for FY2025 and student admissions starting in Fall 2026. The plan requires enrollment stability and improvement in faculty productivity per student throughout the plan. UMSL does not plan to expand its employee base; merit and equity increases are included each year to retain current employees.

#### *Student Revenues*

- Enrollment is projected to flat over the next five years with a 2% decline realized in FY2025. Improvement from FY2026-29 will be driven by targeted enrollment marketing and scholarship strategies.

#### *Grants and Contracts*

- The plan includes annual research growth of 4% across the next five years. In the previous five years, UMSL's grants and contracts have grown by an average of 15% per year.

#### *Philanthropy*

- Improved giving is required through the financial plan to support operating and capital investments. The financial plan includes a 35% growth in private gifts and 87% growth in endowed giving.

**MU Healthcare's** strategic initiatives prioritize enhancing care coordination throughout the patient journey, ensuring seamless transitions and comprehensive support. MU Healthcare leadership aims to improve access by optimizing schedules, implementing throughput initiatives, and extending virtual care services. Establishing Centers of Excellence and Programs of Distinction, along with the implementation of new services and programs, will elevate MU Healthcare's standards of care. MU Healthcare focuses on optimizing space utilization and expanding clinical outreach to strengthen referral relationships and foster partnerships. Service delivery will be enhanced by integrating technology and refining contracts.

Operating performance has improved over FY2024 in both current year's financial results to date and the financial plan. MU Healthcare's financial plan includes:

- Growth in revenues per case with improved payer negotiations
- Capital investments to increase capacity and grow revenue
- Corporate growth lagging volume growth
- Reductions in agency spending to match peer medical centers

In the near term, MU Healthcare is focused on replenishing reserves after several years of declining operating performance and the construction of the new Children's Hospital. The plan includes capital investments to achieve revenue growth and room for an additional acquisition within the five-year period. As is common for all academic medical centers, the hospital will continue to provide support to MU for academic and research investments that support the clinical operations. Healthcare operations will continue to grow at a faster pace than the academic enterprise.

### **Capital Investments**

The following table reflects the capital investment and external capital funding sources included in the financial plan by institution over the next five years, a detailed project list is included in the appendix. The large capital investments support the capital footprint necessary to maintain research growth and resources desired by students.

\$'s in millions	MU	UMKC	S&T	UMSL	MUHC
<b>Sources</b>					
Gifts Received	\$148	\$60	\$215	\$12	
Capital Grants	104	42	34	3	
Capital Appropriations	187	81	82	73	
Debt	184	34			
Operating Cash Flows	670	138	116	58	320
<b>Total Capital Sources</b>	<b>\$1,293</b>	<b>\$355</b>	<b>\$447</b>	<b>\$146</b>	<b>\$320</b>
<b>Uses</b>					
Board Level Projects	\$960	\$302	\$349	\$96	\$74
Capital Projects under \$5M / TBD	230	42	47	32	136
Capital Equipment and Software	103	11	51	18	110
<b>Total Capital Uses</b>	<b>\$1,293</b>	<b>\$355</b>	<b>\$447</b>	<b>\$146</b>	<b>\$320</b>

The capital plan includes \$1 billion of externally sources and \$1 billion generated from internal cash flows. Maintaining capital is a key reason why operating cash flow margins need to exceed 10%. The financial plan includes substantial capital investment due to the availability of external revenues. On a forward basis, capital investment is likely to drop unless these revenues are sustained.

### **Risk in Financial Plan**

The financial planning process also seeks to identify key risks that could disrupt planned investments and financial performance over the planning horizon.

**Enrollment** is the key factor to meeting the revenue projections in each academic institution's financial plan. Enrollments drive both tuition and auxiliary revenues, and any declines put pressure expenditures. Future enrolment growth will be further challenged as the number of Missouri high school graduates is projected to decline starting in 2026. Without enrollment growth, institutions must seek alternative revenue streams such as grants & contracts or face cost reduction actions.

Table 3: Historical Enrollment Volume Growth to Planned

	MU	UMKC	Missouri S&T	UMSL
Historical % Change in Enrollment	6%	-10%	-15%	-20%
Planned % Change in Enrollment	3%	2%	14%	3%
Monetary Enrollment Risk over Planning Horizon	\$20M	-\$12M	-\$24M	-\$11M

Table 3 compares the five-year planned change in enrollment to the previous five years of actual performance. The four universities face a combined enrollment risk of \$47 million over the planning period. UMKC and Missouri S&T have incorporated compensation increases and/or new faculty and staff hires, contingent upon enrollment growth. Should the planned enrollment not be achieved, expenditure reductions will be implemented to balance the financial plan. UMSL requires enrollment growth to support its current expense base. MU's historical growth starts from a relatively low base after an enrollment decrease. If MU achieves the same growth rate as the prior 5 years, tuition revenue would be \$20 million higher over the plan. The achievement of enrollment will impact MU's ability to invest in Mizzou Forward and key auxiliary operations.

As noted in the industry outlook, shifting immigration policies could pressure international enrollment at some institutions. For Fall 2024, Missouri S&T has the highest international student population at 15%, while the overall international population at the University is 6%. Missouri S&T's financial plan addresses this risk by reducing international enrollment and associated expenses. UMKC has the second largest international student population with an estimated impact of \$2 million over the plan which UMKC would plan address through budget efficiencies. The international student population at MU and UMSL is less than 5% of their total enrollment and is not considered a significant risk.

**Federal funding** for research is expected to slow compared previous three fiscal years. Each university assumed continued growth in grants and contract, but at a slower pace. If federal funding slows to plans, the Universities will make expenditure cuts in the areas currently generating revenues from federal research. Given the grant award process, there will be notice of decline and a period for the units to make the decisions to adjust to a change in revenues.

#### *Additional Risks included in Financial Plans*

**MU's** financial plan projects that MURR will generate significant operating resources from radioisotope production contracts. To generate sufficient resources for the complete NextGen MURR investment, these production contracts need to be solidified over the course of a decade or more. Even with these resources, significant support from federal and state sources will be necessary to underwrite a new reactor. MURR's performance also has a significant impact on the consolidated operation. Without this additional cash flow, MU would need to set its operating margin target at 5% to support planned capital investments and fund debt service as compared to a target of 2.5%.

**Missouri S&T's** capital investments over the next five years will be double those of the previous five years. The Kummer Foundation supports both capital and operational initiatives for Missouri S&T. Over the next five years, Missouri S&T plans to draw over \$250 million from the foundation to support capital and operating investments, which represent nearly two thirds of current investments without any investment income.

If enrollment targets are not achieved, **UMSL** will need to identify cost reductions of \$5 million annually on a recurring basis through the annual budget cycle. If permanent reductions are not recognized with current enrollment levels, UMSL will draw cash reserves and fall below target. The plan includes capital investments to enable space consolidation and reduce the load of the building footprints to a more reasonable level for the future.

**MU Healthcare** represents 40% of the consolidated enterprise from an expenditure perspective, representing a significant exposure to the healthcare industry for the consolidated enterprise. MU Healthcare's plan includes another acquisition over the planning horizon to continue efforts to improve growth and scale. The plan assumes the MU Healthcare is able to improve commercial insurance rates consistent with industry trends. The plan also assumes consistent programing in governmental payers, including the continued operation of the 340b pharmacy program. While not quantified, these revenue risk areas would present disruptions to MU Healthcare's operations if changes were enacted.

**Pension** size and exposure remains a key financial risk for the University. Moody's values the net pension liability using private pension standards, counting a net liability of \$2.4 billion in 2024 compared to the \$1.1 billion reported in the financial statements. The university has taken multiple steps to address the growth in the pension liability including adding employee contributions, decreasing the investment return assumption, closing the plan, and buying out vested terminated employees. The University will continue to work towards the goal of achieving a fully funded plan at a market-based discount rate for a closed plan. This will take 15 to 20 years to accomplish.

### **Consolidated Financial Performance Targets**

Following targets are recommended for the consolidated enterprise. The four targets consolidated targets are the key drivers of the operating performance, financial resources, and leverage metrics in the Moody's methodology. Performance at targeted levels maintains the University's strong financial profile.

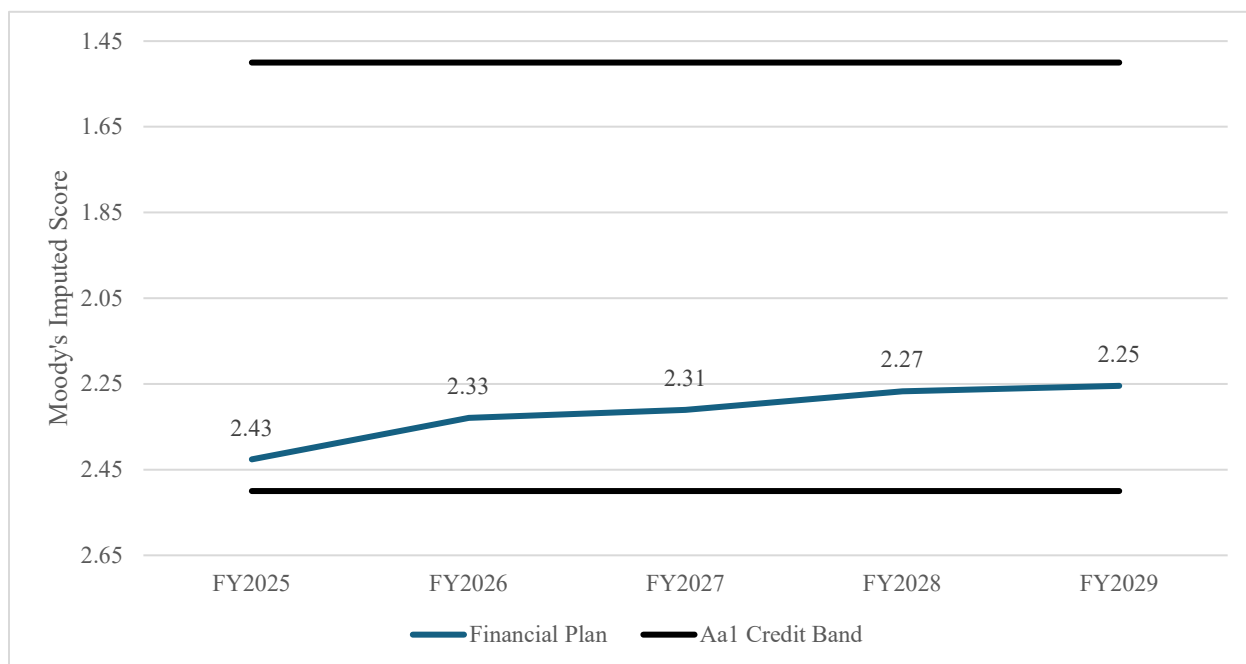
	Proposed Target	FY2025	FY2026	FY2027	FY2028	FY2029
Operating Margin	>3.0%	1.8%	3.2%	3.8%	4.6%	4.5%
Spendable Cash to Operations	>0.90	0.93	0.88	0.85	0.87	0.90
Spendable Cash to Debt	>3.00	2.66	2.89	3.04	3.56	4.01
Debt to Cash Flow*	<3.50	3.77	2.91	2.53	2.08	1.97
Moody's Imputed Score	<2.50	2.43	2.45	2.23	2.37	2.18
<i>*Debt to Cash Flow is utilized for consolidated target instead of debt service coverage for debt affordability to account for bullet maturities</i>						

Planned performance improves the scorecard measure in FY2026-FY2028 on a combination of improved operating performance coupled with falling levels of debt. If the University achieves the planned operating performance over this timeframe, additional capital and debt capacity will be available within the planning horizon. Targets are set at historical levels of performance for the institution. If the University chooses to deleverage in the future, it will not have to carry the same amount of reserves in relation to the operating expenditure base. This decision will be considered annually as targets are reset every year.

Moody's scorecard includes both qualitative and quantitative factors that serves as the underlying basis for the University's credit rating. In a single number, the scorecard attempts to grade the University's overall financial health. The consolidated financial plan meets the targets recommend maintain the University's scorecard Aa1 credit rating throughout the planning horizon. The score evaluates the institution's market profile, financial policy, scale, financial resources, liquidity, leverage and coverage. For details explanations of these factors, refer to the glossary in the appendix. Figure 1 represents the scorecard outcome generated by the financial plan, where a lower number indicates better financial performance (Aa1 Range: 2.5-1.5).

Figure 1: Projected Moody's Scorecard for the University of Missouri





Note: Debt bullet maturities are smoothed over the planning period.

### **Unit Financial Performance Targets**

During the financial planning process, financial accountability targets were allocated to maintain the consolidated credit and aligned with the composite financial index (CFI). The CFI calculation is the financial measure used by Higher Learning Commission (HLC) in accreditation. The target range is a CFI between 3 to 5 for public universities. Typically, a score below 3 indicates a need to reengineer the institution to enhance financial strength, while a higher score suggests financial flexibility for strategic investments. The underlying measures in the CFI calculation align with the proposed financial targets by unit.

CFI results are included in the appendix. All universities maintain a score above 3 throughout the financial plan except for UMSL. UMSL has built a strong balance sheet over the last five years but must generate a positive operating margin to allocate resources towards strategic investments. UMSL achieves positive operating performance by FY2027, and achieving this level of performance moves the CFI score above 3 for UMSL.

The key financial target for monitoring individual unit operating performance is the operating margin, which is included in the budget, quarterly performance reports, and the annual financial status report. Recommended operating margin targets are set to fund debt service requirements and capital budgets. The operating margin is set over a five-year period, as the metric will undergo phases of investment followed by improved operating performance.

	MU	UMKC	Missouri S&T	UMSL	MUHC	UM
Average Moody's Cash Flow Margin	12.0%	10.0%	16.0%	11.5%	11.9%	12.5%
Adjustment for Interest and Depreciation	-7.0%	-6.5%	-11.0%	-8.5%	-5.7%	-6.7%
Moody's Investment Income Adjustment <sup>1</sup>	-2.5%	-2.0%	-2.0%	-2.0%	-1.7%	-2.8%
<b>Recommended Operating Margin Target</b>	<b>2.5%</b>	<b>1.5%</b>	<b>3.0%</b>	<b>1.0%</b>	<b>4.5%</b>	<b>3.0%</b>

Note 1: Adjustment to set spendable investment income to reflect the Board approved policies for the General Pool and Endowment Pool instead of using 5% of the three-year total cash and investment average by the rating agencies.

Table 1 shows the recommended financial performance targets by unit. Targets were allocated to individual units with a review of current performance coupled with a benchmarking of similar institutions. The operating margin targets set for each unit are based on their individual capital and growth plans. Units with higher margin targets have submitted larger capital plans and higher growth rates.

Table 1: Financial Accountability Targets by Unit

	MU	UMKC	Missouri S&T	UMSL
Operating Margin	>2.5%	>1.5%	>3.0%	>1.0%
Spendable Cash to Operations	>0.80	>0.75	>0.80	>0.70
Spendable Cash to Debt	>2.00	>1.75	>2.00	>1.50
Debt Service Coverage	>3.00	>3.00	>3.00	>3.00

Targets are adjusted on an annual basis through the financial planning process. There is flexibility within the scorecard methodology for the four-performance metrics. For instance, underperformance on spendable cash to operations can be supported with an improvement in spendable cash to debt. The underpinning of all the performance metrics remains the ability of earnings to support capital investment and service debt. Current targets are set to maintain levels of leverage, with debt capacity available for use in the latter half of the plan that has not yet been committed. If this capacity is not utilized, subsequent financial plans will continue to adjust leverage down in concert with a downward adjustment in reserves to expense.

Within the financial planning horizon, each university achieves a CFI score above 3, indicating a financial stable institution with resources available to invest in strategic initiatives. Based on planned financial result MU, UMKC, and Missouri S&T will have debt capacity generated from operating performance and principal paydown of outstanding debt over the next five years. The ability to find projects that generate positive earnings to repay debt remains the key limiting factor on debt demand. Debt affordability is evaluated with each project approval.

In contrast to the universities, MU Healthcare’s financial performance begins with higher leverage and lower reserves after a period of investment. The capital investment in the Children’s Hospital, combined with an industry wide tightening of margins eroded MU Healthcare’s financial position. MU Healthcare has shown improvement through the first half of FY2025, and the plan shows continued improvement.

MU Healthcare’s financial performance targets are compared to Moody’s A-rated academic medical centers. The current medians for A-rated medical centers are presented in the following table, with recommended targets aligned with industry benchmarks.

Table 2: MU Healthcare Financial Performance Targets

	Moody’s A – Rated Medical Centers Median	Recommended Target
Operating Margin	3%	>4.5%
Day’s Cash on Hand	206.5	>200
Spendable Cash to Debt	1.74	>1.50
Debt Service Coverage Ratio	4.50	>3.00

MU Healthcare’s financial plan demonstrates a sustained improvement in operating performance from FY2025 onward. The financial plan includes a balanced capital budget within resources generated. With a 4.5% operating margin and a capital budget of \$320 million over the next five years, MU Healthcare’s Days Cash on Hand increases to 176 days from a low of 120 in FY2024 year-end. With continued improvement in operating performance, MU Healthcare will increase its debt capacity towards the end of the financial plan to support additional growth.

### **Next Steps**

With the approval of the financial plans, the University will begin preparations for the FY2026 budget cycle. Key actions in the cycle include:

- Review of FY2027 State Appropriation Request – April 2025
- Review of FY2026 Budget Assumptions – April 2025
- Approval of Capital Plans – April 2025
- Approval of FY2026 Tuition – May 2025
- Approval of FY2026 Budget – June 2025
- Approval of FY2027 State Appropriations Requests – June 2025

## Glossary of Terms

### Key Terms

***Operating Cash Flow Margin:*** calculation is operating revenue less operating expense plus depreciation and interest expense divided by operating revenue. This measures the amount of cash generated by the university to support its strategic and capital initiatives.

***Spendable Cash and Investments:*** calculation is total cash and investments excluding permanently restricted cash and investment. This represents resources that can be accessed over time.

***Spendable Cash and Investments to Operations:*** calculation is total spendable cash divided by operating expenses. This metric shows the amount of cash available to weather unexpected disruptions in revenue or expense.

***Spendable Cash and Investments to Debt:*** calculation is total spendable cash divided by total debt outstanding. This measures the relative size of debt burden against available liquid sources to fund debt.

***Debt Service Coverage:*** calculation is total operating cash flows divided by total debt service payments due. This shows the institution's ability to generate cash flows to pay debt service when it becomes due on bonds and notes payable.

***Debt to Cash Flow:*** calculation is total debt divided by operating cash flow. This measures the ability of a university to repay its debt from its annual operating earnings.

***Composite Financial Index:*** a holistic measure of financial health for the higher education industry used in accreditation decisions. Healthy is defined as a score of 3 or above. Accreditation can be impacted if the score falls below 1. Measure considers operating performance, debt, and reserve levels.

### Moody's Scorecard Factors

***Market Profile*** of a university consists of its brand positioning and operating environment. Moody's evaluates the university's brand by examining the scale and diversity of its educational offerings relative to market demand and the diversity of its revenue sources.

***Financial Policy*** evaluates the management, governance, oversight, and planning mechanisms that enable an institution to fulfill its mission. Moody's assesses this factor by examining the financial policies and procedures in place, the extent of management oversight, and board involvement in key financial decisions.

***Scale*** serves as a measure of an institution's business strength and reputation. Large scale institutions typically have broader diversification of educational programs and revenue sources. Moody's uses total operating revenues as the measure of scale.

***Operating Performance*** measures the institution's ability to generate financial resources to meet obligations and invest in new initiatives. Moody's uses operating cash flow margin (or earnings before interest, depreciation and amortization) to assess operating performance.

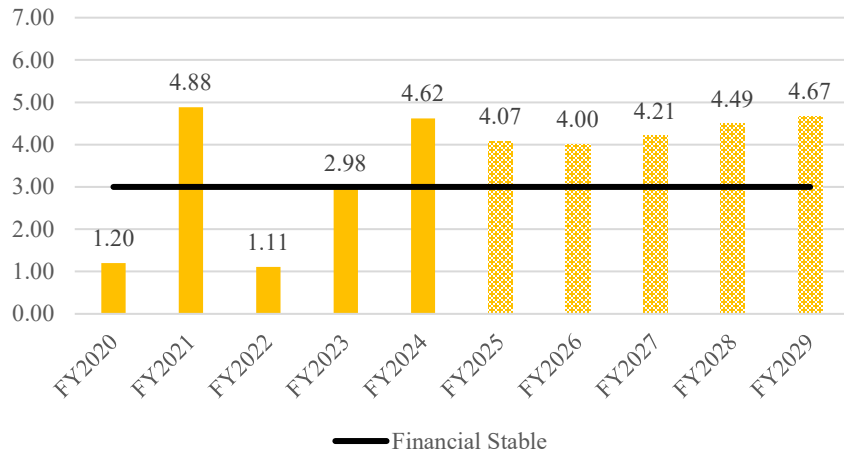
***Financial Resources and Liquidity*** are also referred to as the institution's reserves. Moody's measures financial resources by both total cash and investments and total cash and investments to operating expense.

***Leverage and Coverage*** measures an institution's debt size relative to assets on the balance sheet and the ability to generate cash flow to pay debt service. Moody's incorporates the University's pension into its leverage metric, with the adjusted net pension liability representing over 55% of the total debt.

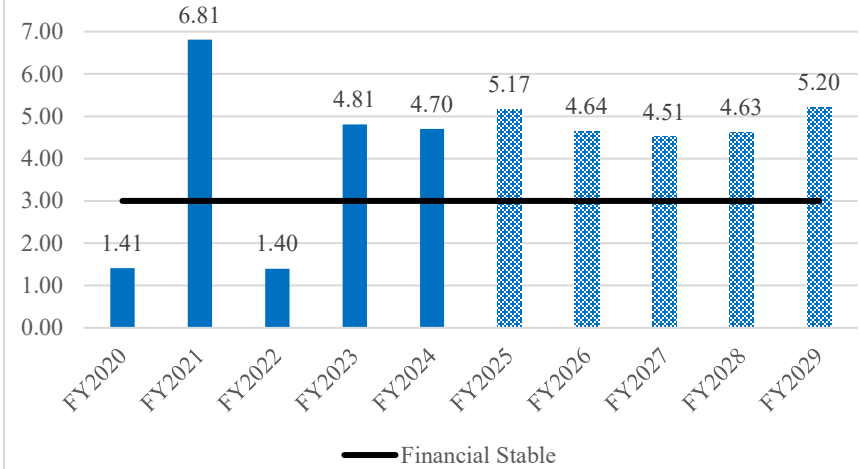
## Composite Financial Index

Note: CFI calculation include impact of pension plan

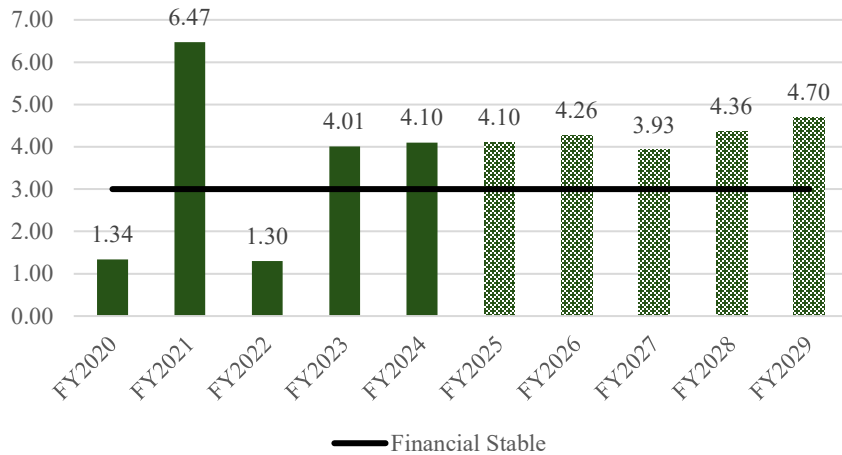
### MU Composite Financial Index



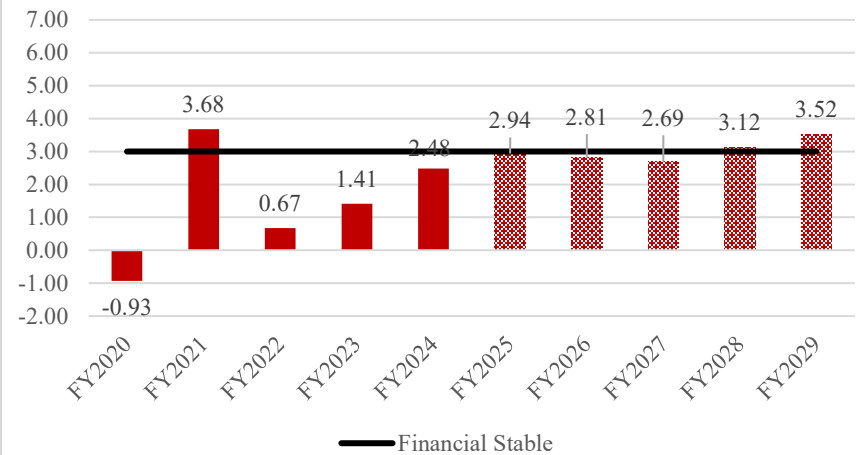
### UMKC Composite Financial Index



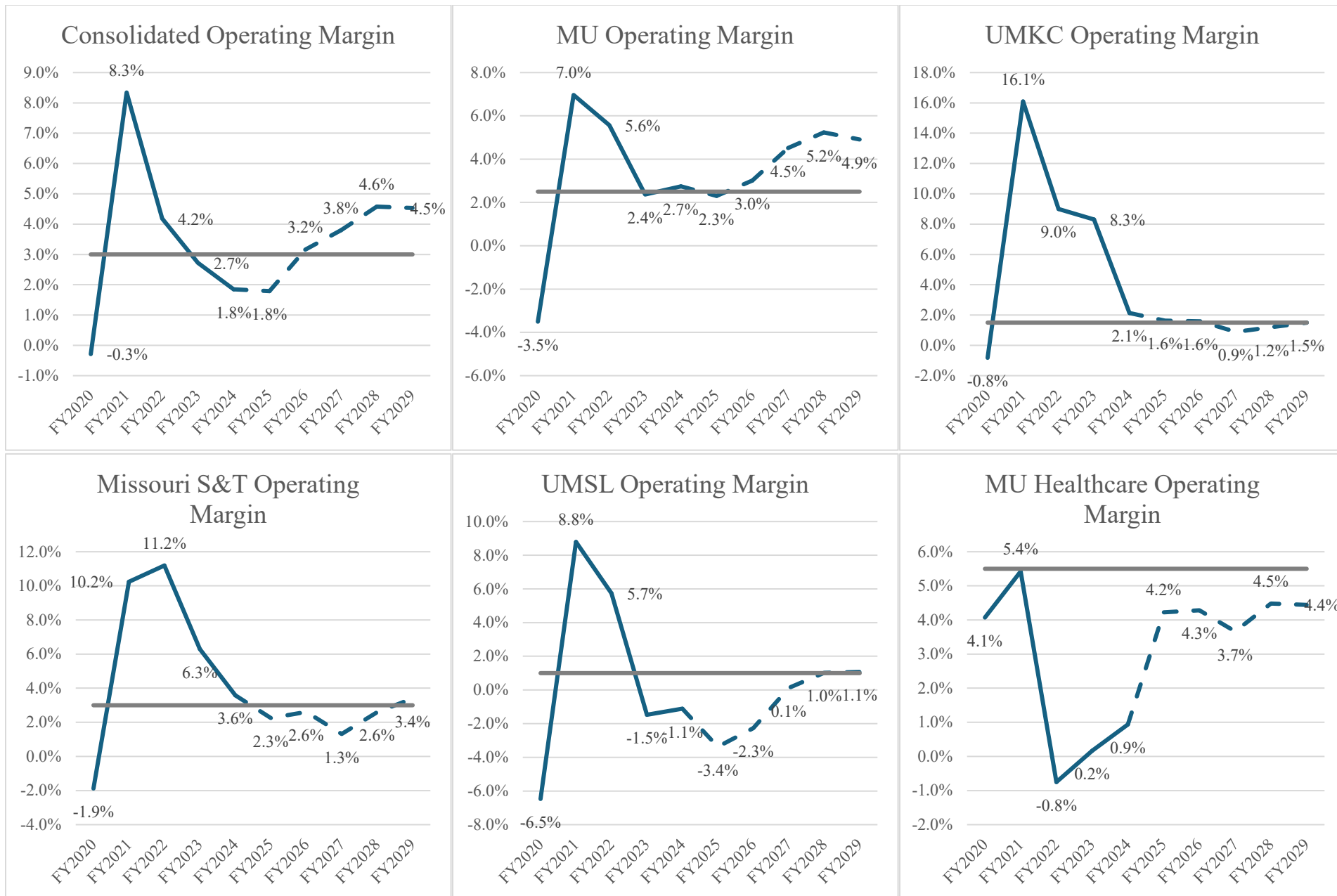
### Missouri S&T Composite Financial Index

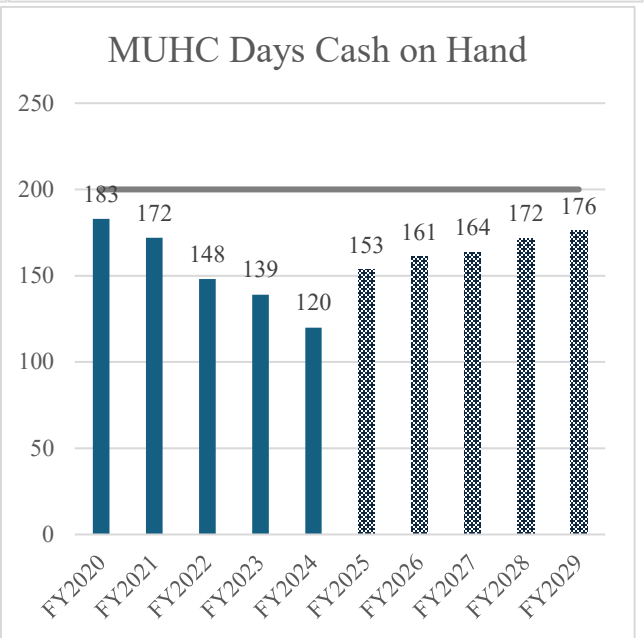
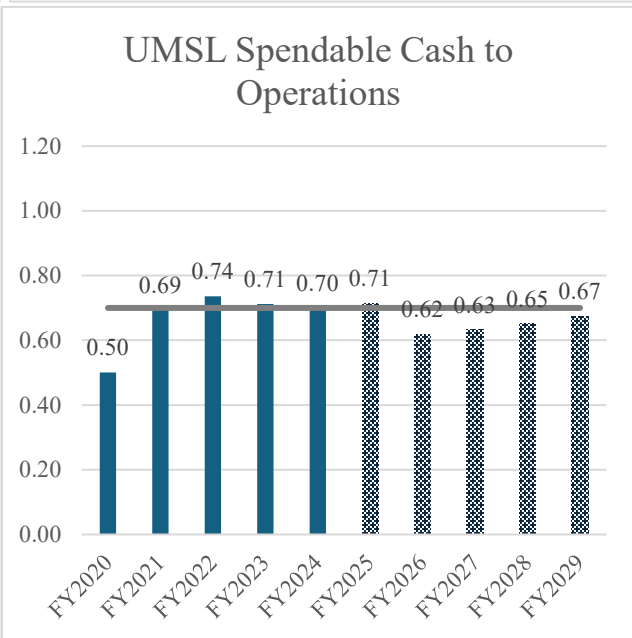
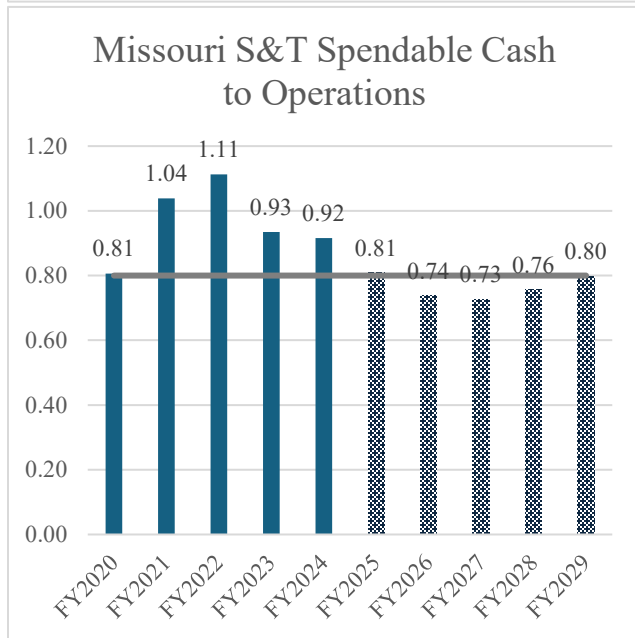
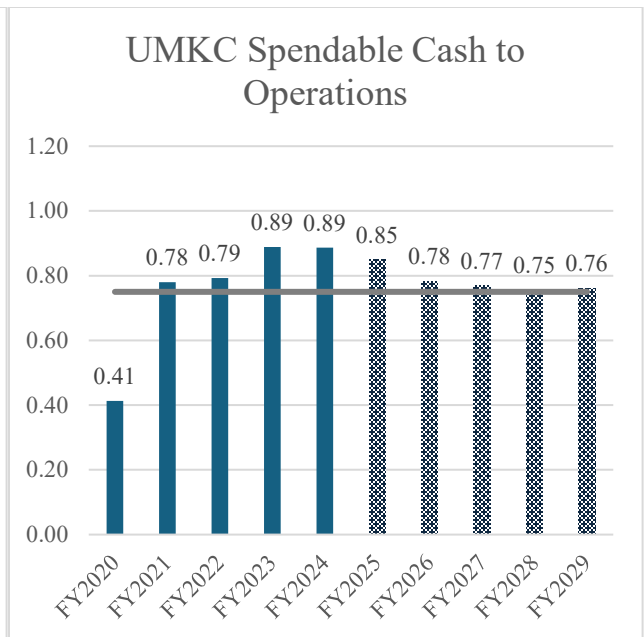
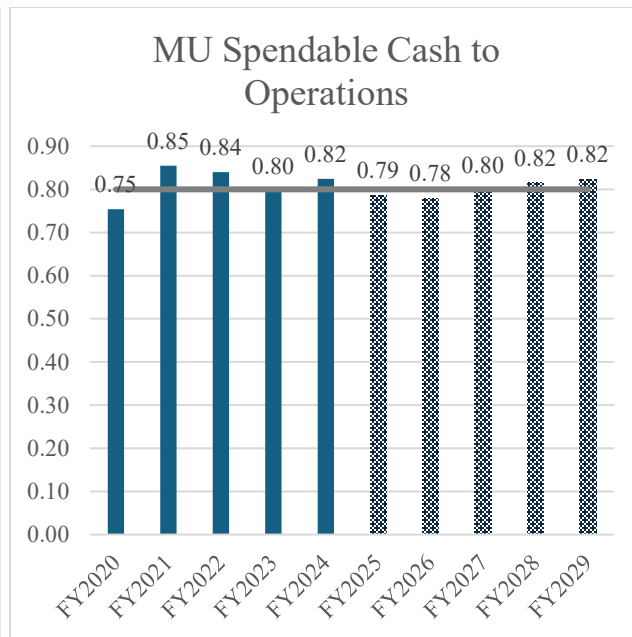
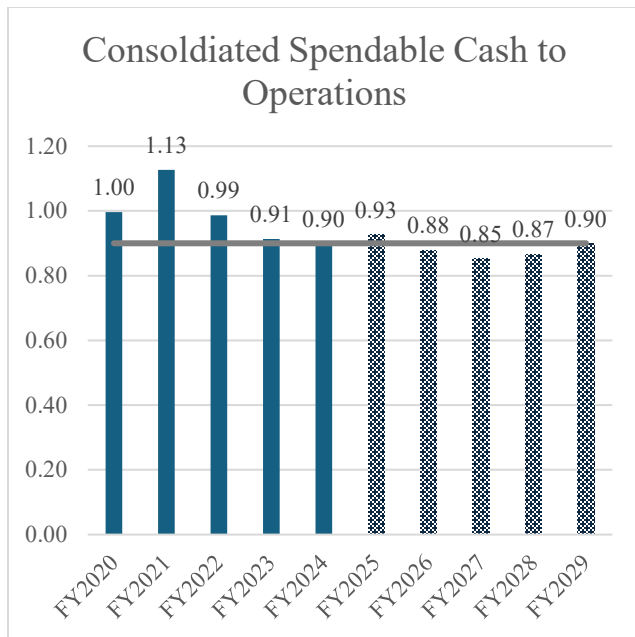


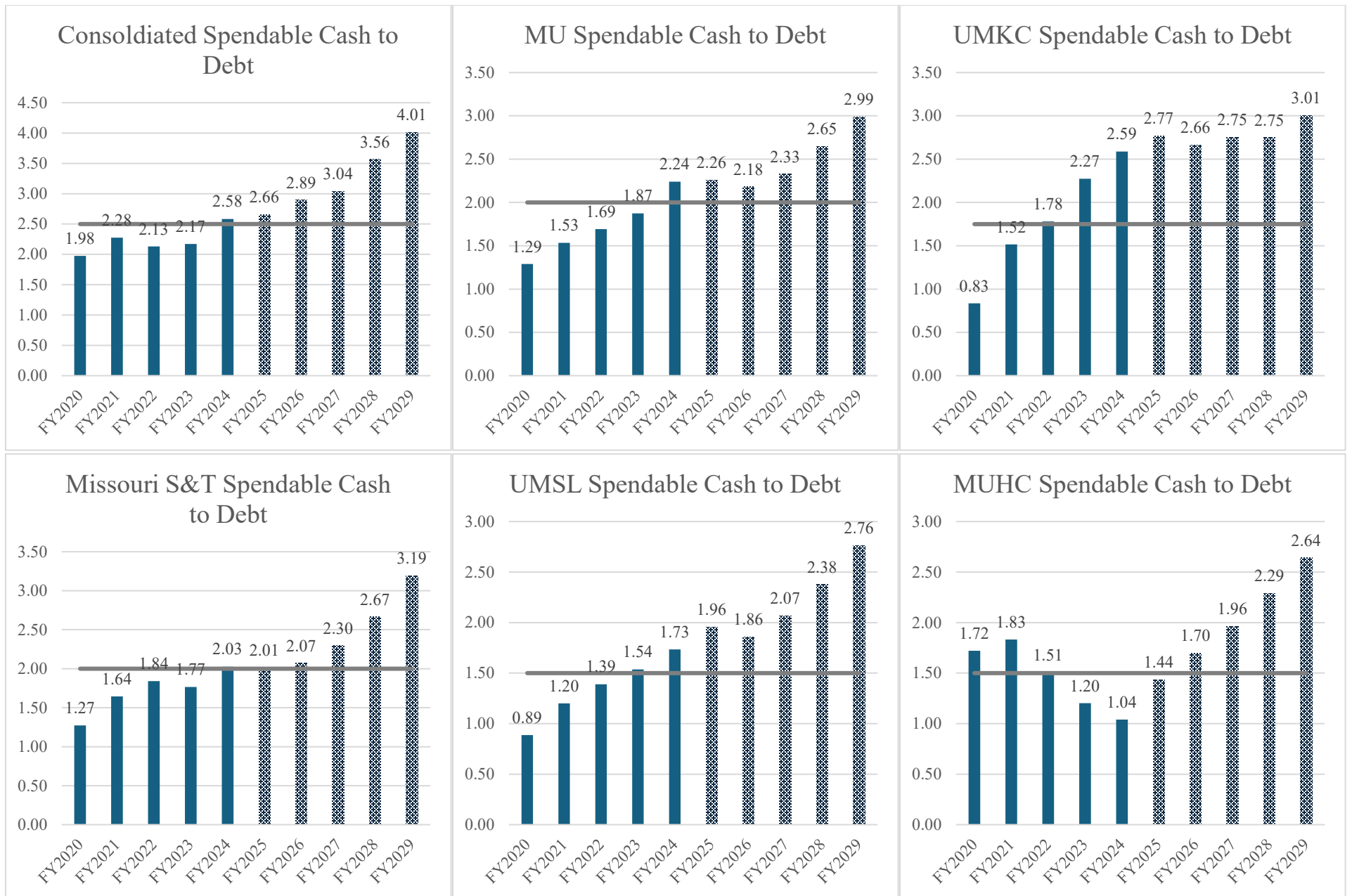
### UMSL Composite Financial Index

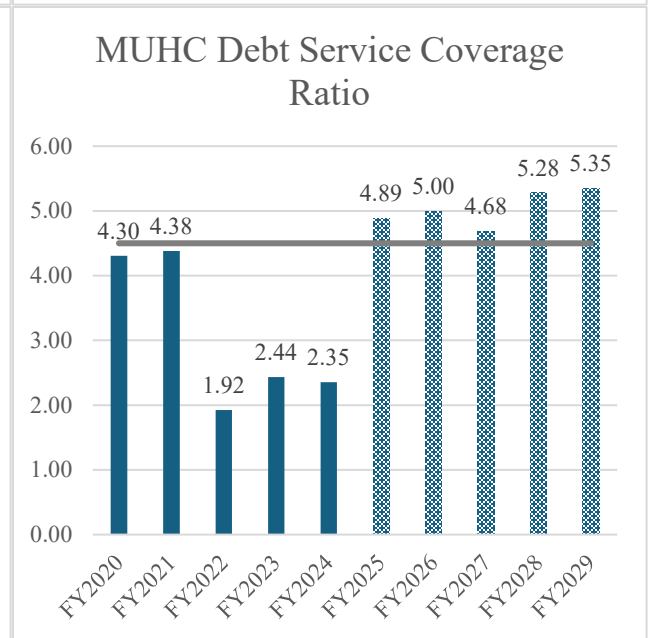
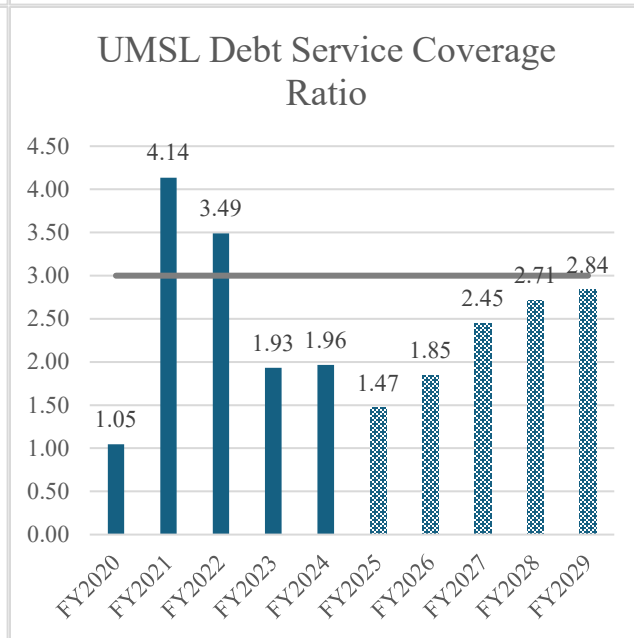
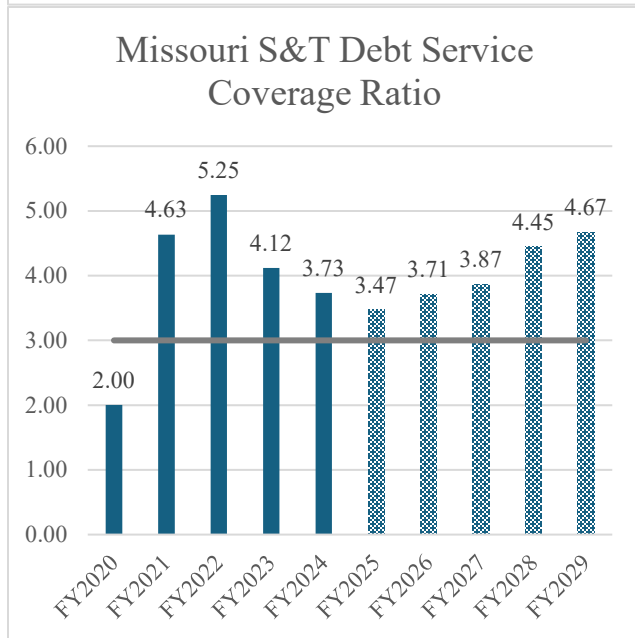
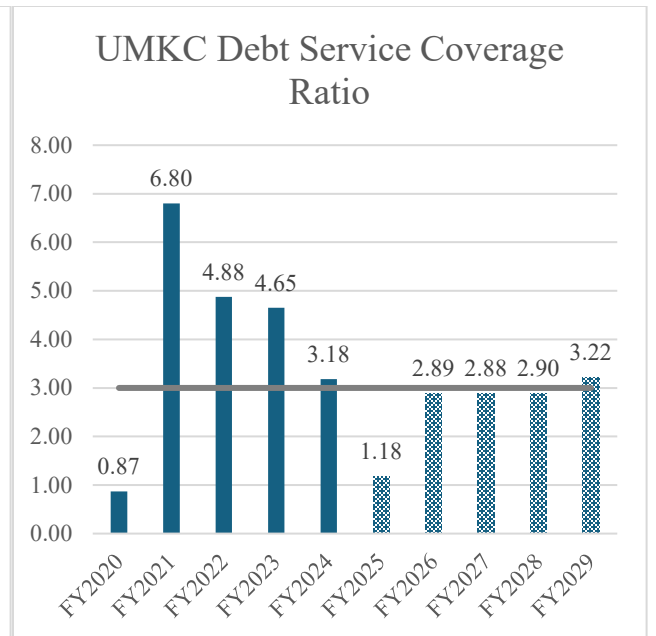
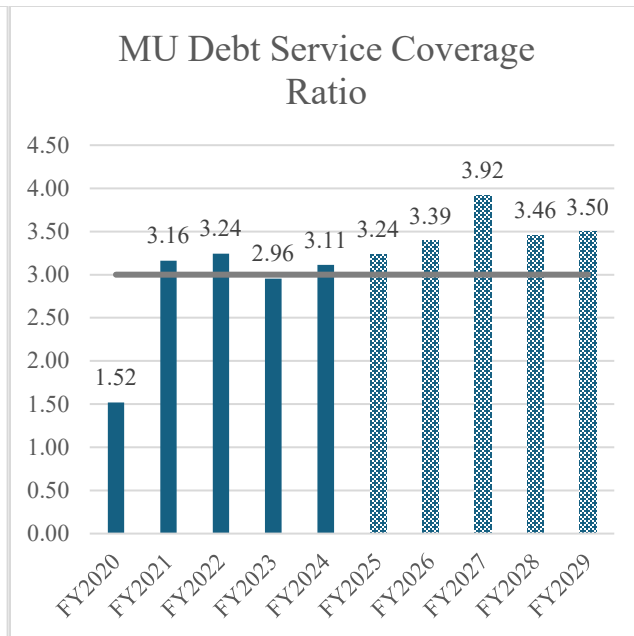
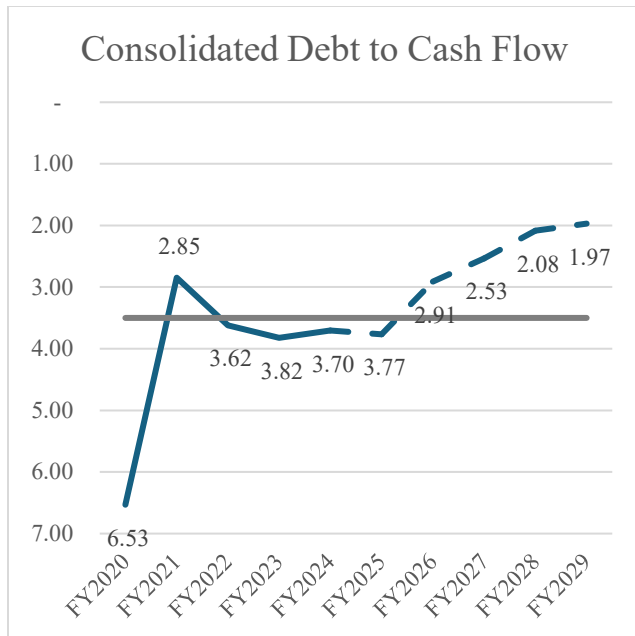












New Degree Program Proposal:

**Bachelor of Science in  
Semiconductor Engineering**

Missouri University of Science and Technology

*February 2025 Board of Curators Meeting*

# New Degree Proposal

## FULL PROPOSAL

### Basic Program Information

Sponsoring University: Missouri University of Science and Technology

College or School: College of Engineering and Computing

Department: Materials Science and Engineering

Proposed Program Title: Semiconductor Engineering

Degree Level/Type: Bachelor of Science

Emphasis Areas: Semiconductor Device Engineering  
Semiconductor Process Engineering

Program Modality: Fully in-person

Program CIP Codes: 14.9999

Implementation: August 2025

Expected Date of First Graduation: May 2029

Proposal Author(s): David Lipke, Mehdi Ferdowsi, Chang-Soo Kim, Bill Kim, Christi Luks, Michael Moats, Jonathan Kimball, Hu Yang

Name, phone, and email of person primarily responsible for the proposal:

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## Executive Summary

The proposed 128-credit hour Semiconductor Engineering (SEMI ENG) Bachelor of Science (BS) program at Missouri S&T will provide a multidisciplinary education integrating mathematics, physical sciences, and engineering fundamentals with principles of materials science and engineering (MSE), electrical and computer engineering (ECE), and chemical engineering (ChE). Reflecting its multidisciplinary nature, the SEMI ENG BS program will be housed within and administered by the MSE Department at Missouri S&T. Primary goals of the proposed program are:

- (1) To build a highly trained workforce to meet current and emergent needs of the state of Missouri, the Midwest region, and the national semiconductor industry in areas of supply chain/materials, manufacturing/processing, design, assembly, packaging and testing of micro/nano-electronic and photonic devices.
- (2) To provide a strong foundation for students who wish to pursue advanced degrees in Semiconductor Engineering or related fields.
- (3) To equip students with the knowledge and skills to make valuable contributions and to become leaders in semiconductor manufacturing and research.

The SEMI ENG BS program is a unique and timely response to demand signals from the U.S. semiconductor industry. According to the Semiconductor Industry Association, tens of thousands of semiconductor jobs in the U.S. risk going unfilled by 2030, including more than 18,000 engineering positions requiring advanced STEM degrees. The SEMI ENG BS program is designed with strategic focus on undergraduate bachelor's level education and training in areas of opportunity such as advanced substrates and materials, and assembly and packaging, to support a semiconductor and electronic component manufacturing sector whose employment forecast decadal growth of 30.8% nationwide and 18.6% in Missouri far exceeds total employment growth rate of 2.8% for the same period.

The program will extensively leverage existing resources to minimize program start-up costs. About three-quarters of the curriculum is in place with minor modifications anticipated to existing courses and pre-requisite sequencing. Ten new courses need to be developed of which three are cleanroom-based laboratory courses. Revenue is expected to be generated primarily from tuition and fees for new students, though there exists significant potential to grow the campus research portfolio via new cleanroom-based infrastructure, which could create additional, indirect revenue streams.

A comprehensive marketing strategy will be implemented to recruit students from Missouri and beyond that will enhance Missouri S&T's brand recognition. Annual program evaluation will be conducted by a committee comprised of faculty from MSE, ECE, and ChE departments with input from an external advisory panel to assess program health and identify opportunities for growth and success.

The SEMI ENG BS program aligns well with university mission and strategic goals and will position Missouri S&T to be a leading contributor to the occupational outlook for semiconductor engineering at a critical time of national need.

## 1. Introduction

### *Academic Program*

The proposed Semiconductor Engineering (SEMI ENG) Bachelor of Science (BS) program at Missouri S&T addresses a nationwide workforce gap for engineers and skilled professionals in semiconductor and electronic component manufacturing and related industries. The SEMI ENG BS program integrates engineering fundamentals with principles of materials science and engineering (MSE), electrical and computer engineering (ECE), and chemical engineering (ChE). The multidisciplinary SEMI ENG BS program will prepare students for career paths across a wide variety of technological fields ranging from microelectronics and nanotechnology (with applications for energy, healthcare, intelligent systems, and cybersecurity) to critical materials supply chain. The program will also prepare students to pursue advanced degrees in related specialized fields such as semiconductor physics, optics, intelligent manufacturing, and metrology.

### *Program Evolution*

Recognizing the global competition for the industries of the future, Congress has recently invested up to \$50 billion via the CHIPS and Science Act<sup>1</sup> for domestic semiconductor manufacturing, with companies pledging more than \$215 billion of private sector investments for new and expanded facilities and operations. Assembly and packaging, advanced substrates, and materials are highlighted as strategic areas of opportunity for the U.S. to lead in this sector. These historic investments have prompted inquiries from employers seeking to hire qualified engineers into semiconductor materials and manufacturing positions. The SEMI ENG BS program has been developed to address this growing workforce demand with continual feedback from external advisors from industry, government, and academia.

### *Program Integration*

The SEMI ENG BS program will leverage engineering and science courses already available across our campus, including significant components from electrical engineering, computer engineering, and chemical engineering. The curriculum requires 21 credit hours in general education, 18 credit hours in Math and Statistics, 17 credit hours in physical sciences (Chemistry and Physics), 4 credit hours in General Engineering, and 3 credit hours in Computer Science. Three credit hours of Free Electives encourages student-directed inquiry. A total of 10 new courses totaling 26 total credit hours must be developed to support the program.

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<sup>1</sup> <https://crsreports.congress.gov/product/pdf/R/R47523>

### *Program Coordination*

The individuals responsible for the success of the SEMI ENG BS program are the chairs of the coordinating departments:

- Michael Moats, Chair of Materials Science and Engineering, Phone: (573) 341-6974; Email: moatsm@mst.edu
- Jonathan Kimball, Chair of Electrical and Computer Engineering, Phone: (573) 341-4503; Email: kimballjw@mst.edu
- Hu Yang, Chair of Chemical and Biochemical Engineering, Phone: (573) 341-4854; Email: huyang@mst.edu

A Memorandum of Understanding between the coordinating departments will be executed within the College of Engineering and Computing to establish procedures for resource allocation to align the program with college and university strategic goals, for degree program and course modifications, and for dispute resolution. The Chair of the Materials Science and Engineering department will oversee annual program assessment and ensure effective interactions with alumni and external industry advisors. The Associate Chair for Academic Affairs in the Materials Science and Engineering department (David Lipke, Phone: (573) 341-6165; Email: lipke@mst.edu) will serve as program coordinator responsible for curriculum development and implementation of continuous improvement efforts for ABET accreditation.

## **2. University Mission & Program Analysis**

### **2.A. Alignment with University Mission & Goals**

*Alignment with campus goals.* The mission of Missouri S&T is to integrate education, research, and application to create and convey knowledge that serves our state and helps solve the world's great challenges. This mission resonates with the key concept of the proposed SEMI ENG BS program, which is to develop a next generation workforce in semiconductor manufacturing, research, and related fields. Our campus is keen to form multidisciplinary educational programs that prepare students for rapidly evolving and cutting-edge fields like Semiconductor Engineering. Therefore, the proposed SEMI ENG BS program serves as an important part of our long-term strategy to advance Missouri S&T and the state of Missouri.

It is anticipated that a Semiconductor Engineering degree program will help Missouri S&T achieve its "North Star" goals to attain Carnegie R1 classification, to grow enrollment to 12,000 students, and to achieve a top-100 ranking among national doctoral universities as measured by U.S. News & World Report. The program will directly grow enrollment, while new research opportunities will emerge from specialized laboratories and training maintained in the Semiconductor Engineering degree program.

*Alignment with college goals.* A core part of the mission of the College of Engineering and Computing at Missouri S&T is to provide students with a transformative education that prepares and inspires them to shape the future. The overall goal and objectives of the

semiconductor program fits perfectly with this mission, as knowledge related to semiconductors will provide students with an innovative skill set in an economic area that is transformational for our nation and is also primed to grow in our state.

## **2.B. Duplication & Collaboration within Campus, Across System**

The proposed SEMI ENG BS program is a first-of-its-kind in the state of Missouri. It will neither duplicate nor has substantial similarity to any of the existing degree programs within the state or in any state adjacent to Missouri. The field of microelectronics has traditionally been served by programs in Electrical Engineering and related fields; however, the SEMI ENG BS program distinguishes itself from programs with a microelectronics focus through its unique multidisciplinary curriculum designed to meet the challenges of semiconductor manufacturing and materials supply chain industries by incorporating extensive coursework and hands-on laboratories on the foundations of materials chemistry and processing to complement application areas in semiconductor device engineering and semiconductor process engineering.

Semiconductor manufacturing is remarkably complex. To operate a modern ‘fab’ for chip manufacturing requires a skilled workforce with expertise across traditional engineering disciplines (e.g., electrical engineering, chemical engineering, mechanical engineering, materials science and engineering, and industrial engineering), computer science, and business/management fields. Discussions across disciplines at Missouri S&T have identified existing coursework relevant to SEMI ENG BS program graduates. The program coordinator will develop detailed advising materials highlighting how student-led inquiry using 3 credit hours of available free electives may facilitate further specialization in areas such as advanced materials processing, semiconductor physics, optics, advanced electronics, computer engineering, metrology, and engineering management. Graduate Track Pathways to accelerated master’s degrees across these and various related disciplines will be vigorously pursued to increase the number of high-quality students pursuing advanced graduate studies at Missouri S&T, UM System campuses, and nationally ranked universities.

No existing programs will be combined, placed on inactive status, or deleted as a result of implementing the SEMI ENG BS program.

## **3. Business-Related Criteria & Justification**

### **3.A. Market Analysis**

#### *3.A.1. Rationale & Workforce Demand for the Program*

Congress has made a once-in-a-generation investment of up to \$50 billion via the CHIPS and Science Act<sup>1</sup> for domestic semiconductor manufacturing, with companies committing more than \$215 billion of private sector investments for new and expanded facilities and operations. Investments in Missouri include a portion of up to \$400 million awarded to GlobalWafers subsidizing up to \$4 billion in planned capital spending by the company in

Texas and Missouri that includes a new facility in St. Peters for domestic manufacturing of semiconductor wafers used in defense and aerospace chips.<sup>2</sup> Other investments include the NextFlex Missouri node<sup>3</sup> led by Jordan Valley Innovation Center at Missouri State University which, in partnership with the Missouri Technology Corporation's Advanced Manufacturing Resiliency Grant Program, has invested over \$5.4 million to date in projects for flexible hybrid electronics research and development.<sup>4</sup> NextFlex is one of 17 Manufacturing USA institutes leveraging over \$2 billion in private investment and \$1 billion in federal funds to solve manufacturing industry's greatest challenges.<sup>5</sup> A new CHIPS Manufacturing USA Institute is expected to be announced soon that will award up to \$285 million for development of digital twins for semiconductor manufacturing.<sup>6</sup> The success of these historic investments will depend on having a qualified workforce. Research from the Semiconductor Industry Association<sup>7</sup> indicates tens of thousands of semiconductor jobs in the U.S. risk going unfilled by 2030, including more than 18,000 engineering positions requiring advanced STEM degrees, posing a threat to innovation, global competitiveness, and security.

There exists an urgent need to expand semiconductor research, design, and fabrication in the U.S. By supporting the expansion of the semiconductor industry, nearly all other sectors will also benefit either through increased supply chain and consumer spending or through the increased availability of chips for downstream industries for their production processes. For example, automobile manufacturers use semiconductor devices to provide safety and performance indicators; cell phone makers design them to fit perfectly in a pocket-sized smart device; and, appliance and instrument manufacturers are increasingly using them to improve performance and reduce energy consumption (i.e., the Internet-of-Things). Semiconductors are critically important for the information age due to their ability to process and transmit vast amounts of data used for communication and navigation systems for commercial and military use. Indeed, semiconductors can be found as an input for or used by nearly every industry of the economy. Our program will provide value to the state by preparing students with essential skills for these jobs, complementing other workforce development initiatives in the State of Missouri led by Missouri S&T including in the areas of critical minerals and intelligent manufacturing.

It is estimated that incentivization of domestic semiconductor manufacturing via the CHIPS and Science Act will add \$24.6 billion annually to the U.S. economy and create an average of 185,000 temporary jobs annually throughout the U.S. economy from 2021 to 2026. Over this six-year build-out period, therefore, the cumulative annual impact of such an incentive program on GDP and jobs would be \$147.6 billion and 1.1 million, respectively. These

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<sup>2</sup> <https://www.reuters.com/technology/us-award-taiwans-globalwafers-up-400-mln-boost-semiconductor-wafer-production-2024-07-17/>

<sup>3</sup> <https://www.nextflex.us/membership/regional-nodes/>

<sup>4</sup> <https://efactory.missouristate.edu/blog/2023/07/25/jvic-node/>

<sup>5</sup> <https://www.manufacturingusa.com/>

<sup>6</sup> <https://www.nist.gov/chips/research-development-programs/chips-manufacturing-usa-institute>

<sup>7</sup> Semiconductor Industry Association. "[Chipping Away: Assessing and Addressing the Labor Market Gap Facing the U.S. Semiconductor Industry.](#)"

economic benefits combine all the channels of impact – direct, indirect (supply chain), and induced (wage spending). With the CHIPS and Science Act authorized to run through 2032, these impacts are expected to persist well beyond the six-year build-out period.

In 2020, the U.S. semiconductor industry contributed to the employment of 1.85 million individuals. This sector directly engaged over 277,000 domestic workers in various capacities, including research and development, design, and manufacturing. Moreover, the sales of U.S. semiconductor companies reached a total of \$208 billion in the same year. According to the U.S. Bureau of Labor Statistics' Employment Projections program, employment in semiconductor and other electronic component manufacturing is anticipated to increase by 30.8% nationwide from 2022 to 2032, outpacing the total employment growth rate of 2.8% for the same period.<sup>8</sup> In the state of Missouri, semiconductor and electronic component manufacturing is projected to increase 18.6% from 2020 to 2030 according to Missouri Economic Research and Information Center.<sup>9</sup>

The establishment of the SEMI ENG BS program will further enhance the visibility of Missouri S&T in the region and will promote collaborative research and workforce development efforts between S&T and the semiconductor industry. It will also incentivize building new semiconductor fabrication facilities in the region, as well as attract new investments in regional fab operation and R&D in the field. The result of building up this domestic semiconductor industrial infrastructure will have an enduring positive impact on the U.S. and regional economy and jobs. Considering job growth and market size analyses, a clear picture emerges that a highly skilled, technically trained workforce prepared by the SEMI ENG BS program is crucial for a robust domestic semiconductor industry and will position Missouri S&T to be a leading contributor to the occupational outlook for semiconductor engineering at a critical time of national need.

The SEMI ENG BS program curriculum has been developed in consultation with an external advisory group featuring alumni and industry subject matter experts to ensure coursework and hands-on laboratory experiences prepare graduates for success in the semiconductor manufacturing workforce or to continue onto advanced graduate studies. Key competencies employers seek in semiconductor engineers include:

- Strong foundations in general engineering principles, physical sciences, mathematics, and computer science.
- Technical expertise with cleanroom operations and semiconductor manufacturing processes used in fabrication and assembly.
- Technical expertise in materials science and engineering, especially process-structure-property relationships necessary to understand the performance of semiconductor materials.

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<sup>8</sup> <https://www.bls.gov/emp/tables/industry-employment-and-output.htm>

<sup>9</sup> <https://meric.mo.gov/data/industry/industry-employment-projections>



- Multidisciplinary technical expertise in the design of semiconductor-based devices (electrical and computer engineering) and/or manufacturing processes (chemical engineering).
- Intrapersonal competencies, including problem-solving and critical thinking skills to analyze complex problems and make data-driven decisions, to understand professional ethics and civic responsibility, and to know why and how to pursue self-directed, lifelong learning.
- Interpersonal competencies, including technical communication, collaborative teamwork, and project management.

Employers and stakeholders have expressed strong support for the establishment of the SEMI ENG BS program. Excerpts from their letters of support are provided below (see **Appendix 1** for full letters):

“Traditionally, semiconductor development or fabrication companies hire engineers from the classic engineering disciplines, such as: chemical, mechanical, electrical, and materials science ... S&T graduates educated in an institutionalized program would dramatically improve the time and resources required to bring new hires up to speed, and hence reduce the whole system cycle-time of development to production within our fabs ... Now is the time to invest in our academic infrastructure to take the best advantage of the CHIPS for America funding intended to grow and strengthen our semiconductor industry. SkyWater Technology fully supports the Missouri S&T initiative and looks forward to hiring graduates from this new exciting program.”

*Thomas Sonderman (CEO, SkyWater Technology)*

“The new Semiconductor Engineering BS degree program embodies [Missouri S&T’s] commitment to preparing students to meet the challenges of a rapidly evolving technology landscape and will help the U.S. fill the gaps defined as national security risks and workforce development opportunities ... Brewer Science relies heavily on Missouri S&T for workforce development. 70% of our interns are S&T students and at least 50% are converted into full-time roles ... Brewer Science eagerly supports the new Semiconductor Engineering BS degree program ... [and we] believe that this program will have a lasting impact on the semiconductor industry.”

*Srikanth Kommu, Ph.D. (Executive VP & COO, Brewer Science)*

“MEMC LLC, a St. Peters MO based Silicon-On-Insulator (SOI) wafer supplier, enthusiastically supports the Missouri University of Science and Technology (S&T) initiative to establish the Bachelor of Science degree program in Semiconductor Engineering ... The S&T degree program proposal is very timely to support increased US semiconductor manufacturing jobs now and into the future ... The presence of this in-state degree program will further strengthen the engagement between MEMC and S&T. It will enable recruiting of well-training program graduates to the MEMC workforce [which] includes many S&T graduates ... Additionally, the establishment of a cleanroom lab facility may provide collaborative research opportunities with S&T.”

*Karla Chaney (Site General Manager, MEMC)*

“To be successful, NXP needs a talented workforce including engineers with education and experience in semiconductor disciplines. A university program focusing on a semiconductor curriculum would likely produce high quality candidates for internships and to help fill new college graduate positions ... Your proposed program comes at a time of major investment in our industry here in the US, both from the government and from the private sector ... New university programs will be critical to create tomorrow’s semiconductor workforce.”

*Scott Hayes (Technical Director, Package Innovation, NXP Semiconductors)*

“The creation of the Semiconductor Engineering B.S. degree program at Missouri S&T is timely and essential. The semiconductor industry is experiencing rapid growth and technological advancements, necessitating a highly skilled workforce equipped with specialized knowledge in semiconductor engineering. This program will not only help bridge the current skills gap but also foster innovation and research collaborations that are vital for the industry’s future ... Missouri S&T is the ideal partner for this initiative due to its strong engineering programs and commitment to research excellence. Located in Missouri, where Watlow has a significant operational presence, the university is well-positioned to support the growth of the semiconductor field in the state and region.”

*Dr. Ashish Bhatnagar (CTO, Watlow)*

“Thank you for advising the Kansas City National Security Campus, managed by Honeywell FM&T, that Missouri S&T will be establishing a Semiconductor Engineering degree program beginning in the Fall 2025 ... The Kansas City National Security Campus will watch this effort with interest in the spirit of technical innovation as our organization conducts research and development, production, and assurance efforts in microelectronics assembly, packaging, and test technologies.”

*Daniel Krueger, Ph.D. (Engineer Fellow, Kansas City National Security Campus)*

“One of the areas of focus for the Jordan Valley Innovation Center [JVIC] Node [of the Manufacturing USA Innovation Institutes member NextFlex focused on Semiconductors and Flexible Hybrid Electronics] is to develop a talent pipeline to meet the demands of the semiconductor industry. This degree program addresses this need and will support the JVIC Node projects. Missouri State University is also a partner with the Missouri University of Science and Technology through its Cooperative Engineering Program and fully supports this program. Finally, the timing of this program is well suited to support the JVIC Node and the growth in the semiconductor industry. This growth is being fueled by technology development, rapid deployment and adoption of new technologies, and significant capital investments, including the CHIPS Act. There is no stronger evidence that this is the time to launch this degree program.”

*Allen D. Kunkel (Associate VP for Economic Development and Director, JVIC)*

### 3.A.2. Student Demand for the Program

Marketing analysis involves the study of occupational projections as well as available programs in the area at the bachelor's level that meet the projected need for the market. LightCast™ analyses and database searches of ABET-accredited engineering programs indicate that there currently exists no bachelor's degree programs in Semiconductor Engineering. Similarly titled or related national BS programs include:

- Engineering Science (Microelectronics) at Arizona State University
- Microelectronic Engineering at Rochester Institute of Technology
- Nanoscale Engineering at University of Albany (SUNY)
- Nanoengineering at University of California San Diego
- Nanoengineering at Rose-Hulman Institute of Technology

Thus, no direct competition currently exists in the state of Missouri or in adjacent states. In addition to the above programs, various departments of electrical engineering, chemical engineering, and materials science and engineering offer emphasis areas (a.k.a. tracks, focus areas, or concentrations) or certificates in microelectronics, semiconductor manufacturing/processing, or nanoengineering/nanotechnology obtained by elective coursework. In contrast, the extensively multidisciplinary approach taken by the proposed SEMI ENG BS program is unique in category, highlighting the opportunity that exists for Missouri S&T to be a leading contributor to the occupational outlook for Semiconductor Engineering.

This lack of direct comparators also means it is difficult to predict initial enrollment. For reference, degree program new enrollments for contributing departments involved in the SEMI ENG BS program at Missouri S&T are summarized in the table below:

**Contributing Missouri S&T Department Degree Program Annual New Enrollments**

	FS2019	FS2020	FS2021	FS2022	FS2023	FS2024
<b>CHEM ENG</b>	71	83	71	73	62	62
<b>ELEC ENG</b>	51	51	74	53	57	82
<b>CER ENG + MET ENG</b>	24	21	9	17	21	25
<b>Total</b>	146	155	154	143	140	169

Based on these annual enrollments, we project new incoming student enrollments of 20 in year 1 with 25% annual growth for the first three years resulting in enrollments of 39 by year 4. Growth rates are based on the anticipated effects of program marketing and word of mouth, and the overall growth of the sector as indicated by LightCast™ analyses for CIP codes associated with contributing department degree program as summarized in the tables below and provided in **Appendices 2 (National Analyses) and 3 (Regional Analyses)**. This growth will allow the program to reach its goal of increasing total undergraduate enrollment at Missouri S&T by 151 new student enrollments in its program by year 8. Additionally, we estimate 10 internal transfer students will be annually accepted to the program beginning Fall 2027.

### LightCast™ Degree Completions

Academic Discipline (CIP codes)	National Trend			Regional Trend		
	Degree Completions			Degree Completions		
	2012	2023	% change	2012	2023	% change
<b>CHEM ENG</b> (14.0701, 14.0702, 14.0799)	7047	8780	+24.6	286	384	+6.3
<b>ELEC ENG</b> (14.1001, 14.4701)	12242	15702	+28.3	538	481	-10.6
<b>MATER SCI ENG</b> (14.1801, 14.0601, 14.2001, 40.1001, 40.1002, 40.1099)	1357	1640	+20.9	98	126	+28.6

**Table 1a. Student Enrollment Projections** (anticipated total number of students enrolled in the program during the first five fall semesters following implementation.)

Year:	1	2	3	4	5
<b>Full-time</b>	20	43	80	121	149
<b>Part-time</b>	0	0	0	0	0
<b>Total</b>	20	43	80	121	149

**Table 1b. New Student Enrollment Projections** (anticipated number of students enrolled in the program during the first five fall semesters following implementation that are new to the University.)

Fiscal Year:	1	2	3	4	5
<b>Full-time</b>	20	43	70	102	125
<b>Part-time</b>	0	0	0	0	0
<b>Total</b>	20	43	70	102	125

**Table 1c. Projected Number of Degrees Awarded**

Year:	1	2	3	4	5	6	7	8	9	10
<b># of Degrees Awarded</b>	0	0	0	10	31	58	90	124	159	194

## **3.B. Financial Projections**

A completed Pro Forma financial statement is included as **Appendix 4**. The fiscal officers of the College of Engineering and Computing and Missouri S&T have reviewed and endorsed the financial projections contained therein as described below.

### *3.B.1. Additional Resources Needed*

The SEMI ENG BS degree program requires new infrastructure to support research and education in microelectronic device fabrication and testing, and in related micro/nanostructured materials and micro/nanotechnologies. An International Organization for Standardization (ISO)-5/6/7 cleanroom as well as equipment for vacuum deposition, etching, photolithography, wet chemical processing, thermal processing, packaging and back-end assembly tools, and metrology/testing is needed. The planned ca.

2,500 square foot cleanroom will be located on the ground floor of the Applied Research Center with construction expected to be completed by end of 2026.

Microelectronics fabrication requires specialty chemicals such as ultra-pure water and hazardous substances that must be safely stored in gas cylinder cabinets or acid cabinets, used in dedicated fume hoods and/or with exhaust abatement protocols, and continuously monitored with gas detectors and other safety equipment. Supplies necessary to maintain the cleanroom environment such as gowning apparel and HVAC filters will need to be regularly laundered and maintained.

To teach the proposed six new lecture courses and the three new laboratory courses featured in the SEMI ENG BS program, new faculty and technical staff with expertise in semiconductor manufacturing will be hired. A faculty position to be hired in 2025 will be expected to take on a leadership role in establishing and growing the program. In 2027, one non-tenure track teaching faculty will be hired to develop and teach proposed new courses. Two tenure-track Assistant Professors may be hired in 2028 contingent on attaining stated enrollment projections for academic and financial viability. Competitive startup packages commensurate with academic rank and experience will be provided for tenured or tenure-track faculty positions. To operate and maintain the cleanroom one or more full-time technicians are required. To support the academic program, one administrative office staff assistant is needed. The Associate Chair for Academic Affairs in the Materials Science and Engineering Department will be appointed as the Program Coordinator for the new degree.

It is anticipated that generating early and sustained word-of-mouth about the new Semiconductor Engineering degree program is vital to growing new enrollment needed for the success of the program. One-time costs associated with developing new marketing materials and conducting strategic outreach efforts to establish inaugural classes for the Semiconductor Engineering degree program are budgeted.

### *3.B.2. Revenue*

A donor gift of \$10M plus a co-investment from the Kummer Institute of \$10M will provide the financial resources needed to start the SEMI ENG BS program. The donor gift will provide a total of \$8M in endowments to support new faculty hire salaries plus an additional discretionary \$2M that will cover operating expenses and salaries for one non-tenure track faculty and one cleanroom technician up to Year 4. Co-investment from the Kummer Institute will support research-related expenses, including one-time costs for new cleanroom infrastructure and equipment, as well as tenure/tenure-track faculty start-up packages. Surplus donations from industry partners will be sought to reduce equipment needs.

Operational expenses for the dual-purpose research and educational cleanroom will be shared by agreement between the administrating academic unit and the Office of the Vice Chancellor for Research and Innovation with funds generated by tuition and fees and core user facility cost recovery models, respectively. During the initial years of the program when revenues from tuition and fees and from core user facility cost recovery are expected to be lower, cleanroom operational expenses will be supplemented by internal revenue transfers.

Program revenue will be generated through tuition and fees from new student enrollments. During program years 1-3, a portion of the costs associated with the senior leadership faculty hire may need to be covered by the University's core institutional budget. Associated expenses are expected to be transferred to an endowment account funded incrementally over program years 1-5. External funding for the SEMI ENG BS program will be secured through workforce development and education grants from CHIPS for America-related opportunities, the National Science Foundation, the Semiconductor Research Corporation, the SEMI Foundation, other federal and state agencies, and through industry partnerships for workforce development.

### 3.B.3. Net Revenue

The cumulative operational margin after campus overhead is expected to be net-positive starting in Year 3 of the program. A detailed accounting, including different enrollment scenarios, is provided in the Pro Forma found in **Appendix 4**.

**Table 2. Financial Projections for Proposed Program for Years 1 Through 5.**

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>1. Expenses per year</b>					
<b>A. One-time</b>					
<i>New/Renovated Space</i>	\$5.20M	0	0	0	0
<i>Equipment</i>	\$1.12M	\$1.77M	\$277K	\$257K	\$267K
<i>Library</i>	0	0	0	0	0
<i>Consultants</i>	0	0	0	0	0
<i>Other (startup)</i>	\$1.20M	0	0	\$1.20M	0
<b>Total one-time</b>	<b>\$7.52M</b>	<b>\$1.77M</b>	<b>\$277K</b>	<b>\$1.46M</b>	<b>\$267K</b>
<b>B. Recurring</b>					
<i>Faculty</i>	\$200K	\$208K	\$305K	\$533K	\$555K
<i>Staff</i>	\$38K	\$124K	\$129K	\$134K	\$140K
<i>Benefits</i>	\$85K	\$118K	\$155K	\$238K	\$247K
<i>Operating Expenses</i>	\$141K	\$102K	\$98K	\$114K	\$106K
<i>Library</i>	0	0	0	0	0
<i>Other (Campus Overhead)</i>	\$120K	\$144K	\$178K	\$265K	\$272K
<b>Total recurring</b>	<b>\$584K</b>	<b>\$696K</b>	<b>\$865K</b>	<b>\$1.28M</b>	<b>\$1.32M</b>
<b>Total expenses (A+B)</b>	<b>\$8.11M</b>	<b>\$2.47M</b>	<b>\$1.14M</b>	<b>\$2.74M</b>	<b>\$1.59M</b>
<b>2. Revenue per year</b>					
<i>Tuition/Fees</i>	\$219K	\$545K	\$1.09M	\$1.73M	\$2.23M
<i>Institutional Resources</i>	0	0	0	0	0
<i>State Aid – CBHE or Other</i>	0	0	0	0	0
<i>Other – Kummer Institute</i>	\$7.30M	\$1.50M	0	\$1.20M	0
<i>Other – Private Donor</i>	\$464K	\$532K	\$528K	\$601K	\$606K
<b>Total revenue</b>	<b>\$7.98M</b>	<b>\$2.58M</b>	<b>\$1.62M</b>	<b>\$3.53M</b>	<b>\$2.84M</b>
<b>3. Net revenue (loss) per year</b>	<b>(\$123K)</b>	<b>\$109K</b>	<b>\$478K</b>	<b>\$787K</b>	<b>\$1.25M</b>
<b>4. Cumulative revenue (loss)</b>	<b>(\$123K)</b>	<b>(\$14K)</b>	<b>\$463K</b>	<b>\$1.25M</b>	<b>\$2.50M</b>

### *3.B.4. Academic and Financial Viability*

The minimum enrollment for academic viability is 50 students, while the minimum enrollment for financial viability is 75 students. Under a 50% enrollment scenario, the program is projected to reach the minimum enrollment around Year 7. Therefore, even if the enrollment projections turn out to be too optimistic, we have good reason to believe the program will be successful. Under this scenario, additional faculty hires not supported by endowments would not be made as compared to the full enrollment projection.

**Table 3. Enrollment for Academic and Financial Viability**

<b>Viability</b>	<b>Minimum Enrollment</b>
<b>Academic</b>	<b>50</b>
<b>Financial</b>	<b>75</b>
<b>Overall</b>	<b>75</b>

## **3.C. Business Plan: Marketing, Student Success, Transition & Exit Strategies**

### *3.C.1. Marketing Plan*

Marketing for the SEMI ENG BS program will be led by the Vice Provost for Enrollment Management at Missouri S&T in close coordination with the Department Chairs of Materials Science and Engineering, Electrical and Computing Engineering, and Chemical and Biochemical Engineering to develop creative and strategic enrollment and recruitment strategies targeting students from Missouri and nearby states with expressed interest in science and engineering fields. A multifaceted marketing plan will be implemented, including:

**Press Releases and Announcements:** When the program launches, press releases and announcements will be sent out to appropriate professional societies and interest groups, such as the Institute of Electrical and Electronics Engineers, the International Microelectronics Assembly and Packaging Society, Microelectronics Packaging and Test Engineering Council, American Ceramic Society, ASM International, Materials Research Society, American Chemical Society, American Institute of Chemical Engineers, American Society for Engineering Education, SEMI Fab Owners Alliance, the Chronicle of Higher Education, and the NIST CHIPS for America newsletter, as well as to key industry partners and government agencies.

**Physical and Digital Marketing:** Recruitment publications, presentations, websites, and digital media for prospective students and recruiting events will be developed. The Enrollment Management office will manage inquiry communications and assist with the prospective student CRM system. News and updates about program strengths and successes will be shared via internet and social media platforms in accordance with Missouri S&T's marketing and communications policies and guidelines.



**Recruitment Events and Campus Visits:** Regional and national high schools and Project Lead the Way high school engineering programs will be targeted for engagement in collaboration with the Kummer Center for STEM Education. Semiconductor-focused summer camps will be developed to raise awareness and interest in careers in semiconductor manufacturing, research, and related fields.

**Collaboration with High Schools, Community Colleges, and External Partnerships:** External partnerships will be built by working with national organizations, foundations, community organizations, partner universities, and other external constituents to build interest in STEM careers and enhance the brand recognition of Missouri S&T. Such organizations may include the Midwest Microelectronics Collective, the Midwest Microelectronics Consortium, the Midwest Semiconductor Network, the Semiconductor Research Corporation, and the Scalable Asymmetric Lifecycle Engagement (SCALE) program. Efforts will also be aligned with campus activities in association with the National Consortium of Specialized Secondary Schools of Math, Science and Technology (NCSSSMST) and the Technology Student Association.

**Alumni Engagement and Industry Partnerships:** An Industry Advisory Board will be formally established to provide feedback on program activities and strategic priorities, to serve as ambassadors for the program in outreach events to help us connect with prospective students, and create opportunities for internships, co-op experiences, and job placements for program graduates.

The SEMI ENG BS program coordinating chairs will annually track and compare costs, revenue, and student enrollment with Pro Forma projections to make informed and responsive adjustments to marketing and recruiting as needed. Each year after program launch, marketing analytics and the number of applicants from various campaigns will be reviewed to target a more focused audience. Progress toward achieving academic and financial viability will be monitored during and after the recruitment/yield period and marketing strategies will be revised for efficacy as needed.

### *3.C.2. Student Success Plan*

The SEMI ENG BS program will support and retain students through graduation using a comprehensive student success plan that includes:

**Academic Advising and Mentorship:** All students in the Department of Materials Science and Engineering are assigned a dedicated professional academic advisor to provide guidance on course selection and program requirements. In addition, each student is assigned a faculty mentor who provides guidance on undergraduate research opportunities, co-ops/internships, and networking/career planning.

**Student Organizations:** Opportunities for networking and professional development are provided by engagement through Missouri S&T's greater than 200 recognized student organizations. Program-related student organizations are also supported in each of the coordinating departments, including:

- Student chapter affiliates of professional societies such as Institute of Electrical and Electronics Engineers (IEEE), American Institute of Chemical Engineers (AIChE), and Material Advantage which includes membership to the American Ceramic Society (ACerS), ASM International, and the Minerals, Metals and Materials Society (TMS); and,
- Honor societies such as Eta Kappa Nu, Alpha Chi Sigma, and Keramos.

**Tutoring and Supplemental Instruction:** Missouri S&T's Division of Student Success provides resources to help students be successful in and out of the classroom, including peer tutoring, coaching, and consultations through the Student Success Center and Writing and Communication Center.

**Promoting Student Health and Well-Being:** Missouri S&T's Division of Student Success provides Student Well-Being services using a personalized care model that includes counseling, health promotion initiatives, and prevention programs to enhance student personal success. Each department has a faculty champion that promotes awareness and serves as a resource to advise and direct toward campus services where appropriate.

### *3.C.3. Transition Plan*

The Chair of the Materials Science and Engineering Department is the individual primarily responsible for the program. If this individual leaves the institution or assumes other responsibilities, a transition plan will be in place to ensure program continuity and quality. An interim department chair will be appointed by the Vice Provost and Dean of the College of Engineering and Computing, and a national search will be conducted to identify and hire a new department chair. If the Associate Chair for Academic Affairs in the Materials Science and Engineering Department who serves as Program Coordinator leaves or assumes other responsibilities, the department chair will appoint a replacement from the faculty to serve in this role.

### *3.C.4. Exit Strategy*

If the program underperforms expectations or fails to meet minimum enrollment criteria for financial viability by Year 4, then a planned faculty hire will not be made, and a program evaluation will be conducted by the Office of the Provost to identify areas of concern requiring adjustment or improvement. Marketing and recruitment strategies will be continually assessed for efficacy and adjusted as needed to attract sufficient enrollment for program viability. Upon implementing recommended changes if the program continues to underperform then the University may place the program on hiatus. In the event this occurs, the coordinating departments will develop a teach-out plan to ensure currently enrolled students can complete their degree requirements in a timely manner. The teach-out plan may include offering required courses until all students can graduate or assisting students in transferring to other degree programs.

## 4. Institutional Capacity

Missouri S&T is strongly positioned to create and sustain the proposed SEMI ENG BS program. The Departments of Materials Science and Engineering (MSE), Electrical and Computer Engineering (ECE), and Chemical and Biochemical Engineering (ChBE) are home to ABET-accredited, nationally ranked<sup>10</sup> degree programs that are highly regarded for their excellence in teaching and research. The table below highlights faculty distributions in degree programs responsible for teaching 36 out of 60 credit hours of major engineering courses in either of the two proposed degree emphasis areas.

**Contributing Missouri S&T Department Degree Program Faculty Distributions**

	Rank (Teaching Faculty)				Total T/TT	Total NTT
	Professor	Associate Professor	Assistant Professor	Lecturer Adjunct or		
<b>CHEM ENG</b>	8	2	1	1	9	3
<b>ELEC ENG</b>	11	13	7	0	26	5
<b>CER ENG</b>	5	3	2	0	8	1

Contingent on hitting program enrollment targets for viability, four new T/TT and NTT faculty with specialized expertise in semiconductor manufacturing will be hired to assist teaching 24 credit hours of new lecture and laboratory coursework. Home departments for new faculty hires shall be based on candidate qualifications and preference.

The contributing departments do not anticipate significant issues offering ELEC ENG, COMP ENG, CHEM ENG, and CER ENG courses included in the SEMI ENG BS program using existing resources at projected enrollment totals. If enrollment greatly exceeds projections, then additional laboratory sections and instructors may be needed to maintain safe learning environments. If this occurs, then revenue from tuition will be used to hire additional faculty as needed.

In addition to departmental resources, Missouri S&T offers a wide range of student support services ranging from academic advising, tutoring, and consultation to mental health counseling and wellness support. The Career Opportunities and Employer Relations office also provides professional development services to students seeking internships, co-ops, and full-time positions, including twice annually hosting one of the nation's largest collegiate career fairs.<sup>11</sup> With the support of these institutional systems, Missouri S&T is ranked the number 3 public university in the nation for career placement by the Princeton Review and is the only public university in the Wall Street Journal's top 10 list of universities on salary impact.<sup>12</sup>

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<sup>10</sup> <https://news.mst.edu/2024/06/missouri-st-ranked-as-states-top-public-engineering-school-among-nations-best/>

<sup>11</sup> <https://career.mst.edu/about/services/>

<sup>12</sup> <https://www.mst.edu/about/rankings/>

## 5. Program Characteristics

### 5.A. Program Outcomes

As required by ABET<sup>13</sup>, the SEMI ENG BS program must have documented student outcomes that support program educational objectives to prepare graduates to enter the professional practice of engineering. Student learning outcomes (SLOs) include:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics;
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors;
3. an ability to communicate effectively with a range of audiences;
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts;
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives;
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions; and,
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Upon completion of the SEMI ENG BS degree program, students will have acquired a comprehensive set of knowledge, skills, and ability (KSA) competencies to prepare them to enter the semiconductor manufacturing workforce and related scientific and technological areas of the field. All program graduates will have a strong foundation in general engineering and will receive hands-on training using state-of-the-art techniques and equipment in a common semiconductor materials and manufacturing core. Program graduates will gain further expertise in one of two emphasis areas pertinent to employment in semiconductor industries: semiconductor device engineering or semiconductor process engineering. The semiconductor device engineering emphasis area features courses in analysis and design of circuits and electronics to provide graduates with in-depth application knowledge of semiconductor-based devices. The process engineering emphasis area features courses in analysis and design of chemical processes and reactors used in the large-scale manufacture of semiconductor-based devices and in the high purity critical materials supply chain. The multidisciplinary nature of the SEMI ENG BS program will provide program graduates with a unique combination of KSA competencies that will prepare them for careers in the semiconductor manufacturing industry or to pursue advanced degrees in related fields.

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<sup>13</sup> <https://www.abet.org/accreditation/accreditation-criteria/criteria-for-accrediting-engineering-programs-2024-2025/>

## **5.B. Program Design & Content**

In alignment with ABET criteria, the following Program Educational Objectives (PEOs) have been adopted for the SEMI ENG BS program:

1. Our graduates will be valued contributors in the science, technology, and management of semiconductor engineering.
2. Our graduates will serve their profession and society.
3. Our graduates will continually enhance their professional skills and educational qualifications.
4. Our graduates will promote diverse and inclusive professional culture that nurtures learning, innovation, and growth.

The relationships between PEOs and SLOs are mapped as follows:

### **Program Educational Objectives relationship to Student Learning Outcomes**

<b>Student Learning Outcome</b> An ability to ...	<b>Program Educational Objective</b> Our graduates will ...			
	... be valued contributors in the science, technology, and management of semiconductor engineering	... serve their profession and society	... continually enhance their professional skills and educational qualifications	... promote diverse and inclusive professional culture that nurtures learning, innovation, and growth
<b>(1)</b> identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	✓	✓		
<b>(2)</b> apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	✓	✓	✓	✓
<b>(3)</b> communicate effectively with a range of audiences	✓	✓		✓
<b>(4)</b> recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	✓	✓	✓	✓
<b>(5)</b> function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	✓	✓		✓
<b>(6)</b> develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	✓	✓		
<b>(7)</b> acquire and apply new knowledge as needed, using appropriate learning strategies	✓	✓	✓	✓

To design the SEMI ENG BS program, curricula for related degree programs identified in section 3.A.2. were examined to identify best practices and important curricular components. Faculty in MSE, ECE, and ChBE departments were asked to identify pertinent existing courses, and new course descriptions were developed for courses not currently offered that were identified as being needed for the program. The resulting curriculum was iteratively developed in consultation with stakeholders from academia, including faculty at Missouri S&T faculty and at peer institutions, as well as from trusted semiconductor industry advisors.

The SEMI ENG BS program will include two emphasis areas: semiconductor device engineering and semiconductor process engineering. The suggested four-year plans of study for each emphasis area are shown below. Curricular flowcharts showing prerequisites for each track are provided in **Appendix 5**.

Curated lists of elective courses identified as being of exceptional relevance to careers in semiconductor manufacturing will be provided to students for advising purposes. Identified areas for further concentration include engineering management, metrology, advanced materials, semiconductor physics, advanced electronics, advanced computer engineering, optics, and advanced process engineering. It is anticipated that a future activity will establish Graduate Track Pathways enabling students to pursue accelerated advanced degrees in these strategic areas of concentration to complement and expand upon their undergraduate education.

Semiconductor Engineering with an Emphasis in Semiconductor Device Engineering						
Year 1						Total Credits
FR ENG 1100	Careers in Eng	1	MECH ENG 1720	Intro Eng Design	3	
ENGL 1120	Expo and Arg	3	CHEM 1320	General Chem II	3	
CHEM 1310	General Chem I	4	MATH 1215	Calculus II	4	
CHEM 1319	General Chem Lab	1	PHYS 1135	Physics I	4	
MATH 1214	Calculus I	4	SEMI ENG 1100*	Eng in Silicon Age	1	
	H/SS Elective <sup>1</sup>	3				
		16			15	31
Year 2						Total Credits
MATH 3304	Elem Diff Eq	3	MATH 2222	Calculus III	4	
PHYS 2135	Physics II	4	ELEC ENG 2120	Circuits II	3	
ELEC ENG 2100	Circuits I	3	COMP ENG 2210	Intro Digital Logic	3	
ELEC ENG 2101	Circuit Analysis Lab	1	COMP ENG 2211	Comp Eng Lab	1	
COMP SCI 1500	Comp Problem Solv	3	SEMI ENG 2100*	Fund Semi Mater	3	
SEMI ENG 3230*	Thermodynamics	3		H/SS Elective <sup>1</sup>	3	
		17			17	34
Year 3						Total Credits
ELEC ENG 3100	Electronics I	3	ELEC ENG 3250	Elec Photon Device	3	
ELEC ENG 3101	Electronics I Lab	1	ELEC ENG 3600	Electromagnetics	4	
SEMI ENG 3100*	Semi Processing	3	SEMI ENG 3101*	Semi Process Lab	3	
SEMI ENG 3001*	Cleanroom Lab	1	SEMI ENG 3410	Characterization	3	
	STAT Elective <sup>2</sup>	3		H/SS Elective <sup>1</sup>	3	
	H/SS Elective <sup>1</sup>	3				
	H/SS Elective <sup>1</sup>	3				
		17			16	33
Year 4						Total Credits
SEMI ENG 4096	Senior Design I	3	SEMI ENG 4097	Senior Design II	3	
SEMI ENG 4100*	Device Simulation	3	SEMI ENG 4200*	Process Simulation	3	
SEMI ENG 4101*	Device Fab Lab	3	SEMI ENG 4400*	Semi Packaging	3	
SEMI ENG 4300*	Polymers for Semi	3		H/SS Elective <sup>1</sup>	3	
COMP ENG 5210	Intro VLSI Design	3		Free Elective	3	
		15			15	30
						128

<sup>1</sup> Eighteen hours of Humanities/Social Science (H/SS) electives of which three hours must be history ([HISTORY 1200](#), [HISTORY 1300](#), [HISTORY 1310](#), or [POL SCI 1200](#)), three hours must be economics ([ECON 1100](#) or [ECON 1200](#)), and three hours must be communications ([ENGLISH 1160](#), [ENGLISH 3560](#), or [SP&M S 1185](#)). Of the remaining nine credit hours of H/SS electives, at least three hours must be upper-level (i.e., 2000-level with pre-requisite or 3000-level or higher).

<sup>2</sup> [STAT 3113](#) or [STAT 3115](#) or [STAT 3117](#)

\* denotes new courses to be developed



Semiconductor Engineering with an Emphasis in Semiconductor Process Engineering						
Year 1						Total Credits
FR ENG 1100	Careers in Eng	1	MECH ENG 1720	Intro Eng Design	3	
ENGL 1120	Expo and Arg	3	CHEM 1320	General Chem II	3	
CHEM 1310	General Chem I	4	MATH 1215	Calculus II	4	
CHEM 1319	General Chem Lab	1	PHYS 1135	Physics I	4	
MATH 1214	Calculus I	4	SEMI ENG 1100*	Eng in Silicon Age	1	
	H/SS Elective <sup>1</sup>	3				
		16			15	31
Year 2						Total Credits
MATH 3304	Elem Diff Eq	3	MATH 2222	Calculus III	4	
PHYS 2135	Physics II	4	ELEC ENG 2100	Circuits I	3	
CHEM ENG 2100	Mater Ener Balance	4	ELEC ENG 2101	Circuit Analysis Lab	1	
COMP SCI 1500	Comp Problem Solv	3	CHEM ENG 2110	Thermodynamics I	3	
	H/SS Elective <sup>1</sup>	3	SEMI ENG 2100*	Fund Semi Mater	3	
				H/SS Elective <sup>1</sup>	3	
		17			17	34
Year 3						Total Credits
CHEM ENG 3101	Fund Transport	4	CHEM ENG 3150	Reactor Design	3	
CHEM ENG 3111	Num Computing	3	ELEC ENG 2200	Intro Elec Devices	3	
CHEM ENG 3120	Thermodynamics II	3	ELEC ENG 2201	Elec Devices Lab	1	
SEMI ENG 3100*	Semi Processing	3	SEMI ENG 3101*	Semi Process Lab	3	
SEMI ENG 3001*	Cleanroom Lab	1	SEMI ENG 3410	Characterization	3	
	H/SS Elective <sup>1</sup>	3		STAT Elective <sup>2</sup>	3	
		17			16	33
Year 4						Total Credits
SEMI ENG 4096	Senior Design I	3	SEMI ENG 4097	Senior Design II	3	
SEMI ENG 4101*	Device Fab Lab	3	SEMI ENG 4200*	Process Simulation	3	
SEMI ENG 4300*	Polymers for Semi	3		H/SS Elective <sup>1</sup>	3	
CHEM ENG 4110	Proc Dyn Control	3		H/SS Elective <sup>1</sup>	3	
COMP ENG 4102	Chem Eng Lab I	3		Free Elective	3	
		15			15	30
						128

<sup>1</sup> Eighteen hours of Humanities/Social Science (H/SS) electives of which three hours must be history ([HISTORY 1200](#), [HISTORY 1300](#), [HISTORY 1310](#), or [POL SCI 1200](#)), three hours must be economics ([ECON 1100](#) or [ECON 1200](#)), and three hours must be communications ([ENGLISH 1160](#), [ENGLISH 3560](#), or [SP&M S 1185](#)). Of the remaining nine credit hours of H/SS electives, at least three hours must be upper-level (i.e., 2000-level with pre-requisite or 3000-level or higher).

<sup>2</sup> [STAT 3113](#) or [STAT 3115](#) or [STAT 3117](#)

\* denotes new courses to be developed

## **5.C. Program Structure**

The SEMI ENG BS program will include two emphasis areas: semiconductor device engineering and semiconductor process engineering. Each emphasis area is designed to comply with Missouri S&T requirements for BS degrees and engineering degrees in addition to ABET criteria for general engineering.

### *5.C.1. Program Structure Form*

#### **Semiconductor Engineering with emphasis in Semiconductor Device Engineering**

1. **Total Credits Required for Graduation:** 128
2. **Residence requirements, if any:** None
3. **General education**
  - a. Total general education credits: 21

Courses (specific course or distribution area and credit hours):

Course	Hrs	Course	Hrs	Course	Hrs
ENGL 1120: <i>Exposition and Argumentation</i>	3	HIST 1200: <i>Modern Western Civilization</i> , HIST 1300: <i>American History to 1877</i> , HIST 1310: <i>American History since 1877</i> , or POL SCI 1200: <i>American Government</i>	3	ENGL 1160: <i>Writing and Research</i> , ENGL 1600/ TCH COM 1600: <i>Introduction to Technical Communication</i> , ENGL 3560: <i>Technical Writing</i> , or SP&M S 1185: <i>Principles of Speech</i>	3
ECON 1100: <i>Principles of Microeconomics</i> , or ECON 1200: <i>Principles of Macroeconomics</i>	3	H/SS elective	6	Upper-level H/SS elective	3

#### 4. Major Requirements

- a. Total credits specific to degree: 101

Courses (specific course or distribution area and credit hours):

Course	Hrs	Course	Hrs	Course	Hrs
FR ENG 1100: <i>Study and Careers in Engineering and Computing</i>	1	MATH 1214: <i>Calculus I</i>	4	CHEM 1310: <i>General Chemistry I</i>	4
MECH ENG 1720: <i>Introduction to Engineering Design</i>	3	MATH 1215: <i>Calculus II</i>	4	CHEM 1319: <i>General Chemistry I Laboratory</i>	1
PHYS 1135: <i>Engineering Physics I</i>	4	MATH 2222: <i>Calculus III</i>	4	CHEM 1320: <i>General Chemistry II</i>	3
PHYS 2325: <i>Engineering Physics II</i>	4	MATH 3304: <i>Elementary Differential Equations</i>	3	SEMI ENG 1100: <i>Engineering in the Silicon Age</i>	1
COMP SCI 1500: <i>Computational Problem Solving</i>	3	ELEC ENG 2100: <i>Circuits I</i>	3	ELEC ENG 2101: <i>Circuit Analysis Laboratory</i>	1
SEMI ENG 3230: <i>Thermodynamics of Materials</i>	3	COMP ENG 2210: <i>Introduction to Digital Logic</i>	3	COMP ENG 2211: <i>Computer Engineering Laboratory</i>	1
ELEC ENG 2120: <i>Circuits II</i>	3	ELEC ENG 3100: <i>Electronics I</i>	3	ELEC ENG 3101: <i>Electronics I Laboratory</i>	1
SEMI ENG 2100: <i>Fundamentals of Semiconductor Materials</i>	3	SEMI ENG 3001: <i>Cleanroom Facilities and Practices Laboratory</i>	1	SEMI ENG 3100: <i>Semiconductor Materials Processing</i>	3
ELEC ENG 3600: <i>Electromagnetics</i>	4	ELEC ENG 3250: <i>Electronic and Photonic Devices</i>	3	STAT 3113: <i>Applied Engineering Statistics</i> , STAT 3115: <i>Engineering Statistics</i> , or STAT 3117: <i>Introduction to Probability and Statistics</i>	3
SEMI ENG 4200: <i>Semiconductor Process Simulation</i>	3	SEMI ENG 4300: <i>Polymers for Semiconductor Devices and Processes</i>	3	SEMI ENG 3410: <i>Characterization of Inorganic Solids</i>	3
SEMI ENG 3101: <i>Semiconductor Materials Processing Laboratory</i>	3	SEMI ENG 4100: <i>Semiconductor Device Simulation</i>	3	SEMI ENG 4101: <i>Semiconductor Device Fabrication and Testing Laboratory</i>	3
COMP ENG 5210: <i>Introduction to VLSI Design</i>	3	SEMI ENG 4096: <i>Materials Senior Design I</i>	3	SEMI ENG 4097: <i>Materials Senior Design II</i>	3
SEMI ENG 4400: <i>Microsystems Packaging and Integration</i>	3				

5. **Free elective credits**

- a. Total free elective credits: 3

6. **Requirement for thesis, internship or other capstone experience:**

All SEMI ENG BS students are required to complete a two-semester capstone design experience (SEMI ENG 4096: *Materials Senior Design I* and SEMI ENG 4097: *Materials Senior Design II*). In addition, all Missouri S&T undergraduate students must graduate with a significant experiential learning experience.<sup>14</sup>

7. **Any unique features such as interdepartmental cooperation:**

As a highly multidisciplinary field, the SEMI ENG BS program requires technical courses instructed by faculty members across many departments, including Materials Science and Engineering, Electrical and Computer Engineering, Chemical and Biochemical Engineering, Computer Science, Mechanical and Aerospace Engineering, Chemistry, Physics, Math and Statistics.

**Semiconductor Engineering with emphasis in Semiconductor Process Engineering**

1. **Total Credits Required for Graduation:** 128

2. **Residence requirements, if any:** None

3. **General education**

- a. Total general education credits: 21

Courses (specific course or distribution area and credit hours):

Course	Hrs	Course	Hrs	Course	Hrs
ENGL 1120: <i>Exposition and Argumentation</i>	3	HIST 1200: <i>Modern Western Civilization</i> , HIST 1300: <i>American History to 1877</i> , HIST 1310: <i>American History since 1877</i> , or POL SCI 1200: <i>American Government</i>	3	ENGL 1160: <i>Writing and Research</i> , ENGL 1600/ TCH COM 1600: <i>Introduction to Technical Communication</i> , ENGL 3560: <i>Technical Writing</i> , or SP&M S 1185: <i>Principles of Speech</i>	3
ECON 1100: <i>Principles of Microeconomics</i> , or ECON 1200: <i>Principles of Macroeconomics</i>	3	H/SS elective	6	Upper-level H/SS elective	3

<sup>14</sup> <https://experientiallearning.mst.edu/requirement/>

#### 4. Major Requirements

- a. Total credits specific to degree: 101

Courses (specific course or distribution area and credit hours):

Course	Hrs	Course	Hrs	Course	Hrs
FR ENG 1100: <i>Study and Careers in Engineering and Computing</i>	1	MATH 1214: <i>Calculus I</i>	4	CHEM 1310: <i>General Chemistry I</i>	4
MECH ENG 1720: <i>Introduction to Engineering Design</i>	3	MATH 1215: <i>Calculus II</i>	4	CHEM 1319: <i>General Chemistry I Laboratory</i>	1
PHYS 1135: <i>Engineering Physics I</i>	4	MATH 2222: <i>Calculus III</i>	4	CHEM 1320: <i>General Chemistry II</i>	3
PHYS 2325: <i>Engineering Physics II</i>	4	MATH 3304: <i>Elementary Differential Equations</i>	3	SEMI ENG 1100: <i>Engineering in the Silicon Age</i>	1
COMP SCI 1500: <i>Computational Problem Solving</i>	3	ELEC ENG 2100: <i>Circuits I</i>	3	ELEC ENG 2101: <i>Circuit Analysis Laboratory</i>	1
CHEM ENG 2100: <i>Chemical Engineering Materials &amp; Energy Balances</i>	4	SEMI ENG 2100: <i>Fundamentals of Semiconductor Materials</i>	3	SEMI ENG 3001: <i>Cleanroom Facilities and Practices Laboratory</i>	1
CHEM ENG 2110: <i>Chemical Engineering Thermodynamics I</i>	3	CHEM ENG 3120: <i>Chemical Engineering Thermodynamics II</i>	3	SEMI ENG 3100: <i>Semiconductor Materials Processing</i>	3
CHEM ENG 3111: <i>Numerical Computing in Chemical and Biochemical Engineering</i>	3	CHEM ENG 3101: <i>Fundamentals of Transport in Chemical and Biochemical Engineering</i>	4	STAT 3113: <i>Applied Engineering Statistics</i> , STAT 3115: <i>Engineering Statistics</i> , or STAT 3117: <i>Introduction to Probability and Statistics</i>	3
SEMI ENG 3101: <i>Semiconductor Materials Processing Laboratory</i>	3	ELEC ENG 2200: <i>Introduction to Electronic Devices</i>	3	ELEC ENG 2201: <i>Electronic Devices Laboratory</i>	1
SEMI ENG 4300: <i>Polymers for Semiconductor Devices and Processes</i>	3	CHEM ENG 3150: <i>Reactor Design</i>	3	SEMI ENG 3410: <i>Characterization of Inorganic Solids</i>	3
CHEM ENG 4110: <i>Process Dynamics and Control</i>	3	SEMI ENG 4200: <i>Semiconductor Process Simulation</i>	3	SEMI ENG 4101: <i>Semiconductor Device Fabrication and Testing Laboratory</i>	3
CHEM ENG 4102: <i>Applied Chemical Engineering Laboratory</i>	3	SEMI ENG 4096: <i>Materials Senior Design I</i>	3	SEMI ENG 4097: <i>Materials Senior Design II</i>	3

**5. Free elective credits**

- a. Total free elective credits: 3

**6. Requirement for thesis, internship or other capstone experience:**

All SEMI ENG BS students are required to complete a two-semester capstone design experience (SEMI ENG 4096: *Materials Senior Design I* and SEMI ENG 4097: *Materials Senior Design II*). In addition, all Missouri S&T undergraduate students must graduate with a significant experiential learning experience.<sup>15</sup>

**7. Any unique features such as interdepartmental cooperation:**

As a highly multidisciplinary field, the SEMI ENG BS program requires technical courses instructed by faculty members across many departments, including Materials Science and Engineering, Electrical and Computer Engineering, Chemical and Biochemical Engineering, Computer Science, Mechanical and Aerospace Engineering, Chemistry, Physics, Math and Statistics.

### **5.D. Program Goals and Assessment**

The primary goals of the SEMI ENG BS program are:

- (1) To build a highly trained workforce to meet current and emergent needs of state of Missouri, Midwest regional, and national semiconductor industry in areas of supply chain/materials, manufacturing/processing, design, assembly, and packaging of semiconductor devices;
- (2) To provide a strong foundation for students who wish to pursue advanced degrees in Semiconductor Engineering or related fields; and,
- (3) To equip students with the knowledge and skills to make valuable contributions and to become leaders in semiconductor manufacturing and research.

Performance metrics for students in the SEMI ENG BS program are: 90% first-year retention rate; 80% six-year graduation rate; and, 90% six-month post-graduation job placement rate in related fields.

The MSE Department Chair and SEMI ENG BS program coordinator will execute this assessment process to continuously improve the curriculum to ensure students gain KSA competencies necessary to enter the semiconductor workforce and build a foundation for future career success.

The SEMI ENG BS program will assess the attainment of student learning outcomes (SLOs) using several methods, including: performance on coursework and laboratory assignments, senior capstone projects and presentations, surveys of program stakeholders (i.e., faculty, alumni, and employers), and graduating senior exit surveys. A rigorous and comprehensive assessment process will be implemented for the SEMI ENG BS program as part of continuous

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<sup>15</sup> <https://experientiallearning.mst.edu/requirement/>

improvement efforts and for ABET accreditation. This process gathers evidence of SLO performance in the form of key performance indicators (KPIs) for each SLO. KPIs are measurable quantitative assessments of individual student learning as they progress through the SEMI ENG BS curriculum. KPIs map specific courses to SLOs and indirectly to PEOs. KPIs may take the form of diagnostic problems, special assignments, projects, and reports, or related student activities. A preliminary curriculum mapping indicating where assessment will be conducted for continuous improvement program evaluation feedback loops is described in the table below:

### Mapping of SEMI ENG courses to SLOs including evaluation feedback loops

(✓ = course addresses SLO; A = course is used in assessment of SLO)

Course Number	Course Title	Student Learning Outcomes						
		1	2	3	4	5	6	7
SEMI ENG 1100	Engineering in the Silicon Age				✓			✓
SEMI ENG 2100	Fundamentals of Semiconductor Materials	✓		✓		✓		✓
SEMI ENG 3001	Cleanroom Facilities and Practices Laboratory	A	A	A	A	A	A	A
SEMI ENG 3100	Semiconductor Materials Processing	✓					✓	✓
SEMI ENG 3101	Semiconductor Materials Processing Laboratory	✓	✓	✓		✓	✓	✓
SEMI ENG 3230	Thermodynamics of Materials	A	A	A	A	A	A	A
SEMI ENG 3410	Characterization of Inorganic Solids	A	A	A	A	A	A	A
SEMI ENG 4096	Materials Senior Design I	✓	A	A	✓	A		A
SEMI ENG 4097	Materials Senior Design II	A	✓	✓	A	✓	A	✓
SEMI ENG 4100	Semiconductor Device Simulation	✓	✓				✓	✓
SEMI ENG 4101	Semiconductor Device Fabrication and Testing Laboratory	✓	✓	✓		✓	✓	✓
SEMI ENG 4200	Semiconductor Process Simulation	✓	✓				✓	✓
SEMI ENG 4300	Polymers for Semiconductor Devices and Processes	✓					✓	✓
SEMI ENG 4400	Microsystems Packaging and Integration	✓					✓	✓

Other sources of information used to evaluate student outcomes attainment in addition to overall efficacy of the program include: the graduating senior exit survey; surveys of recently graduated alumni and employers (conducted every 3 years); and feedback from an Industry Advisory Board comprising 9-13 working professionals, subject matter experts, and hiring executives in the semiconductor sector. Qualitative measures of program effectiveness may also include: number of students participating in undergraduate research; number of students completing co-op/internships; and, number of students receiving scholarships or awards in the field of semiconductor engineering.

Because Semiconductor Engineering is interdisciplinary by nature, participating departments and faculty members will have a stake in the program's curriculum, assessment, recruiting, and related features. Moreover, the contributions by faculty members outside the Materials Science and Engineering department will be recognized and appropriately credited to their home departments. To this end, a program steering



committee will be formed that includes at least one faculty member from each participating department. The chair of the committee will be the department chair of the program's home department (Materials Science and Engineering). At the end of each academic year, the committee will be tasked with generating a program evaluation report that includes (but need not be limited to) the following:

1. Undergraduate enrollment numbers for the Semiconductor Engineering program and programs/departments that are affiliated with it.
2. Student credit hours taught by each faculty member and department in support of the Semiconductor Engineering degree.
3. A summary of recruiting and retention efforts for the Semiconductor Engineering degree program with appropriate attribution to faculty members and departments.
4. A summary of ABET data collection activities associated the Semiconductor Engineering degree program with appropriate attribution to faculty members and departments.

This report will be completed annually by August 1 and sent out to participating Department Chairs, the Vice Provost and Dean of the College of Engineering and Computing that host these departments, and the Provost. Enrollment numbers in Semiconductor Engineering and the level of participation in supporting the degree will be considered in the allocation of resources for the departments and colleges involved.

### **5.E. Student Preparation**

The target population for the SEMI ENG BS program is first-time college students and transfer students from community colleges or other institutions with an interest in engineering and advanced technology fields (e.g., microsystems, microelectronics, nanomaterials). Students considering SEMI ENG should have strong backgrounds in mathematics, science, and written and oral communication to succeed in the BS program. Missouri S&T recommends that students planning to attend should follow a college preparatory curriculum completing at least 17 units of credit (1 unit = 1 year) comprising the following minimum requirements:

- **English:** 4 units, one of which may be speech or debate; two units emphasizing composition or writing skills. Acceptable courses may be English 9, 10, 11, 12; English Literature; Speech; Debate; Journalism; etc.
- **Mathematics:** 4 units (Algebra I and higher). Acceptable courses may be Algebra I, Algebra II/Intermediate Algebra, Geometry, Trigonometry, Calculus, Math Analysis, etc.
- **Social Studies:** 3 units. Acceptable courses may be World History, American History, Government, Principles of Democracy, etc.
- **Science:** 3 units, one of which must be a laboratory course. Acceptable courses may be Biology, Earth Science, Chemistry, Physics, etc.
- **Fine Arts:** 1 unit. Acceptable courses may be Visual Arts, Music, Theater, Painting/Drawing, etc.

- **Foreign Language:** 2 units, same language.

## **5.F. Faculty and Administration**

The individuals primarily responsible for the success of the SEMI ENG BS program are:

- Michael Moats, Chair of Materials Science and Engineering, Phone: (573) 341-6974; Email: moatsm@mst.edu. Roles: primary point of contact for program administration, coordinating teaching responsibilities, general program oversight.
- David Lipke, Associate Chair for Academic Affairs (MSE Dept.), Phone: (573) 341-6165; Email: lipke@mst.edu. Roles: coordinates program activities and continuous improvement efforts, maintains curriculum, resource for advising.

All required courses in the SEMI ENG BS program are planned to be taught by full-time faculty members. Elective courses or experimental courses may be taught by part-time or adjunct faculty. Teaching faculty will be required to possess a terminal degree (i.e., Ph.D.) in semiconductor engineering or related fields, or to possess equivalent qualified experience for non-tenure track faculty or professors of practice. Lists of qualifications of teaching faculty in the MSE, ECE, and ChBE departments are provided in **Appendix 7**.

The SEMI ENG BS program features 26 credit hours of new lecture and laboratory coursework across 10 courses. Up to four new T/TT and NTT faculty members and two cleanroom technicians will be hired to support additional specialized coursework and hands-on laboratories, and to grow the program research portfolio.

## **5.G. Alumni and Employer Survey**

The SEMI ENG BS program will gather feedback from recently graduated (i.e., within 2-6 years) alumni and employers using online questionnaires and surveys mailed every 3 years. The surveys ask respondents to evaluate the importance and perceived attainment of program PEOs, satisfaction with curricula, faculty, facilities, and other contributing factors to program success, and to identify gaps and opportunities for program improvement. Overall satisfaction rates exceeding 80% among respondents is a program metric for success, though a holistic approach is taken to evaluate and address any issues raised.

In addition to these survey instruments, alumni and employers are frequently engaged via university and departmental communications such as public announcements and newsletters, at events such as career fairs, departmental seminars and social events, and via Industry Advisory Board meetings.

## **5.H. Program Accreditation**

The SEMI ENG BS program will be accredited by the ABET Engineering Accreditation Commission in 2029. “ABET accreditation assures confidence that a collegiate program has met standards essential to prepare graduates to enter critical STEM fields in the global workforce. Graduates from an ABET-accredited program have a solid educational foundation and are capable of leading the way in innovation, emerging technologies, and in anticipating the welfare and safety needs of the public.”<sup>16</sup>

In 2028 (program year 3), an initial accreditation visit will be requested to take place in 2029 (program year 4) concurrent with the inaugural graduating cohort. A full ABET accreditation review is planned for 2032 (program year 7) in alignment with the review cycle for accredited engineering programs at Missouri S&T. The program will be accredited under General Engineering criteria with the American Society for Engineering Education as lead society with a multidisciplinary evaluator team.

Approximately one year prior to scheduled accreditation visits, self-study reports will be prepared containing detailed program information on goals, outcomes, curriculum, resources, faculty, and continuous improvement processes. Following on-site accreditation visits, draft evaluation reports written by ABET program evaluator teams will be reviewed. The department will respond to any findings or concerns raised in the report by providing clarifying information as needed. The ABET Engineering Accreditation Commission (EAC) will provide a final accreditation decision upon reviewing the self-study report and departmental response to the program evaluator team report. Upon receiving full accreditation (typically valid for 6 years), the department will implement its continuous improvement plan to sustain and advance program quality.

## **6. Appendices**

Appendix 1 – Letters of Support (*Included*)

Appendix 2 – LightCast™ National Analyses

Appendix 3 – LightCast™ Regional Analyses

Appendix 4 – Pro Forma Budget Spreadsheet

Appendix 5 – Curriculum Flowcharts

Appendix 6 – Course Descriptions

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<sup>16</sup> <https://www.abet.org/accreditation/what-is-accreditation/why-abet-accreditation-matters/>



MISSOURI UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
— ROLLA, MISSOURI —

**Office of the Provost**

102 Parker Hall  
300 W. 14<sup>th</sup> Street  
Rolla, MO 65409  
573-341-4138  
[provost@mst.edu](mailto:provost@mst.edu)  
[provost.mst.edu](http://provost.mst.edu)

30 September 2024

To: UM System Office of Academic Affairs

From: Dr. Colin Potts, Provost and Executive Vice Chancellor for Academic Affairs

Subject: New Program Proposal, B.S. Degree in Semiconductor Engineering

I enthusiastically recommend that the proposal for a Bachelor of Science degree in Semiconductor Engineering (SEMI ENG) be advanced to the UM System for their review. This new degree program will be housed in the Department of Materials Science and Engineering (MSE) in the College of Engineering and Computing (CEC) and a copy of Dean Borrok's letter of support is attached, along with the proposal itself. For Missouri S&T, this degree program and its associated infrastructure will support education and research in strategic areas across a wide variety of technological fields ranging from microelectronics and nanotechnology (with applications for energy, healthcare, intelligent systems, and cybersecurity) to critical materials supply chain.

This will be an ABET-accredited degree with an emphasis on interdisciplinary engineering skills building upon a strong foundation of general engineering principles and a common core of materials science and engineering coursework and hands-on experiences in a new cleanroom for semiconductor material processing and device fabrication and testing. Students specialize in one of two emphasis areas: semiconductor device engineering, which features coursework and laboratories primarily in electrical and computer engineering; and semiconductor process engineering, which features coursework and laboratories primarily in chemical engineering. This program will result in program graduates with uniquely interdisciplinary skills and abilities that will prepare them for careers in the semiconductor industry or to pursue graduate studies.

The proposed curriculum will extensively leverage existing campus resources with required courses offered by CEC (Materials Science and Engineering, Electrical and Computer Engineering, Chemical and Biochemical Engineering) in addition to the core and general education courses associated with our other engineering degrees. The curriculum will require ten new courses, including three hands-on laboratories, to be developed by four new faculty hires.

A new 2,500 square foot ISO-5/6/7 cleanroom will be constructed to support research and education in semiconductor materials and devices, and related fields. Resources for the cleanroom infrastructure, equipment, start-up packages for new faculty hires, and endowments for two new faculty positions have been identified from private donations and co-investment from the Kummer Institute. The program is anticipated to be net revenue positive by year 3 at target enrollment, and by year 7 at 50% enrollment scenario.

This degree represents a very exciting opportunity for both faculty and students involved in the program. The unique engineering degree being the first of its kind in the state and region provides a "first-mover" opportunity to develop and advance this multidisciplinary field and fits naturally within the broad portfolio of engineering degrees offered by this campus.

Mohammed Dehghani, Ph.D.

10/2/24

Date



## College of Engineering and Computing

September 3, 2024

To: Dr. Colin Potts, Provost and Executive Vice Chancellor for Academic Affairs

From: Dr. David Borrok, Vice-Provost and Dean, College of Engineering and Computing

A handwritten signature in black ink, appearing to read "David Borrok".

Subject: Support for the creation of a B.S. Degree in Semiconductor Engineering

Semiconductor engineering is a field experiencing unprecedented growth, as the onshoring of chip manufacturing is being stimulated by state and federal government and industry co-investment. Missouri S&T and the College of Engineering and Computing (CEC) is poised to make a \$20M investment to develop the necessary infrastructure to support research and education in semiconductor engineering.

The occupational outlook for engineering positions in the semiconductor industry is excellent, with an estimated workforce gap of 18,000 engineers needed to meet demand in the sector over the next decade. Therefore, the creation of a new BS-degree in semiconductor engineering is aligned with the strategic goals of Missouri S&T and the CEC which focus on providing transformative educational opportunities for our students.

The proposed BS degree in semiconductor engineering will be housed within the Department of Materials Science and Engineering but is interdisciplinary in nature. The curriculum will leverage existing expertise and coursework in Electrical Engineering, Chemical Engineering, and Materials Science and Engineering. The program will include emphasis areas in device engineering and process engineering. This flexible curriculum will help to provide a pipeline of interdisciplinary engineering workforce for the semiconductor industry.

A key part of the mission of our college and university is to address societal problems through the development and implementation of new technologies. Microelectronic chips and semiconductor devices have changed our modern society and look to continue to shape the future to meet human needs. Therefore, establishing a new undergraduate degree program in semiconductor engineering is an affirmation of our core mission. Graduating students in this critical field will contribute to the growth and economic development of Missouri and the nation. With this in mind, we have already formed a strong advisory board for this program that includes three semiconductor companies in Missouri as well as others nationwide. We want to leverage our efforts to attract more of these companies to our state.





Srikanth Kommu, Ph.D.  
Brewer Science, Inc.  
2401 Brewer Drive  
Rolla, MO 65401  
573-364-0300  
skommu@brewerscience.com

September 16, 2024

Re: Letter of Support for Semiconductor Engineering BS Degree Program

Professor Michael Moats  
Chair of the Materials Science and Engineering Department  
Missouri University of Science and Technology (Missouri S&T)  
223 McNutt Hall  
1400 N. Bishop Avenue  
Rolla, MO 65409-0330

Dear Professor Moats,

I am writing to express my strong support for Missouri S&T's Semiconductor Engineering Bachelor of Science (BS) degree program. Currently serving as our Executive Vice President & Chief Operations Officer at Brewer Science with over 20 years of leadership experience in the semiconductor industry, I understand the vital role that engineering plays in driving innovation, economic growth, and technology advancement. The new Semiconductor Engineering BS degree program embodies the school's commitment to preparing students to meet the challenges of a rapidly evolving technology landscape and will help the U.S. fill the gaps defined as national security risks and workforce development opportunities.

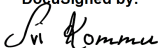
Having been in operation since 1981, Brewer Science operates two state-of-the-art manufacturing facilities in Rolla and Vichy, Missouri producing patented, highly specialized materials used by our customers in the fabrication of advanced microchips. Our self-generated intellectual property base includes more than 175 U.S. patents and a substantial body of trade secrets resulting from decades of investing in research and development. Furthermore, Brewer Science relies heavily on Missouri S&T for workforce development. 70% of our interns are S&T students and at least 50% are converted into full-time roles. We are proud of our integrated Rolla connection.

Looking to the future, long-term U.S. national security interests require stable, sustainable onshore access to semiconductors, which needs a robust, secure domestic semiconductor materials supply chain. As we onshore production of microchips, the semiconductor industry will need to have access to even more engineering talent to fill open roles. The industry has already felt the effects of the talent shortage.

Brewer Science eagerly supports the new Semiconductor Engineering BS degree program. Whether it be through workforce development, industry advisory boards, or future research opportunities, Brewer Science will be an advocate for this program. We believe that this program will have a lasting impact on the semiconductor industry and are excited about the opportunities it presents.

Thank you for your consideration. Please reach out if you require any further information or if there are additional ways that we can support this effort.

Sincerely,

DocuSigned by:  


DF9FA167DDE1496...  
Srikanth (Sri) Kommu, Ph.D.  
Executive Vice-President & COO





# Missouri State<sup>™</sup>

U N I V E R S I T Y

September 12, 2024

Dr. Michael Moats, Chair  
Materials Science and Engineering Department  
Missouri University of Science and Technology  
223 McNutt Hall  
1400 N. Bishop Avenue  
Rolla, MO 65409-0330

Dear Dr. Moats,

The Jordan Valley Innovation Center (JVIC) at Missouri State University supports the creation of the Semiconductor Engineering Bachelor of Science degree program at the Missouri University of Science and Technology. This initiative aligns well with the JVIC mission and capabilities.

JVIC is a high-tech research and technology development center that works in collaboration with industry partners and government agencies, including the Department of Defense. JVIC is also the Missouri Node established to support the semiconductor industry. NextFlex, a leading member of the Manufacturing USA Innovation Institutes focused on Semiconductors and Flexible Hybrid Electronics (FHE), approved the Missouri Node at JVIC to increase the volume, pace and coordination of FHE and other needed semiconductor technology developments. The Missouri Node at JVIC is the third NextFlex location in the U.S., with the other two nodes located in New York and Massachusetts. By design, these Nodes foster collaboration with and among private businesses by providing direct-line access to facilities, equipment, and infrastructure to rapidly deploy design, development and manufacturing adoption. National security and supply chain initiatives are addressed at the Nodes by facilitating technology innovation, accelerating the development of the manufacturing workforce, and promoting a much needed, sustainable advanced manufacturing ecosystem within the U.S.

One of the areas of focus for the JVIC Node is to develop a talent pipeline to meet the demands of the semiconductor industry. This degree program addresses this need and will support the JVIC Node projects. Missouri State University is also a partner with the Missouri University of Science and Technology through its Cooperative Engineering Program and fully supports this program. Finally, the timing of this program is well suited to support the JVIC Node and the growth in the semiconductor industry. This growth is being fueled by technology development, rapid deployment and adoption of new technologies, and significant capital investments, including the CHIPS Act. There is no stronger evidence that this is the time to launch this degree program.

JVIC is committed to the development and support of the semiconductor industry. Our team and facilities are well positioned to support this new degree program. We appreciate your continued efforts to provide quality educational programs to address the needs in Missouri and across the nation. As you implement your degree program, please feel free to contact me at (417) 836-3020 or [AllenKunkel@MissouriState.edu](mailto:AllenKunkel@MissouriState.edu).

Sincerely,

Allen D. Kunkel, CEcD  
Associate Vice President for Economic Development and Director, JVIC



14520 Botts Road  
Kansas City, MO 64147  
816-488-2000  
kcncsc.doe.gov

Daniel Krueger, PhD  
Engineer Fellow  
816-488-2701  
816-914-1443  
dkrueger@kcncsc.doe.gov

August 29, 2024

Dr. David Lipke  
Missouri University of Science & Technology  
Materials Science & Engineering Department  
223 McNutt Hall, 1400 N. Bishop Ave., Rolla, MO 65409

Dear Dr. Lipke,  
Thank you for advising the Kansas City National Security Campus, managed by Honeywell FM&T, that Missouri S&T will be establishing a Semiconductor Engineering degree program beginning in the Fall 2025. Honeywell FM&T manages and operates the Kansas City National Security Campus for the U.S. Department of Energy under Management and Operating contract DE-NA0002839. As a Management and Operating contractor, we are prohibited from using appropriated funds, either directly or indirectly, to influence the award of government funding.

The Kansas City National Security Campus will watch this effort with interest in the spirit of technical innovation as our organization conducts research and development, production, and assurance efforts in microelectronics assembly, packaging, and test technologies as part of our site's mission as well as hires and employs staff members that rely on semiconductor engineering skills to carry out that work. The Kansas City National Security Campus has a staff of more than 7,000 across engineering, science, business, and production functions.

Sincerely,

Daniel Krueger, PhD  
Engineer Fellow and Modeling & Simulation Center of Excellence Leader  
International Microelectronics Assembly and Packaging Society (iMAPS), President-Elect  
Kansas City National Security Campus managed by Honeywell FM&T



September 3, 2024

Professor Michael Moats  
Chair Materials Science and Engineering  
Missouri University of Science and Technology

Dear Professor Moats,

MEMC LLC, a St. Peters MO based Silicon-On-Insulator (SOI) wafer supplier, enthusiastically supports the Missouri University of Science and Technology (S&T) initiative to establish the Bachelor of Science degree program in Semiconductor Engineering. MEMC is very pleased to be participating on the industrial advisory committee working with S&T on the degree proposal.

MEMC LLC is a part of GlobalWafers Company Ltd (GWC), the third largest worldwide silicon wafer manufacturing company with 18 manufacturing sites in 9 countries. Silicon wafers are the foundational material for the semiconductor chip industry. The MEMC site in Missouri was established in 1959 and was the first US silicon wafer manufacturer. The site has recently completed construction of a 300mm SOI wafer expansion facility and will be ramping wafer volumes and adding more than 100 new permanent jobs over the next few years. The MEMC Missouri site also is home to GWC's global research and development organization.

The S&T Semiconductor Engineering degree program will build a trained workforce helping to meet the needs of the Missouri semiconductor industry which includes supply chain/materials, manufacturing, design, and assembly/packaging. The S&T degree program proposal is very timely to support increased US semiconductor manufacturing jobs now and into the future. It will also serve as an excellent preparation for students to pursue advanced degrees in semiconductors.

The presence of this in-state degree program will further strengthen the engagement between MEMC and S&T. It will enable recruiting of well-trained program graduates to the MEMC workforce. MEMC plans to support student internships and sponsorship of senior design projects. MEMC's workforce includes many S&T graduates, and its proximity has always been a benefit in recruiting engineers who prefer to live in the Midwest. Additionally, the establishment of a cleanroom lab facility may provide collaborative research opportunities with S&T.

MEMC strongly endorses the S&T proposal to establish the Semiconductor Engineering degree program. We look forward to participating with S&T on a successful launch and are committed to support the future growth and success of the program.

Sincerely,

A handwritten signature in blue ink that reads "Karla Chaney". The signature is fluid and cursive.

Karla Chaney  
Site General Manager



## Letter of Support

September 12<sup>th</sup>, 2024

Professor Michael Moats  
Chair of the Materials Science and Engineering Department  
Missouri University of Science and Technology

Dear Professor Moats,

I write to you to express my support for the planned Semiconductor Engineering Bachelor of Science degree program at Missouri University of Science and Technology.

NXP Semiconductors creates innovative semiconductor solutions in the automotive, industrial and IoT, mobile, and communications infrastructure markets. The company owns and operates four wafer fabrication facilities in the US, two of which are in Austin, Texas and two more in Chandler, Arizona. The representative products of these fabs include microcontrollers (MCUs) and microprocessors (MPUs), power management devices, RF transceivers, amplifiers, and sensors. NXP designs, develops, qualifies, and manufactures products for more than 26,000 customers globally.

To be successful, NXP needs a talented workforce including engineers with education and experience in semiconductor disciplines. A university program focusing on a semiconductor curriculum would likely produce high quality candidates for internships and to help fill new college graduate positions. It is also likely that students and faculty affiliated with such a program could engage in semiconductor research projects directly with industry partners, like NXP, or through collaborative opportunities such as Semiconductor Research Corporation or CHIPS related projects.

Your proposed program comes at a time of major investment in our industry here in the US, both from the government and from the private sector. The CHIPS act has created manufacturing and R&D hubs around the US which have a great need for new talent to sustain the growth. New university programs will be critical to create tomorrow's semiconductor workforce.

I'm encouraged by schools like Missouri S&T that are considering programs directed at our industry's needs and look forward to their impact on our workforce.

Sincerely,

A handwritten signature in black ink, appearing to read 'Scott M. Hayes', is positioned above the printed name.

Scott Hayes  
Technical Director, Package Innovation  
NXP Semiconductors





September 12, 2024

Professor Michael Moats  
Chair Materials Science and Engineering  
Missouri University Science and Technology

Subject: Letter of Support

To Whom it May Concern:

I am writing on behalf of SkyWater Technology to express our strong support for the proposal of an accredited Semiconductor Engineering Bachelor of Science degree program at Missouri University Science and Technology (S&T).

SkyWater Technology is a U.S.-based pure play semiconductor foundry in the United States, with facilities for front-end microelectronics manufacturing in Minnesota and back-end advanced packaging solutions in Florida. SkyWater develops and produces multiple technologies, including superconducting, photonics, bio-sensors and standard Complementary Metal-Oxide-Semiconductor (CMOS) down to sub-40nm line widths. As a Defense Microelectronics Activity (DMEA) Category 1A Trusted Supplier, SkyWater is vital to the strength and breadth of the defense industrial base and commercial microelectronics industry, and would be a natural off taker of the graduates produced by the Missouri S&T program.

Traditionally, semiconductor development or fabrication companies hire engineers from the classic engineering disciplines, such as: chemical, mechanical, electrical, and materials science. Once SkyWater onboards new employees, the company conducts internal training programs to provide new hires insights and specific skills in the unique aspects of semiconductor development manufacturing. S&T graduates educated in an institutionalized program would dramatically improve the time and resources required to bring new hires up to speed, and hence reduce the whole system cycle-time of development to production within our fabs.

The goal of the recent government and industry actions to foster strong semiconductor technology and fabrication expertise domestically is vital to both our country's growth and

security. I applaud Missouri S&T in taking the initiative with this new program to fulfill the massive workforce demand that exists in our industry here in the United States. With Missouri S&T located in the general Midwest, attraction and transition becomes more streamlined for graduates to contemplate other centers of semiconductor clusters at companies such as those in Minnesota and recently supported by CHIPS funding in Missouri. Now is the time to invest in our academic infrastructure to take the best advantage of the CHIPS for America funding intended to grow and strengthen our semiconductor industry. SkyWater Technology fully supports the Missouri S&T initiative and looks forward to hiring graduates from this new exciting program.

Best Regards,

A handwritten signature in black ink, appearing to be 'TS' with a long horizontal stroke extending to the right.

Thomas Sonderman  
Chief Executive Officer  
SkyWater Technology

Cc: Gregg Damminga  
VP and Fellow  
SkyWater Technology

Brian Lenihan  
VP Government Relations  
SkyWater Technology

Professor Michael Moats  
Chair of the Materials Science and Engineering Department  
Missouri University of Science and Technology

Dear Professor Moats,

Watlow is pleased to express our strong support for the proposed Semiconductor Engineering Bachelor of Science degree program at Missouri University of Science and Technology. As a global leader in the design and manufacture of industrial thermal systems, Watlow recognizes the critical importance of semiconductor engineering in advancing technology and innovation across various industries.

Watlow, with over 1,100 patents and a workforce of more than 4,200 team members operating in 12 manufacturing facilities and 9 advanced technology and development centers worldwide, has a significant presence in the semiconductor field. Our expertise in thermal systems and control is integral to the manufacturing processes of semiconductors, making us a key stakeholder in the development of this new degree program.

The creation of the Semiconductor Engineering B.S. degree program at Missouri S&T is timely and essential. The semiconductor industry is experiencing rapid growth and technological advancements, necessitating a highly skilled workforce equipped with specialized knowledge in semiconductor engineering. This program will not only help bridge the current skills gap but also foster innovation and research collaborations that are vital for the industry's future.

Watlow stands to benefit significantly from this program through enhanced workforce development. Graduates from this program will bring advanced technical skills and innovative thinking to our organization, enabling us to maintain our competitive edge and continue delivering cutting-edge solutions to our customers. Additionally, the program will open opportunities for collaborative research, allowing us to work closely with Missouri S&T to address industry challenges and drive technological advancements.

Missouri S&T is the ideal partner for this initiative due to its strong engineering programs and commitment to research excellence. Located in Missouri, where Watlow has a significant operational presence, the university is well-positioned to support the growth of the semiconductor field in the state and region. The proximity will facilitate seamless collaboration and engagement between our organization and the university.

In conclusion, Watlow fully supports the establishment of the Semiconductor Engineering B.S. degree program at Missouri S&T. We are excited about the potential this program holds for developing the next generation of semiconductor engineers and look forward to the positive impact it will have on our industry and community.

Sincerely,



Dr. Ashish Bhatnagar  
Chief Technology Officer (CTO)  
Watlow



# **UMKC School of Dentistry**

## **St. Joseph Dental Satellite Training Program**

### **Program Expansion Detailed Summary**

#### **Background: Why a UMKC Rural Satellite for Dentistry?**

America's rural areas suffer from an acute lack of healthcare practitioners. According to the Oral Health Workforce Research Center, rural populations utilize dental care at lower rates and have fewer dentists per capita compared to urban areas. Practitioners, including dentists and dental hygienists, are concentrated in urban areas, leaving rural residents with few options for regular cleanings or even oral health emergencies. Missouri follows these national trends. Today, Missouri is home to 15 U.S. Health Resources and Services Administration (HRSA) designated geographic Rural Health Professional Shortage Areas. In Northwest Missouri, most counties have less than one dentist per 2,100 people. Our proposal drives a higher percentage of oral healthcare graduates to rural areas to address existing disparities.

A shortage of dental providers in rural areas leads to delays in routine check-ups, which contributes to short- and long-term degradation of oral health. Poor oral health can negatively affect physical and mental health broadly and hinder economic productivity among workers. Studies show tooth issues increase employee "presenteeism," when individuals show up to work but are less productive than normal due to poor oral health. Untreated oral health issues can drive visits to rural hospitals and emergency rooms, increasing costs, putting pressure on already overworked rural providers, and delaying necessary care for other emergency conditions. Additionally, rural areas tend to have large un- and under-insured populations, making urban care solutions cost prohibitive. A UMKC dentistry program satellite would not only train the providers who could address the healthcare shortage in the area, but the students themselves would provide dental services for community patients during their training. We expect much of the healthcare provided at the campus to be for un- and under-insured residents, including Medicaid patients. Such safety net care would not compete with incumbent dental practices; rather, it would fill an unmet need, and transform Northwest Missouri oral healthcare access and delivery.

Providers have consistently declined to work in rural areas, preferring on average to remain in the area where they trained, which is normally an urban or suburban area. Because many students receive their degree at urban-based institutions, they fail to train, socialize, and build networks in rural areas. Like physicians, dentists and dental hygienists are more likely to move to rural areas when they train and embed in rural communities.

UMKC School of Dentistry can offer multiple competitive advantages. A satellite campus would:

- Leverage UMKC School of Dentistry's strong reputation and infrastructure.

- Align admissions with current UMKC standards using the American Dental Education Association's Associated American Dental Schools Application Service. Applicants can rank location preferences or choose one specific location.
- Provide on-site clinical facilities in St. Joseph enabling students to deliver comprehensive dental care.
- Build on UMKC's track record for high retention of graduates in rural practice (Pharmacy data):
  - 24% of rural-origin graduates now practice in rural areas.
  - 16% of total graduates practice in rural areas.
  - 69% of Missouri graduates remain in-state to practice.
  - Focus on Missouri applicants increases the likelihood of practitioners in underserved rural areas.

## **Program Structure and Curriculum**

### **Doctor of Dental Surgery (DDS)**

- The DDS is a four-year program. Students enter the program after completing their bachelor's degree.
- Each year, the program will admit 10 students, for a total of 40 students when the program is at capacity. The existing Kansas City program admits approximately 109 students each year; this rural health-focused expansion will increase the number of dentists graduating from our program by approximately 10% annually.
- The first two years of instruction for DDS students will be at the Kansas City campus, following the exact curriculum for all DDS students.
- Clinical training in the third and fourth years will be at the St. Joseph satellite, also following the exact curriculum of the existing Kansas City program.
- A 2+2 (Kansas City + St. Joseph) training program is preferred to a 4-year satellite program (similar to our current Pharmacy and Medicine programs) because there is capacity to add students to in person didactic courses in Kansas City with no additional instructional costs. Online course work for DDS students is not preferred, in large part due to laboratory and clinical simulation courses required by the Commission on Dental Accreditation (CODA). Strict CODA requirements for supervisor calibration in clinical portions of the training (years 3-4), limit the use of community-based clinical training at rural community dental clinics. The clinical training environment in St. Joseph in years 3-4 of the program will replicate the KC clinical training experience while allowing students to build professional and personal networks within northwest Missouri, prior to graduation and launch of their professional career.
- Link to UMKC Catalog for DDS curriculum: <https://catalog.umkc.edu/colleges-schools/dentistry/doctor-of-dental-surgery-program/program-requirements/>

### **Bachelor of Science in Dental Hygiene (DH)**

- The Bachelor of Science in Dental Hygiene (DH) is a four-year program, totaling 120 credit hours. During the first two years of study, students complete general education courses.
- Admission to the DH program is selective, and students apply after completing approximately two years of undergraduate coursework (general education + pre-requisite coursework).
- Once matriculated into the DH program (junior year) students complete two years of major-specific dental hygiene coursework.
- Each year, the DH program will admit 5 students for training in the St. Joseph satellite program. The existing Kansas City program admits approximately 30 students each year; this rural health-focused expansion will increase the number of dental hygienists graduating from our program by > 15% annually.
- In their junior year, DH students will be at the Kansas City campus.
- Remaining didactic coursework and clinical training in their senior year will be at the St. Joseph satellite. Didactic coursework is possible for DH students, and the preliminary renderings include built in classroom space or any synchronous didactic courses.
- Link to UMKC Catalog for DH curriculum: <https://catalog.umkc.edu/colleges-schools/dentistry/division-of-dental-hygiene/bachelor-of-science-dental-hygiene/>

### **Clinical Operations:**

The clinic will function similarly to our Kansas City DDS training clinic. Students will see patients for general dentistry services and will gain exposure to required training in specialty services. Business support staff will also be on site to manage patient check-in, billing/insurance, materials sterilization/preparation, and records management. At full training capacity, the satellite program clinic will include 10 third year DDS students, 10 fourth year students, and 5 dental hygiene students. In addition to full time clinical faculty and staff, community dental partners will be hired as adjunct faculty, similar to our Kansas City training model.

Figure 1 shows the northwestern Missouri counties we anticipate serving. The total census for those counties is 227,350, providing an ample patient population to meet training need while also serving a critical service for un/under insured individuals in the region.

Figure 1. Missouri Counties to be served by the training satellite clinic.



### **New Faculty Needed to Meet Accreditation Requirements and Clinical Instruction:**

- Accreditation requirements for faculty-to-student ratios:
  - DDS: 1:8
  - DH: 1:5
- Onsite Assistant Dean (lead administrative official and faculty member)
- Clinical Assistant/Associate Professor-DDS Lead
- Clinical Assistant/Associate Professor-Patient Care Clinic
- Clinical Assistant/Associate Professor-Hygiene Lead
- Adjunct Clinical Faculty (in clinical and community)

### **Academic Approval Process**

Location	Doctor of Dental Surgery	BS in Dental Hygiene*
Main Campus	104 (54%)	94 (78%)
St. Joseph Satellite	87 (46%)	26 (22%)

\* Of note, MDHE considers the percent of major requirements (excluding general education) in their determination of whether additional approval is necessary. Based on major requirements for DH, 41 of 67 major hours (61%) would be taught on the Kansas City campus; 26 of 67 major hours (39%) would be taught in St. Joseph.

- Because < 50% of the DDS and DH curricula would be delivered at the St. Joseph satellite facility, MDHEWD and HLC approvals are not required.
- The Commission on Dental Accreditation (CODA) requires approval for program expansion and off campus training sites; CODA notification is required by May 1, 2025 or November 1, 2025, with an 18-month approval process thereafter.

## **Facilities:**

### **Missouri Western State University Collaboration**

UMKC is engaged in discussions with Missouri Western State University to locate the campus on the second floor of one of MWSU's academic buildings. MWSU leadership supports the plan and is excited to welcome UMKC to their campus. The Missouri Western State University Board of Governors are aware of the concept and are supportive. We are in the process of developing a general terms and lease document. Once those have been proposed, the Board of Governors can officially review and endorse the collaboration.

## **Budget and Construction:**

Clark & Enersen were engaged to complete a programmatic review of the needs for the satellite site, as well as develop conceptual designs for the renovation project. Their initial estimates are \$7.5 million for construction and an overall project cost, including soft costs, FF&E, Contingency, and Design, of \$12 million. Their initial design concepts are included with this proposal.

The satellite operating expenses will be covered by tuition, student fees, and clinical services fees. While we have estimated a rental rate for Missouri Western in the draft proforma based current rates for our satellite Pharmacy program on the Missouri State University campus, we have not begun the conversations to solidify those expenses. A proforma is included with this proposal. It includes start up construction costs (\$12M, noted above) in year 1, as well as start-up and ongoing operational costs. Approval for the construction costs will be sought at the April Board of Curators meeting.

Summary Pro Forma

PROGRAM: DDS DH Rural Satellite Clinic	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
<b>Revenue Projections</b>								
Tuition	-	552,325	\$ 1,094,617	\$ 1,925,758	2,789,707	2,845,502	2,902,412	2,960,460
Supplemental & Other Fees	-	-	-	-	-	-	-	-
Scholarship Allowances	-	-	-	-	-	-	-	-
<b>Net Tuition and Fees</b>	-	552,325	1,094,617	1,925,758	2,789,707	2,845,502	2,902,412	2,960,460
Clinic Revenue (Projected Collections)	\$ -	\$ -	\$ -	\$ 27,777	\$ 134,386	\$ 138,301	\$ 142,215	\$ 146,129
Other Income (Instruction Fee)	\$ -	\$ 34,554	\$ 69,108	\$ 103,662	\$ 138,216	\$ 142,241	\$ 146,267	\$ 150,293
<b>TOTAL PROGRAM REVENUE</b>	<b>\$0</b>	<b>586,879</b>	<b>1,163,725</b>	<b>2,057,197</b>	<b>3,062,310</b>	<b>3,126,044</b>	<b>3,190,893</b>	<b>3,256,882</b>
							\$ -	\$ -
<b>TOTAL REVENUE</b>	<b>\$0</b>	<b>\$586,879</b>	<b>\$1,163,725</b>	<b>\$2,057,197</b>	<b>\$3,062,310</b>	<b>\$3,126,044</b>	<b>\$3,190,893</b>	<b>\$3,256,882</b>
<b>Expenditure Projections</b>								
<b>Subtotal Salaries and Benefits</b>	\$ -	\$ 562,859	\$ 739,904	\$ 1,462,159	\$ 1,589,871	\$ 1,636,824	\$ 1,685,186	\$ 1,734,999
<b>Subtotal Operating Expense</b>	-	\$ 29,176	\$53,353	\$479,327	\$490,662	\$502,279	\$514,185	\$ 526,389
<b>Subtotal One-time Expense</b>	\$ -	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>0</b>	\$ -	\$ -	\$ -	\$ -	\$ -	0	0	0
<b>TOTAL EXPENDITURES</b>	<b>\$0</b>	<b>\$ 592,035</b>	<b>\$793,257</b>	<b>\$1,941,486</b>	<b>\$2,080,533</b>	<b>\$2,139,103</b>	<b>\$2,199,371</b>	<b>\$2,261,387</b>
<b>DIRECT MARGIN</b>	<b>\$0</b>	<b>(\$5,156)</b>	<b>\$370,468</b>	<b>\$115,711</b>	<b>\$981,777</b>	<b>\$986,941</b>	<b>\$991,522</b>	<b>\$995,494</b>
<b>MARGIN AFTER CAMPUS OVERHEAD</b>	<b>\$0</b>	<b>(\$12,569)</b>	<b>\$355,642</b>	<b>\$95,944</b>	<b>\$957,067</b>	<b>\$962,231</b>	<b>\$966,813</b>	<b>\$970,785</b>
<b>CUMULATIVE MARGIN AFTER CAMPUS OVERHEAD</b>	<b>\$0</b>	<b>(\$12,569)</b>	<b>\$343,073</b>	<b>\$439,017</b>	<b>\$1,396,084</b>	<b>\$2,358,315</b>	<b>\$3,325,128</b>	<b>\$4,295,913</b>

**Renovation costs (not included in schedule above)**

Furniture, Fixtures and Equipment	2,500,000
Professional Services (Architect, Engineering, other)	2,100,000
Construction cost	7,000,000
Contingency	400,000
	<u>12,000,000</u>

*Renovation costs will be covered by federal, state and philanthropic funding.*

*Project costs estimated in FY2025 dollars (unadjusted for future inflationary increases).*

**Ethics, Compliance, and Audit Services (ECAS) Quarterly Report**  
**UM System**  
**February 6, 2025**

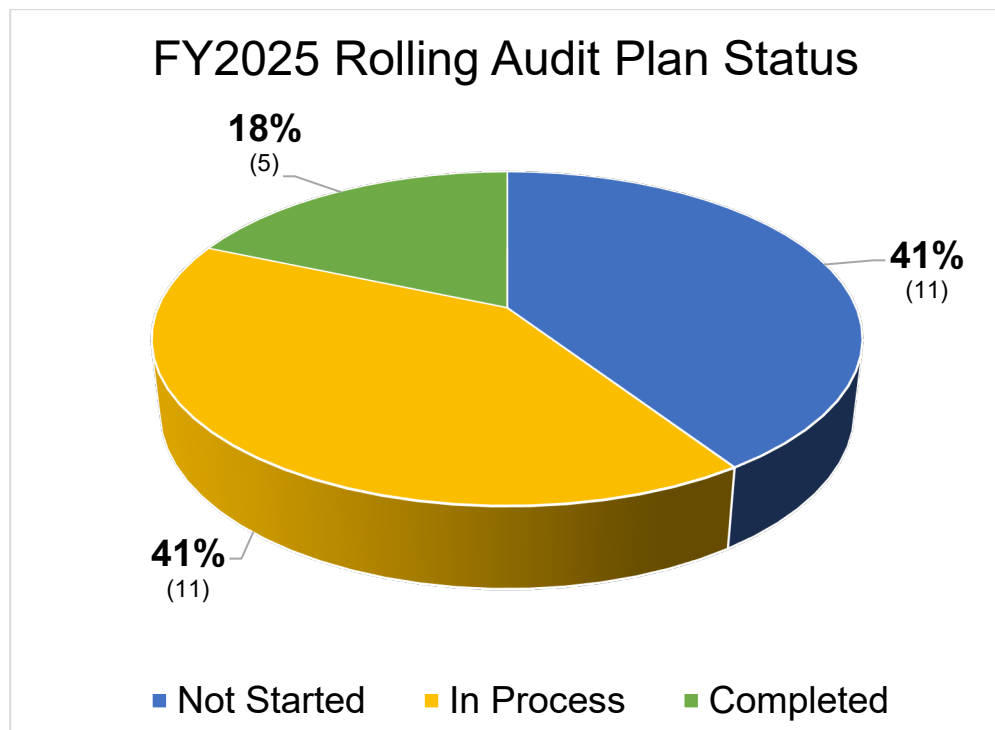
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**INTERNAL AUDIT**

**FY2024 Rolling Internal Audit Plan Status**

*Audit/Consulting:*

Projects completed	5
In Process	11
Not Started	11



**Internal Audits Completed Since November 2024**

Audit	Risk Rating
MU Standard Financial Controls of CAFNR	2
MUHC Provider Based Billing	3
MU Scholarship Awards	3



## Internal Audits Completed: Executive Summaries

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### Internal Audit Summary Report MU Scholarships July 2024

Report Risk Rating:				
1	2	3	4	5

### Background

Scholarships serve as an important tool for increasing enrollment and retention, and for advancing strategic initiatives in support of the Missouri Compact for Excellence in Student Success at the University of Missouri (MU). Recognizing that undergraduate population trends are declining and competition for students is increasing, this internal audit was conducted to review the processes in place to manage and award donor funded scholarships at MU. A population of 2,552 scholarships were identified as in scope for the audit, totaling more than \$27 million in awarded student aid, including both annual and endowed donor funds.

The scholarship management process at MU is decentralized, with 85% of all donor funded scholarships under the control of academic or auxiliary units, and 15% under control of the Office of Financial Aid. Stakeholders in the MU scholarship management process include University Advancement, Enrollment Management and the Office of Financial Aid (Financial Aid), the Division of Finance & Business Services (MU Finance), and the Academic and Auxiliary Units (AUs). [UM Policy 21101 Fiscal Responsibility](#) assigns responsibility for spending funds according to fiscal policies and procedures to the AUs. All stakeholders have a role in scholarship management processes, but no single stakeholder has general authority or oversight of the scholarship management process.

In 2021, Financial Aid implemented scholarship management software “Scholarship Universe” to manage the awards under its control, and worked with AUs to adopt the system, but no standard for implementation was required. Financial Aid and MU Finance provide regular support to the AUs for understanding awarding best practices and accounting responsibilities. A request for proposal (RFP) is currently in process to assess the functionality of other scholarship management systems to drive greater standardization and improve outcomes, with a projected completion date of March 2025.

### Issues Summary

While Financial Aid has established structures and processes for the administration of scholarship funds, most donor funded scholarship funds at MU are controlled by the Academic Units, not Financial Aid, resulting in lack of accountability and oversight of the scholarship management process. Knowledge gaps and variability in account monitoring in the AUs, combined with the lack of accountability and oversight, result in inconsistent scholarship funds management.

## **Management Action Plan Summary**

Financial Aid, MU Finance, and University Advancement will work collectively and independently to provide improved tools, resources, and education to personnel in the AUs, to improve consistency in the management and awarding of donor funded scholarships in the AUs. Due Dates: March 2025 – July 2027.

## **Risk Rating Rationale**

The current decentralized scholarship management process lacks accountability, oversight, and structure increasing the risk of scholarship awarding and accounting errors. Establishing consistent processes, clearly communicating expectations, and providing resources and tools to support compliance with university policy and donor intent will reduce the risk of scholarship accounting and awarding errors in the AUs.

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Report Risk Rating:				
1	2	3	4	5



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## **Internal Audit Summary Report**

### **MU Standard Financial Controls of CAFNR**

**December 2024**

## **Background**

The College of Agriculture, Food and Natural Resources (CAFNR) at the University of Missouri was established in 1870 as the College of Agriculture and Mechanical Arts. Over the years, CAFNR has evolved to encompass a wide range of disciplines, reflecting the growing complexity and interconnectivity of agriculture, food systems, and natural resources.

Today, CAFNR is a leader in agricultural research and education, offering over 55 academic degree programs, minors, and certificates. Academic Divisions that make up CAFNR include Animal Sciences, Biochemistry, Division of Applied Social Sciences, Food Nutrition and Exercise Sciences, Plant Science and Technology, and School of Natural Resources. The services overseen by CAFNR include Buck's Ice Cream, Experiment Station Chem Lab, Mizzou Meat Market, Soil and Plant Testing Lab, Soil Health Assessment Center, and Tiger Garden Flower Shop.

The fiscal year 2024 internal audit plan includes audits of key controls over financial performance as defined by University of Missouri – System policies and Collected Rules and Regulations (CRRs), and as implemented by local campuses, schools, and/or divisions (CSD). CSD audit work focuses on controls identified in policies and processes over the following areas: purchasing practices, budget management, grant management, scholarship

management, gift management, one card program management, and outside (entrepreneurial) entity management.

### **Issues Summary**

Controls around prepaid cards used for international travel are generally effective but are not formally documented in an internal policy. Daily reconciliations at retail locations and periodic review of One Card terminations have not been implemented.

### **Management Action Plan Summary**

Management will implement an internal policy around prepaid cards for international travel, strengthen controls at retail locations, and conduct periodic reviews of one card terminations to enhance the overall control environment. Due Date: June 1, 2025.

### **Risk Rating Rationale**

The control environment at CAFNR was noted to be generally effective. Minor improvements to controls around prepaid cards, retail sales, and one card terminations will effectively reduce risks in these areas.

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### **Audits and Consulting Engagements Currently in Process**

<b>Audit Area</b>	<b>Overall Objective</b>	<b>Status</b>	<b>Risk Area(s)</b>
S&T – Information Security Assessment	Information security assessments, in collaboration with the information security officers, for critical systems, excluding Microsoft, Outlook, PeopleSoft, and Active Directory.	Reporting	Information Technology
UMKC – Information Security Assessment		Reporting	Information Technology
UMSL – Information Security Assessment		Reporting	Information Technology
MUHC – No Surprises Act	Assessment of compliance with the No Surprises Act.	Reporting	Compliance

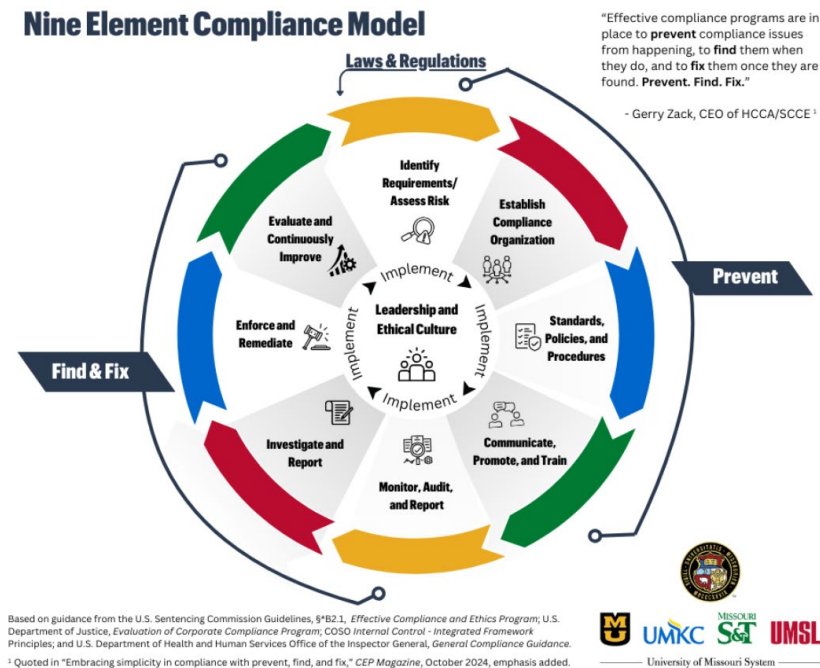
<b>Audit Area</b>	<b>Overall Objective</b>	<b>Status</b>	<b>Risk Area(s)</b>
MUHC – Price Transparency	Assessment of compliance with CMS guidelines surrounding the Hospital Price Transparency Rule.	Reporting	Compliance
UMSL – Export Controls	Assessment of export control processes.	Fieldwork	Compliance
SYS – New Leave Programs	Post-implementation review of the qualifying leave programs (short-term disability; parental leave; caregiver leave).	Fieldwork	Operations
UMKC – Scholarships	Assessment of processes to manage donor funded scholarships.	Planning	Operations
MU – Institutional Review Board	Assessment of processes and controls in place, specifically for clinical trials	Planning	Compliance

In addition, since September, 16 investigations have been completed and 5 are currently in progress.

## ETHICS AND COMPLIANCE

### Compliance Foundations

Over the past few months, the UM System Compliance Program foundations compliance model, introduced to last year, was pilot tested and has been introduced and discussed with a variety of stakeholders at all UM System Institutions. This model has been communicated to all Chancellors via Board Reports and will be distributed to compliance leaders at each institution, accompanied by a booklet entitled, *Implementing Effective Compliance Programs: Basic Guidance and Tools for Compliance Leaders in the University of Missouri System*. Our hope is that this guide will be a resource to leaders with responsibilities over high-risk compliance programs. While progress has been made, continued engagement with stakeholders will help ensure broader adoption.



The table below summarizes accomplishments since June 2024 related to building out the elements of effective compliance programs, including work in high-risk areas related to the above compliance model.

Leadership and Ethical Culture		
Socialize compliance program model to leadership at all levels; get buy-in		In Process
Identify Requirements and Assess Risk		

Pilot testing nine element compliance model in export controls	Completed
Conduct GAP analysis of Clery programs at all four campuses	In Process
Develop and implement sanctions risk assessment	In Process
<b>Establish Compliance Organization</b>	
Develop and implement a compliance program CRR	In Process
Compliance program governance and/or oversight structure	In Process
<b>Standards, Policies, and Procedures<sup>1</sup></b>	
Foreign Gift and Contract Reporting Procedures	Completed
CHIPS and Sciences Act Foreign Income Reporting Procedures	In Process
Unpaid Appointments Policy and Procedures, formerly known as Courtesy Appointments (to include research security concerns)	In Process
Assist with the Covered Component Designation	Completed
Assist with the development of Clery Policy and associated procedures	In Process
Fraud Policy	Not Started
Non-retaliation Policy	Not Started
Any other policy/procedure gaps or revisions required because of gap analysis work and/or work with the General Counsel in establishing a compliance policy framework	Ongoing
<b>Communicate, Promote, and Train</b>	
Assist in the development of materials for export controls and researcher specific trainings	In Process
FY 25 Newly Developed Electronic Data Protection Training	Completed
Code of Conduct annual training	Ongoing
Visiting scholars and disclosure requirements awareness and	Not Started

<sup>1</sup> Working with business owners to facilitate

training	
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<b>Monitor, Audit, and Report</b>	
Assist with the implementation of the Research Security Program	Ongoing
Monitor training completion for Sanctions Compliance	Not Started
<b>Investigate and Report</b>	
As errors are detected, compliance will continue to work collaboratively with other subject matter experts to investigate, address, conduct a root cause analysis, and determine how best to reduce the possibility of future occurrences.	Ongoing
<b>Enforce and Remediate</b>	
As errors are detected, compliance will continue to work collaboratively with other subject matter experts to investigate, address, conduct a root cause analysis, and determine how best to reduce the possibility of future occurrences.	Ongoing
<b>Evaluate and Continuously Improve</b>	
Evaluate compliance program framework and align to Federal Sentencing Guidelines, DOJ guidance, and other best practice frameworks	Ongoing

### **Compliance High-Risk Area Support**

One of the important roles of compliance is assisting and facilitating when new laws or regulations are put into effect, especially in high-risk areas. Compliance also helps stand up new programs and helps programs continuously improve. The table below summarizes areas where compliance has focused its efforts to support or continue to support high-risk areas since June 2024.

### **UM System Compliance Plan Focus Areas**

<b>Compliance Area</b>	<b>FY2025</b>	<b>Status</b>
Research Security and Compliance (Export Controls and Sanctions)	Complete compliance program review of export controls and sanctions (started in FY2024).	Completed. Based on results, management chose to reorganize this function. Most management actions related to the reorganization are complete; the remainder will be completed by July 2025.



Clery Act	<ul style="list-style-type: none"> <li>- Clery Act GAP analysis</li> <li>- Identify and address gaps in identification, notification, and training of Campus Security Authorities</li> </ul>	<ul style="list-style-type: none"> <li>- Clery gap analysis completed at UMKC. Gap analysis at other institutions in currently in progress.</li> <li>- Achieved a 97.5% completion rate for Campus Security Authority training by year-end, demonstrating strong progress in compliance and training participation.</li> </ul>
Youth Protection Program (YPP)	<ul style="list-style-type: none"> <li>- Complete mid-year reports</li> <li>- Update and enhance the program</li> </ul>	Mid-year reports have been published, showing a notable increase in overall compliance with key policy requirements, including training, background checks, and supervision ratios. As of September 2024, the overall compliance score was 3.80 out of 4.0 up from the calendar year 2023 overall score of 3.37.
Covered Component (HIPAA)	Draft and finalize covered component designation Assist in development of compliance lifecycle for covered component security and privacy program between MUHC and UM.	Completed.
Code of Conduct	<ul style="list-style-type: none"> <li>- Annual training with attestation (ongoing)</li> <li>- Awareness campaign</li> </ul>	Reporting Concerns and general Code of Conduct campaigns are progressing with all materials developed for the next phase. Distribution is set to begin in February 2025 which will focus on faculty and staff, graduate students, and MU Health Care audiences.
Section 117 and CHIPS	<ul style="list-style-type: none"> <li>- Publish Section 117 Foreign Income Reporting Policy</li> <li>- Implement relevant policies</li> </ul>	<ul style="list-style-type: none"> <li>- Finalized policy updates and initiated socialization efforts across the System.</li> <li>- Collaborating with each campus to identify areas for</li> </ul>

		improvement and implementing necessary changes
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## **PRIVACY**

### **Preventive Privacy Work**

Ad hoc consultation on various engagements is a significant part of the services provided by the Privacy team. This service has been highly beneficial in ensuring that new contracts, software purchases, policies, and emerging focuses, such as AI governance, are considered from a privacy perspective. In FY24, the Privacy team completed 24 engagements. Based on current requests at this mid-point in the fiscal year, we anticipate at least a 28% increase in engagements in FY25.

#### **Engagements Summary FY25 (as of 1/3/25)**

Type	Engagements
New Venture	5
Software	8
Process/Policy	2
Prevention/Remediation	3
<b>Total</b>	<b>18</b>

### **Health Insurance Portability and Accountability Act (HIPAA):**

#### **Covered Component Designations**

The Privacy team, in collaboration with Compliance, General Counsel, and MUHC stakeholders, has recently completed a review of the various entities within the University of Missouri System. The purpose was to determine if they function as covered components under HIPAA and are therefore subject to its regulations. This review, essential for HIPAA compliance, was last completed in 2014. A complete list of those covered components is now available on the system website.

### **Consent Management**

Thus far in FY25, the Privacy team has focused largely on implementing consent management for our website visitors. Consent management is a staple in the privacy industry and can significantly impact various outcomes, including the size of a data breach, the cost of cybersecurity insurance, compliance with federal and global law, and our reputation.

We have piloted this initiative with the Missouri S&T Kummer Center and Mizzou, specifically targeting our youth camps. We have developed a privacy policy tailored to our youth populations and their parents, increasing transparency regarding the data we collect and their rights in that data collection. Additionally, we have created a privacy banner that will be displayed to visitors on these sites, referencing the new policy.

Our next step is to add functionality that will allow users to choose the types of information they share, change their sharing preferences, and exercise their right to be forgotten. We are also preparing our main websites, in collaboration with the Strategic Communications and Digital Services offices on the four campuses, for full implementation in early FY26.

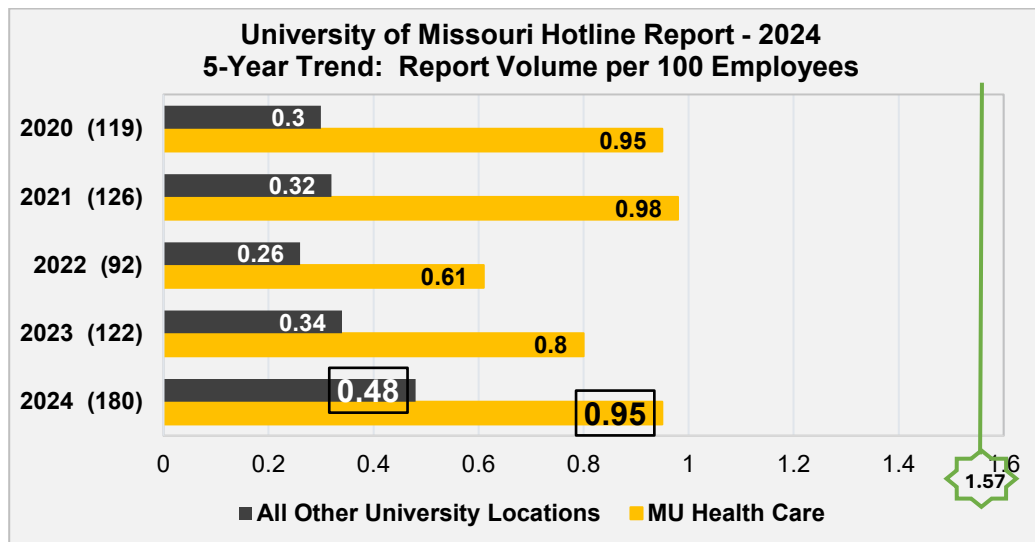
## University of Missouri System Reporting Hotline Annual Report 2024

This annual report incorporates information from the UM System Integrity & Accountability hotline and mail/email reports received and forwarded to the hotline process by System administration. The hotline received 180 reports in the calendar year 2024, a 40% increase in reports over last year. On 12/31/24, 167 reports (93%) had been resolved and closed, and investigation outcomes were still pending for 13 reports.

Analyzing and benchmarking hotline data helps an organization better understand its culture, the effectiveness of employee communications, the quality of investigations, and employee awareness of reporting channels. This report compares data collected through the UM System case management platform with key data benchmarks and trends from the Navex Global database of reports and outcomes, providing context for evaluating program performance and maturation. (The most recent benchmarks available are for 2023; 2024 data will be published in April 2025). To provide a better understanding of university program history and performance, we have included five years of data to illustrate trends. The 2024 results in this report reflect outcomes for cases closed as of 12/31/24, which may change as pending cases are resolved.

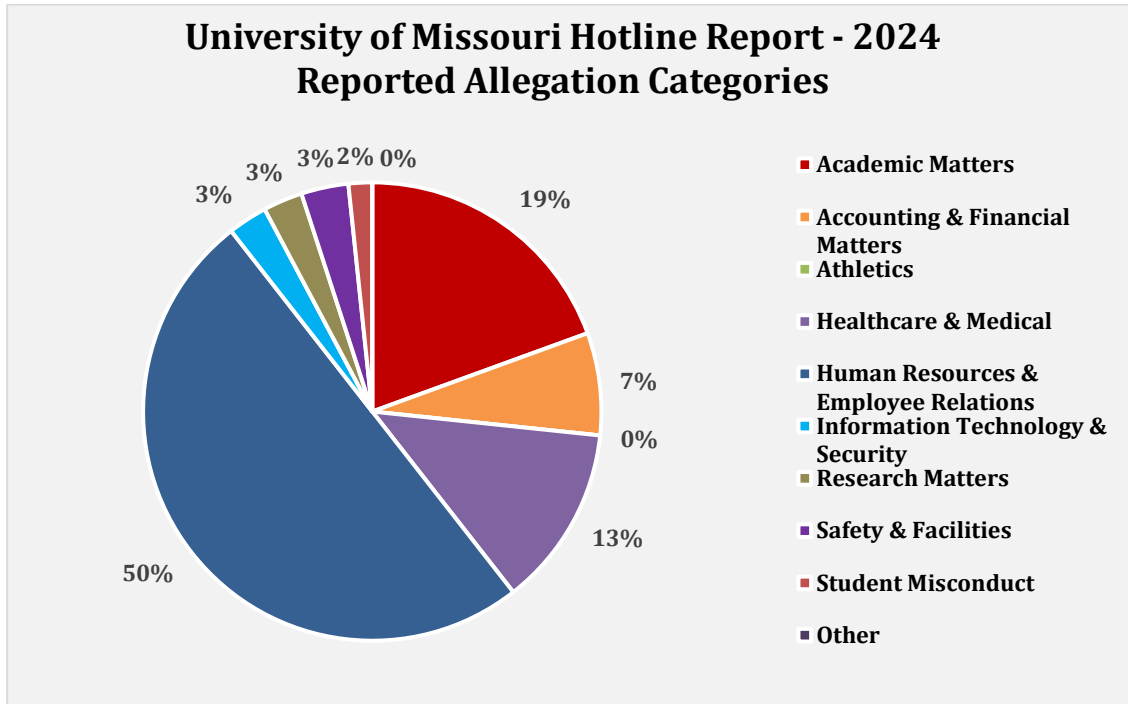
### Report Volume per 100 Employees

This metric enables organizations to compare total numbers of unique reporter contacts. The benchmark for this metric increased last year from 1.47 to 1.57 reports per 100 employees. MU Health Care is consistently identified as the location for 40-50% of reports to the hotlines; therefore, results are graphed to demonstrate this breakdown. “All other locations” includes MU, Missouri S&T, UMKC, UMSL and UM System Central Services.

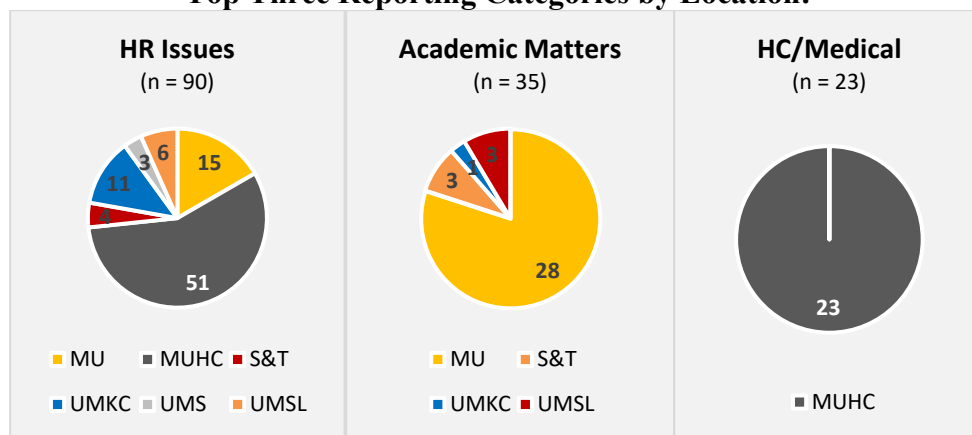


### Reported Allegation Categories

The types of reports an organization receives indicate where resources may be needed and can measure the effectiveness of efforts directed toward previously identified areas of concern. The highest number of reports is consistently HR issues, followed in 2024 by Academic Matters, and HC/Medical. The top three reporting categories together account for 82% of all hotline reports.

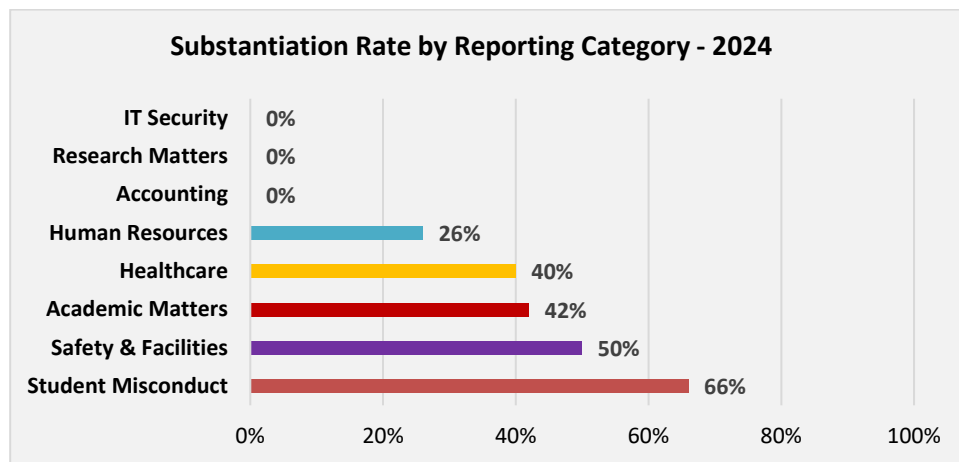
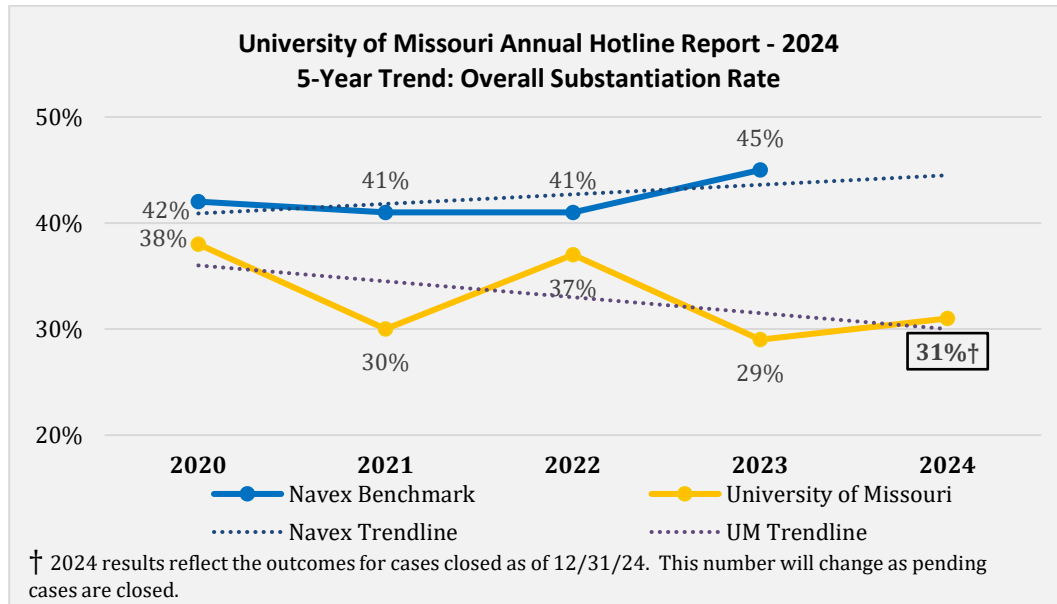


### **Top Three Reporting Categories by Location:**



### Overall Substantiation Rate

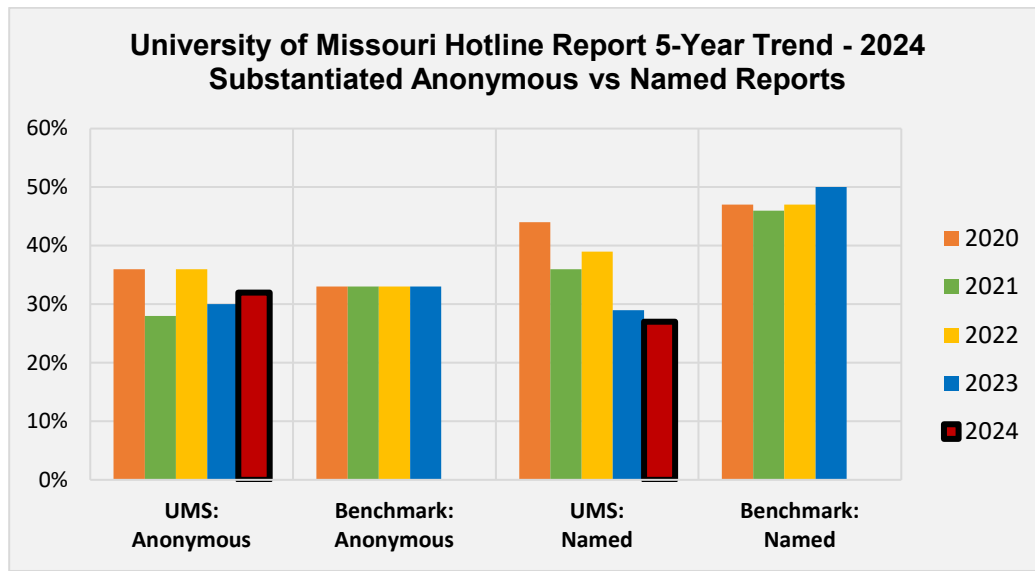
The overall substantiation rate reflects the percentage of allegations that were investigated and either fully or partially confirmed. A high substantiation rate reflects a well-informed employee base that makes high-quality reports, coupled with effective investigation processes. Overall substantiation rates at UM have been trending down, but average 30-35%.



### Substantiation: Anonymous vs. Named Reports

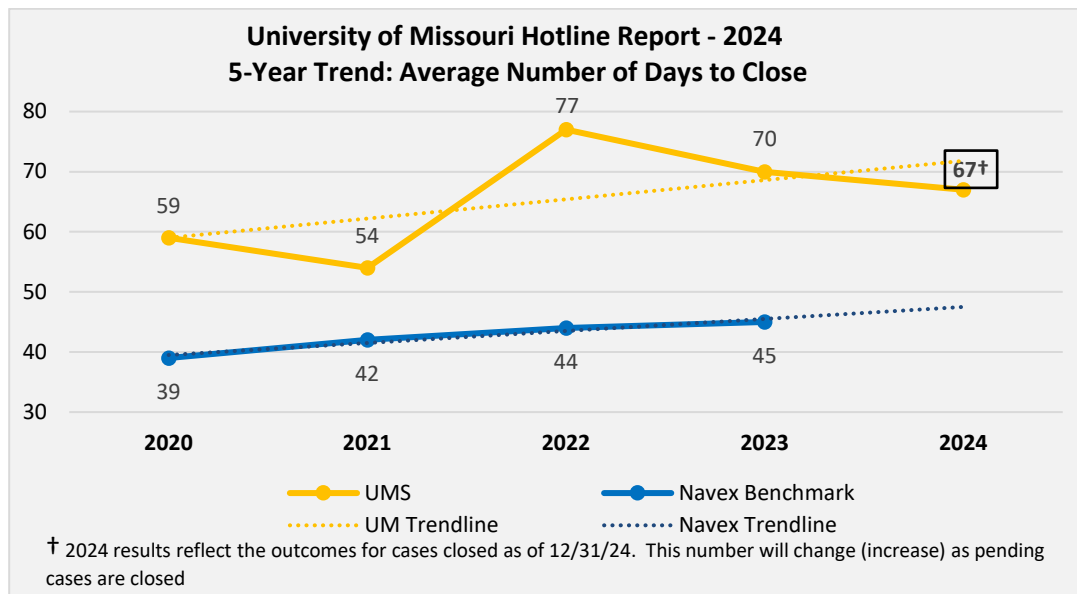
Named reports enable investigators to gather more information directly from reporters, improving effectiveness and potentially increasing substantiation rates. Although anonymous reports may be taken less seriously, they can reveal obscure legal, regulatory, and compliance issues. The ACFE reports that anonymous tips are the most common method for detecting fraud. Promoting anonymous reporting fosters a strong speak-up culture, leading to more reports and deeper insights into organizational risks. Substantiation of anonymous reports in 2024 was 32%, and named reports was 27%.





### Case Closure Time

Case closure time is the number of calendar days to complete an investigation and close the case. Prompt investigations build employee trust. The best-practice average is 30 days, as issues persisting for 40+ days can harm morale, productivity, and culture. Increased trust may lead to more complex reports, requiring additional time and resources. The UM Hotline Committee aims to consider each report individually, allocate appropriate resources, use a standard investigative approach, and resolve matters promptly. Case closure time for reports closed at the end of the calendar year 2024 was 67 days.



## Conclusions and Opportunities for Improvement

### 2024 Highlights

1. On May 11, 2024, transition of the university-wide hotline service to new vendor Ethics Suite was completed. This 6-month conversion included a new reporting website, phone number, QR code reporting, and dissemination of re-branded promotional materials. Hotline reporting was also extended to student workers at all University of Missouri locations, and to Capital Regional Medical Center on January 1, 2024.
2. The volume of hotline reports received in 2024 (n =180) is a 40% increase over the number of reports received in 2023, and at least a 30% increase in reports received in any year since the hotline was implemented at the University (12/2007). We believe awareness of the vendor transition, promotion of the hotline service to student workers, and the launch of the “Reporting Concerns” campaign to supervisors in September 2024 contributed to the increase. Despite an increase in report volume, 93% of all reports received in 2024 were closed by the end of the calendar year. The number of days to close and substantiation rates remained steady but were generally lower than benchmarks in 2024.
3. Report volumes per 100 employees increased for all university locations and the health system for the third year in a row. Despite increases, however, report volumes continue to be low for an organization of our size. Reporting volume would need to increase by nearly 100% from 2024 volumes for the university to approach the benchmark for this statistic.

- [www.EthicsSuite.com/UMSHotline](http://www.EthicsSuite.com/UMSHotline)
- 884-469-6383



### 2025 Focus

- UM Office of Compliance will continue promoting the Code of Conduct and a speak-up culture via the “Reporting Concerns” campaign, which includes:
  - The importance of speaking up and reporting concerns
  - Examples of concerns to report
  - The important details to report so an investigation can be conducted
  - Different ways and resources for reporting concerns
- The next phase of the Reporting Concerns campaign in 2025 will focus on faculty and staff, graduate students, and MU Health Care audiences.
- UM Central Investigations will continue to assist and advise investigative partners across the University, with the goals of improving processes and decreasing days to close reports.

# Forvis Mazars Report to the Board of Curators, Audit Committee, and Management

University of Missouri System

Results of the 2024 Financial Statement Audit, Including Required Communications

June 30, 2024

## Required Communications Regarding Our Audit Strategy & Approach (AU-C 260)

### Overview & Responsibilities

Matter	Discussion
Scope of Our Audit	<p>This report covers audit results related to your financial statements of the business-type activities, the discretely presented component unit, and the fiduciary activities:</p> <ul style="list-style-type: none"><li>• As of and for the year ended June 30, 2024.</li><li>• Conducted in accordance with our contract dated April 16, 2024.</li></ul>
Our Responsibilities	<p>Forvis Mazars is responsible for forming and expressing an an opinion about whether the financial statements that have been prepared by management, with the oversight of those charged with governance, are prepared in accordance with accounting principles generally accepted in the United States of America (GAAP).</p>
Audit Scope & Inherent Limitations to Reasonable Assurance	<p>An audit performed in accordance with auditing standards generally accepted in the United States of America (GAAS) and <i>Government Auditing Standards</i> issued by the Comptroller General of the United States (GAGAS) is designed to obtain reasonable, rather than absolute, assurance about the financial statements. The scope of our audit tests was established in relation to the opinion unit being audited and did not include a detailed audit of all transactions.</p>
Extent of Our Communication	<p>In addition to areas of interest and noting prior communications made during other phases of the engagement, this report includes communications required in accordance with GAAS that are relevant to the responsibilities of those charged with governance in overseeing the financial reporting process, including audit approach, results, and internal control. The standards do not require the auditor to design procedures for the purpose of identifying other matters to be communicated with those charged with governance.</p>
Independence	<p>The engagement team, others in our firm, as appropriate, and our firm, have complied with all relevant ethical requirements regarding independence.</p>
Your Responsibilities	<p>Our audit does not relieve management or those charged with governance of your responsibilities. Your responsibilities and ours are further referenced in our contract.</p>



Matter	Discussion
<b>Distribution Restriction</b>	<p>This communication is intended solely for the information and use of the following and is not intended to be, and should not be, used by anyone other than these specified parties:</p> <ul style="list-style-type: none"> <li>• Board of Curators, Audit Committee, and Management</li> <li>• Others within the Entity</li> </ul>

## Government Auditing Standards

Matter	Discussion
<b>Additional GAGAS Reporting</b>	<p>We also provided reports as of June 30, 2024, on the following as required by GAGAS:</p> <ul style="list-style-type: none"> <li>• Internal control over financial reporting and on compliance and other matters based on an audit of the financial statements performed in accordance with GAGAS</li> </ul>
<b>Reporting Limitations</b>	<p>Our consideration of internal control over financial reporting and our tests of compliance were not designed with an objective of forming an opinion on the effectiveness of internal control or on compliance, and accordingly, we do not express such an opinion.</p>

## Group Audits

### *Referred-To Auditors*

Our audit strategy included the use of the work of a referred-to auditor, resulting in a division of responsibility over the group financial statements and our report thereon.

We did not audit the financial statements of the Kummer Institute Foundation, the discretely presented component unit.

Those statements were audited by other auditors, whose report has been furnished to us, and our opinion, insofar as it relates to the amounts included for the Kummer Institute Foundation, is based solely on the report of the other auditors. We have had communications with the other auditors during planning and throughout the audit regarding their qualifications to perform the audit, including independence, and consideration of materiality as a basis for referring to their audit report. Professional standards require that we provide you with information about our responsibilities in accordance with GAAS, as well as certain information related to the planned scope and timing of our audit.

## Other Information Accompanying the Audited Financial Statements

The audited financial statements are presented along with management's annual report. Management, or those charged with governance, is responsible for preparing the annual report.

We were not engaged to audit the introductory and statistical sections contained in the annual report, and as a result, our opinion does not provide assurance as to the completeness and accuracy of the information contained therein.

As part of our procedures, we read the entire report to determine if financial information discussed in sections outside the financial statements materially contradicts the audited financial statements. If we identify any such matters, we bring them to management's attention and review subsequent revisions.

## Auditor Objectives Related to Other Information

Our objectives related to the other information accompanying the audited financial statements were to:

- Consider whether a material inconsistency exists between the other information and the financial statements

- Remain alert for indications that:
  - A material inconsistency exists between the other information and the auditor's knowledge obtained in the audit, or
  - A material misstatement of fact exists or the other information is otherwise misleading
- Respond appropriately when we identify that such material inconsistencies appear to exist or when we otherwise become aware that other information appears to be materially misstated. Potential responsive actions would include requesting management to correct the identified inconsistency
- Include the appropriate communication in our auditor's report, disclosing the procedures performed on the Other Information, as well as the results obtained

## Qualitative Aspects of Significant Accounting Policies & Practices

### Significant Accounting Policies

Significant accounting policies are described in Note 1 of the audited financial statements.

With respect to new accounting standards adopted during the year, we call to your attention the following topics detailed in the following pages:

- Management adopted a number of GASBs that did not have a material impact on the System's financial statements. Those adoptions include:
  - GASB No. 93, *Replacement of Interbank Offered Rates*
  - GASB No. 99, *Omnibus 2022*
  - GASB No. 100, *Accounting Changes and Error Corrections*

### Unusual Policies or Methods

With respect to significant unusual accounting policies or accounting methods used for significant unusual transactions (significant transactions outside the normal course of business or that otherwise appear to be unusual due to their timing, size, or nature), we noted the following:

- No matters are reportable

### Alternative Accounting Treatments

We had discussions with management regarding alternative accounting treatments within GAAP for policies and practices for material items, including recognition, measurement, and disclosure considerations related to the accounting for specific transactions as well as general accounting policies, as follows:

- No matters are reportable

### Management Judgments & Accounting Estimates

Accounting estimates are an integral part of financial statement preparation by management, based on its judgments. Significant areas of such estimates for which we are prepared to discuss management's estimation process and our procedures for testing the reasonableness of those estimates include:

- Allowance for Uncollectable Accounts - Management's estimate for the allowance is based on historical collection, contributor mix and anticipated trends.

- Valuation of Investment Securities - Management values investments at fair value as of the statement of net position date. Accounting standards define fair value as the price that would be received to sell a financial asset in an orderly transaction between market participants at the measurement date. Investments are valued using quoted market prices or third-party sources, including appraisers and valuation specialists, when available.
- Defined Benefit Pension and Other Postemployment Benefit Plan Assumptions - Management has recorded a liability for its defined pension plan and other postemployment benefit plan. The liability is based on the actuarial present value of future expected benefits and is based on inputs provided by management, including expected future earnings on plan assets and discount rates as well as past history of the plans.
- Amounts Due from Third-Party Payors (Third-Party Reimbursement) - Net operating revenues include management's estimates of amounts to be reimbursed by third parties. Amounts received for patient billings are generally less than amounts billed. The difference between what is billed and expected to be received is recorded through contractual adjustments. Management's process of estimating amounts to be received from third parties requires estimation based on payor classification, historical data and payor contract provisions. Estimates of third-party reimbursements also include management assumptions about uncertainties in health care reform, payor mix and state of the economy.
- Accrual for Malpractice Claims, General Liability Claims, Health Claims and Workers' Compensation Claims - These liability claims are based on estimates of known claims and estimates for incurred but not reported claims. Management estimates the liability based on specific claims facts, historical claim reporting and actuarial assumptions.

## Financial Statement Disclosures

The following areas involve particularly sensitive financial statement disclosures for which we are prepared to discuss the issues involved and related judgments made in formulating those disclosures:

- Fair value of assets and liabilities
- Retirement, disability and death benefit plan
- Other postretirement benefits

## Our Judgment About the Quality of the Entity's Accounting Principles

During the course of the audit, we made the following observations regarding the Entity's application of accounting principles:

- No matters are reportable

## Adjustments Identified by Audit

During the course of any audit, an auditor may propose adjustments to financial statement amounts. Management evaluates our proposals and records those adjustments that, in its judgment, are required to prevent the financial statements from being materially misstated.

A misstatement is a difference between the amount, classification, presentation, or disclosure of a reported financial statement item and that which is required for the item to be presented fairly in accordance with the applicable financial reporting framework.

## Proposed & Recorded Adjustments

Auditor-proposed and management-recorded entries include the following:

- No matters are reportable

## Uncorrected Misstatements

Some adjustments proposed were **not recorded** because their effect is not currently considered material. We request that all identified misstatements be corrected.

Uncorrected misstatements that were determined by management to be immaterial, both individually and in the aggregate, but more than trivial to the financial statements as a whole are included as an attachment to this communication.

While these uncorrected misstatements were deemed to be immaterial to the current-period financial statements, it is possible that the impact of these uncorrected misstatements, or matters underlying these uncorrected misstatements, could potentially cause future-period financial statements to be materially misstated.

### ***Current-Period Uncorrected Misstatements***

- See Attachments for a summary of uncorrected misstatements we aggregated during the current engagement and pertaining to the latest period presented that were determined by management to be immaterial, both individually and in the aggregate, to the financial statements as a whole.

## Other Required Communications

### **Other Material Communications**

Listed below are other material communications between management and us related to the audit:

- Management representation letter (see Attachments)

We orally communicated to management other deficiencies in internal control identified during our audit that are not considered material weaknesses or significant deficiencies.



## Attachments

### **Management Representation Letter (Attachment A)**

As a material communication with management, included herein is a copy of the representation letter provided by management at the conclusion of our engagement.

### **Schedule of Uncorrected Misstatements (Attachment B)**

The detail of uncorrected misstatements identified as a result of our engagement are included herein.



## Attachment A

# Management Representation Letter



University of Missouri System

*Representation of:*

University of Missouri System  
c/o Mr. Ryan Rapp, Vice President  
for Finance and Chief Financial Officer  
University of Missouri System  
118 University Hall  
Columbia, MO 65211

*Provided to:*

**Forvis Mazars, LLP**  
Certified Public Accountants  
1201 Walnut Street, Suite 1700  
Kansas City, MO 64106

The undersigned ("We") are providing this letter in connection with Forvis Mazars' audits of our financial statements as of and for the years ended June 30, 2024 and 2023.

Our representations are current and effective as of the date of Forvis Mazars' report: October 18, 2024.

Our engagement with Forvis Mazars is based on our contract for services dated: April 16, 2024.

### **Our Responsibility & Consideration of Material Matters**

We confirm that we are responsible for the fair presentation of the financial statements subject to Forvis Mazars' report in conformity with accounting principles generally accepted in the United States of America.

We are also responsible for adopting sound accounting policies; establishing and maintaining effective internal control over financial reporting, operations, and compliance; and preventing and detecting fraud.

Certain representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of size, if they involve an omission or misstatement of accounting information that, in light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement. An omission or misstatement that is monetarily small in amount could be considered material as a result of qualitative factors.

### **Confirmation of Matters Specific to the Subject Matter of Forvis Mazars' Report**

We confirm, to the best of our knowledge and belief, the following:

***Broad Matters***

1. We have fulfilled our responsibilities, as set out in the terms of our contract, for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America.
2. We acknowledge our responsibility for the design, implementation, and maintenance of:
  - a. Internal control relevant to the preparation and fair presentation of the financial statements that are free from material misstatement, whether due to fraud or error.
  - b. Internal control to prevent and detect fraud.

3. We have provided you with:
  - a. Access to all information of which we are aware that is relevant to the preparation and fair presentation of the financial statements, such as financial records and related data, documentation, and other matters.
  - b. Additional information that you have requested from us for the purpose of the audit.
  - c. Unrestricted access to persons within the entity from whom you determined it necessary to obtain audit evidence.
  - d. All minutes of the governing body meetings held through the date of this letter or summaries of actions of recent meetings for which minutes have not yet been prepared. All unsigned copies of minutes provided to you are copies of our original minutes approved by the board, if applicable, and maintained as part of our records.
  - e. All significant contracts and grants.
4. We have responded fully and truthfully to all your inquiries.

***Government Auditing Standards***

5. We acknowledge that we are responsible for compliance with applicable laws, regulations, and provisions of contracts and grant agreements.
6. We have identified and disclosed to you all laws, regulations, and provisions of contracts and grant agreements that have a direct and material effect on the determination of amounts in our financial statements or other financial data significant to the audit objectives.
7. We have identified and disclosed to you any violations or possible violations of laws, regulations, and provisions of contracts and grant agreements, tax or debt limits, and any related debt covenants whose effects should be considered for recognition and/or disclosure in the financial statements or for your reporting on noncompliance.
8. We have taken or will take timely and appropriate steps to remedy any fraud, abuse, illegal acts, or violations of provisions of contracts or grant agreements that you or other auditors report.
9. We have a process to track the status of audit findings and recommendations.
10. We have identified to you any previous financial audits, attestation engagements, performance audits, or other studies related to the objectives of your audit and the corrective actions taken to address any significant findings and recommendations made in such audits, attestation engagements, or other studies.

***Federal Awards Programs (Uniform Guidance)***

11. We have identified in the schedule of expenditures of federal awards all assistance provided (either directly or passed through other entities) by federal agencies in the form of grants, contracts, loans, loan guarantees, property, cooperative agreements, interest subsidies, commodities, insurance, direct appropriations, or in any other form.
12. We have disclosed to you all contracts or other agreements with service organizations, and we have disclosed to you all communications from the service organizations relating to noncompliance at the service organizations.

13. We have reconciled the schedule of expenditures of federal awards (SEFA) to the financial statements.
14. Federal awards-related revenues and expenditures are fairly presented, both in form and content, in accordance with the applicable criteria in the University of Missouri System's (the System) financial statements.

***Misappropriation, Misstatements, & Fraud***

15. We have informed you of all current risks of a material amount that are not adequately prevented or detected by our procedures with respect to:
  - a. Misappropriation of assets.
  - b. Misrepresented or misstated assets, deferred outflows of resources, liabilities, deferred inflows of resources, or net position.
16. We have no knowledge of fraud or suspected fraud affecting the System involving:
  - a. Management or employees who have significant roles in internal control over financial reporting, or
  - b. Others when the fraud could have a material effect on the financial statements.
17. We understand that the term "fraud" includes misstatements arising from fraudulent financial reporting and misstatements arising from misappropriation of assets. Misstatements arising from fraudulent financial reporting are intentional misstatements, or omissions of amounts or disclosures in financial statements to deceive financial statement users. Misstatements arising from misappropriation of assets involve the theft of an entity's assets where the effect of the theft causes the financial statements not to be presented in conformity with accounting principles generally accepted in the United States of America.
18. We have no knowledge of any allegations of fraud or suspected fraud affecting the System received in communications from employees, former employees, customers, analysts, SEC or other regulators, short-sellers, suppliers, or others.
19. We have assessed the risk that the financial statements may be materially misstated as a result of fraud and disclosed to you any such risk identified.

***Ongoing Operations***

20. We acknowledge the current economic volatility presents difficult circumstances and challenges for our industry. Entities are potentially facing declines in the fair values of investments and other assets, declines in the volume of business, constraints on liquidity, difficulty obtaining financing or bonding, significant credit quality problems, etc. We understand the values of the assets and liabilities recorded in the financial statements could change rapidly, resulting in material future adjustments to asset values, allowances for accounts and notes or receivable, capital, etc., that could negatively impact the System's ability to meet debt covenants or maintain sufficient liquidity.

We acknowledge that you have no responsibility for future changes caused by the current economic environment and the resulting impact on the System's financial statements. Further, management and governance are solely responsible for all aspects of managing the System, including questioning the quality and valuation of investments, inventory, and other assets; evaluating assumptions regarding defined benefit pension plan obligations, reviewing allowances for uncollectible amounts; or loan losses evaluating capital needs and liquidity plans.

### ***Related Parties***

21. We have disclosed to you the identity of all of the System's related parties and all the related-party relationships of which we are aware.

In addition, we have disclosed to you all related-party transactions and amounts receivable from or payable to related parties of which we are aware, including any modifications during the year that were made to related-party transaction agreements which existed prior to the beginning of the year under audit, as well as new related-party transaction agreements that were executed during the year under audit.

Related-party relationships and transactions have been appropriately accounted for and disclosed in accordance with accounting principles generally accepted in the United States of America.

22. We understand that the term related party refers to:

- Affiliates
- Trusts for the benefits of employees, such as pension and profit-sharing trusts that are managed by or under the trusteeship of management
- Those charged with governance and members of their immediate families
- Management and members of their immediate families
- Any other party with which the System may deal if one party can significantly influence the management or operating policies of the other to an extent that one of the transacting parties might be prevented from fully pursuing its own separate interests.

Another party is also a related party if it can significantly influence the management or operating policies of the transacting parties or if it has an ownership interest in one of the transacting parties and can significantly influence the other to an extent that one or more of the transacting parties might be prevented from fully pursuing its own separate interests.

The term affiliate refers to a party that directly or indirectly controls, or is controlled by, or is under common control with, the System.

### ***Litigation, Laws, Rulings & Regulations***

23. We have disclosed to you all known actual or possible litigation and claims whose effects should be considered when preparing the financial statements. The effects of all known actual or possible litigation and claims have been accounted for and disclosed in accordance with accounting principles generally accepted in the United States of America.
24. We have no knowledge of communications, other than those specifically disclosed, from regulatory agencies, governmental representatives, employees, or others concerning investigations or allegations of noncompliance with laws and regulations, deficiencies in financial reporting practices, or other matters that could have a material adverse effect on the financial statements.

25. We have disclosed to you all known instances of violations or noncompliance or possible violations or suspected noncompliance with laws and regulations whose effects should be considered when preparing financial statements or as a basis for recording a loss contingency.
26. We have no reason to believe the System owes any penalties or payments under the Employer Shared Responsibility Provisions of the *Patient Protection and Affordable Care Act*, nor have we received any correspondence from the IRS or other agencies indicating such payments may be due.
27. We have not been designated as a potentially responsible party (PRP or equivalent status) by the Environmental Protection Agency (EPA) or other cognizant regulatory agency with authority to enforce environmental laws and regulations.

#### **Nonattest Services**

28. You have provided nonattest services, including the following, during the period of this engagement:
  - Preparing a draft of the financial statements and related notes for University of Missouri Saint Louis project cost audits
  - Preparing the Form 990 for Capital Regions Medical Center
  - Completing the cost report and medicaid filing for Capital Regions Medical Center
29. With respect to these services:
  - a. We have designated a qualified management-level individual to be responsible and accountable for overseeing the nonattest services.
  - b. We have established and monitored the performance of the nonattest services to ensure they meet our objectives.
  - c. We have made any and all decisions involving management functions with respect to the nonattest services and accept full responsibility for such decisions.
  - d. We have evaluated the adequacy of the services performed and any findings that resulted.
  - e. We have established and maintained internal controls, including monitoring ongoing activities.
  - f. When we receive final deliverables from you, we will store those deliverables in information systems controlled by us. We have taken responsibility for maintaining internal control over these deliverables.

#### **Transactions, Records, & Adjustments**

30. All transactions have been recorded in the accounting records and are reflected in the financial statements.
31. We have everything we need to keep our books and records.
32. We have disclosed any significant unusual transactions the System has entered into during the period, including the nature, terms, and business purpose of those transactions.
33. We are in agreement with the adjusting journal entries you have proposed, and they have been posted to the entity's accounts.



34. We believe the effects of the uncorrected financial statement misstatements and omitted disclosures summarized in the attached schedule and aggregated by you during the current engagement are immaterial, both individually and in the aggregate, to the financial statements taken as a whole.

***Healthcare Matters***

35. We have provided you with all peer review organizations, administrative contractor, and third- party payer reports and information.
36. We have informed you of all pending or completed investigations by regulatory authorities of which we are aware. There are no known circumstances that could jeopardize the entity's participation in the Medicare or other governmental healthcare programs.
37. Adequate provisions and allowances have been accrued for any material losses from Medicare/Medicaid and other third-party payer contractual, audit, or other adjustments.
38. With respect to the entity's possible exposure to past or future medical malpractice assertions:
- a. We have disclosed to you all incidents known to us that could possibly give rise to an assertion of malpractice.
  - b. All known incidents have been reported to our actuarial consultants and are appropriately considered in our malpractice liability accrual. Any claims that should be reported to our excess liability carrier have been reported.
  - c. There is no known lapse in coverage, including any lapse subsequent to the fiscal year- end, that would result in any known incidents being uninsured above our customary self- insured retention amounts.
  - d. Management does not expect any claims to exceed any applicable excess policy malpractice insurance limits.
  - e. We believe our accruals for uninsured malpractice claims are sufficient for all known and any probable potential claims.
  - f. We have reviewed the assumptions used by our actuarial consultant to estimate our self- insured accrual and believe those assumptions are appropriate.
39. Billings to third-party payers comply in all material respects with applicable coding guidelines, laws, and regulations. Billings reflect only charges for goods and services that were medically necessary; properly approved by regulatory bodies, if required; and properly rendered.
40. With regard to cost reports filed with Medicare, Medicaid, or other third parties:
- a. All required reports have been properly filed.
  - b. Management is responsible for the accuracy and propriety of those reports.
  - c. All costs reflected on such reports are appropriate and allowable under applicable reimbursement rules and regulations and are patient-related and properly allocated to applicable payers.
  - d. The reimbursement methodologies and principles employed are in accordance with applicable rules and regulations.

- e. All items required to be disclosed, including disputed costs that are being claimed to establish a basis for a subsequent appeal, have been fully disclosed in the cost report.
  - f. Recorded third-party settlements include differences between filed (and to be filed) cost reports and calculated settlements, which are necessary based upon historical experience or new or ambiguous regulations that may be subject to differing interpretations. While management believes the entity is entitled to all the amounts claimed on the cost reports, management also believes the amounts of these differences are appropriate.
41. With respect to the entity's possible exposure to past or future workers' compensation assertions:
- a. We have disclosed to you all incidents known to us that could possibly give rise to workers' compensation assertion.
  - b. All known incidents have been reported to the appropriate workers' compensation insurer.
  - c. There is no known lapse in coverage, including any lapse subsequent to the fiscal year- end, that would result in any known incidents being uninsured.
  - d. Management does not expect any claims to exceed workers' compensation insurance limits.
42. There are no instances of noncompliance with laws or regulations with respect to Medicare and Medicaid antifraud and abuse statutes, in any jurisdiction, whose effects we believe should be considered for disclosure in the financial statements or as a basis for recording a loss contingency, other than those disclosed or accrued in the financial statements. This is including, but not limited to, the Anti-Kickback statute of the *Medicare and Medicaid Patient and Program Protection Act of 1987*, limitations on certain physician referrals (the Stark law), and the *False Claims Act*.
43. With regard to the payments received from the Provider Relief Fund established by the CARES Act, we represent the following:
- a. To the extent revenue has been recognized, we believe we have met the eligibility requirements as outlined in the U.S. Department of Health and Human Services' (HHS) terms and conditions for the Provider Relief Fund.
  - b. We believe the method we have utilized to recognize revenue associated with the Provider Relief Fund is consistent with acceptable methods outlined in HHS' terms and conditions and other guidance available as of September 30, 2022.
  - c. Consistent with the terms and conditions established by HHS and other guidance available as of September 30, 2022, Provider Relief Fund payments were not used to reimburse expenses or losses that have been reimbursed or are obligated to be reimbursed by other sources, including payments from insurance and/or patients and amounts received from federal, state, or local governments.
  - d. We acknowledge that HHS may issue new guidance that could have a material impact on the amount of revenue recognized from the Provider Relief Fund as of September 30, 2022.
  - e. We understand that amounts recognized on the Schedule of Expenditures of Federal Awards may differ from amounts recognized on the financial statements.

### ***Governmental Accounting & Disclosure Matters***

44. Interfund, internal, and intra-entity activity and balances have been appropriately classified and reported.
45. With regard to deposit and investment activities:
  - a. All deposit, repurchase and reverse repurchase agreements, and investment transactions have been made in accordance with legal and contractual requirements.
  - b. Investments and derivative instrument transactions are properly valued.
  - c. Disclosures of deposit and investment balances and risks in the financial statements are consistent with our understanding of the applicable laws regarding enforceability of any pledges of collateral.
  - d. We understand that your audit does not represent an opinion regarding the enforceability of any collateral pledges.
46. The financial statements include all component units.
47. We have identified and evaluated all potential fiduciary activities. The financial statements include all fiduciary activities required by GASB Statement No. 84, *Fiduciary Activities*, as amended.
48. Components of net position (net investment in capital assets, restricted, and unrestricted).
49. Capital assets, including infrastructure and intangible assets, are properly capitalized, reported, and, if applicable, depreciated or amortized.
50. We have appropriately disclosed the System's policy regarding whether to first apply restricted or unrestricted resources when an expense is incurred for purposes for which both restricted and unrestricted net position is available and have determined that net position is properly recognized under the policy.
51. The System has properly separated information in debt disclosures related to direct borrowings and direct placements of debt from other debt and disclosed any unused lines of credit, collateral pledged to secure debt, terms in debt agreements related to significant default or termination events with finance-related consequences, and significant subjective acceleration clauses in accordance with GASB Statement No. 88.
52. We have identified and evaluated all potential tax abatements, and we believe there are no material tax abatements.
53. The System's ability to continue as a going concern was evaluated and that appropriate disclosures are made in the financial statements as necessary under GASB requirements.
54. The supplementary information required by the Governmental Accounting Standards Board, consisting of management's discussion and analysis, pension, and other postemployment benefit information), has been prepared and is measured and presented in conformity with the applicable GASB pronouncements, and we acknowledge our responsibility for the information. The information contained therein is based on all facts, decisions, and conditions currently known to us and is measured using the same methods and assumptions as were used in the preparation of the financial statements. We believe the significant assumptions underlying the

measurement and/or presentation of the information are reasonable and appropriate. There has been no change from the preceding period in the methods of measurement and presentation.

55. With regard to pension and other postretirement benefits (OPEB):

- a. We believe the actuarial assumptions and methods used to measure pension and OPEB liabilities and costs for financial accounting purposes are appropriate in the circumstances.
- b. We have provided you with the System's most current pension and OPEB plan instrument for the audit period, including all plan amendments.
- c. The participant data provided to you related to pension and OPEB plans are true copies of the data submitted or electronically transmitted to the plan's actuary.
- d. The participant data that we provided the plan's actuary for the purposes of determining the actuarial present value of accumulated plan benefits and other actuarially determined amounts in the financial statements were complete.

**General Government Matters**

- 56. Expenses have been appropriately classified in the statement of activities, and allocations have been made on a reasonable basis.
- 57. Revenues are appropriately classified in the statement of activities within operating revenues, nonoperating revenues, contributions to term or permanent endowments.
- 58. We have exercised due care in the preparation of the statistical sections included in our annual financial report and are not aware of any information contained therein that is inconsistent with the information contained in our basic financial statements.

**Accounting & Disclosure**

- 59. All transactions entered into by the System are final. We are not aware of any unrecorded transactions, side agreements or other arrangements (either written or oral) that are in place.
- 60. Except as reflected in the financial statements, there are no:
  - a. Plans or intentions that may materially affect carrying values or classifications of assets, deferred outflows of resources, liabilities, deferred inflows of resources, or net position.
  - b. Material transactions omitted or improperly recorded in the financial records.
  - c. Material unasserted claims or assessments that are probable of assertion or other gain/loss contingencies requiring accrual or disclosure, including those arising from environmental remediation obligations.
  - d. Events occurring subsequent to the statement of net position date through the date of this letter, which is the date the financial statements were available to be issued, requiring adjustment or disclosure in the financial statements.
  - e. Agreements to purchase assets previously sold.

- f. Arrangements with financial institutions involving compensating balances or other arrangements involving restrictions on cash balances, lines of credit, or similar arrangements.
- g. Guarantees, whether written or oral, under which the System is contingently liable.
- h. Known or anticipated asset retirement obligations.
- i. Supplier finance arrangements.

61. Except as disclosed in the financial statements, the System has:

- a. Satisfactory title to all recorded assets, and those assets are not subject to any liens, pledges, or other encumbrances.
- b. Complied with all aspects of contractual agreements, for which noncompliance would materially affect the financial statements.

***Revenue, Accounts Receivable, & Inventory***

62. Adequate provisions and allowances have been accrued for any material losses from:

- a. Uncollectible receivables.
- b. Excess or obsolete inventories.
- c. Service commitments, including those unable to be fulfilled.
- d. Purchase commitments in excess of normal requirements or at prices in excess of prevailing market prices.

***Estimates***

- 63. We have identified all accounting estimates that could be material to the financial statements and we confirm the appropriateness of the methods and the consistency in their application, the accuracy and completeness of data, and the reasonableness of significant assumptions used by us in making the accounting estimates, including those measured at fair value reported in the financial statements.
- 64. Significant estimates that may be subject to a material change in the near term have been properly disclosed in the financial statements. We understand that “near term” means the period within one year of the date of the financial statements. In addition, we have no knowledge of concentrations, which refer to volumes of business, revenues, available sources of supply, or markets, existing at the date of the financial statements that would make the System vulnerable to the risk of severe impact in the near term that have not been properly disclosed in the financial statements.

***Fair Value***

- 65. With respect to the fair value measurements of financial and nonfinancial assets and liabilities, if any, recognized in the financial statements or disclosed in the notes thereto:
  - a. The underlying assumptions are reasonable and they appropriately reflect management’s intent and ability to carry out its stated course of action.

- b. The measurement methods and significant assumptions used in determining fair value are appropriate in the circumstances for financial statement measurement and disclosure purposes and have been consistently applied.
- c. The significant assumptions appropriately reflect market participant assumptions.
- d. The disclosures related to fair values are complete, adequate, and in conformity with U.S. GAAP.
- e. There are no subsequent events that require adjustments to the fair value measurements and disclosures included in the financial statements.



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Dr. Mun Y. Choi, President of University of Missouri System  
and Chancellor of University of Missouri



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Ryan D. Rapp, Vice President of Finance and Chief Financial Officer

Attachment:

Schedule of Uncorrected Misstatements and Omitted Disclosures



## **Attachment B**

### **Schedule of Uncorrected Misstatements**



# University of Missouri System

Period Ending: June 30, 2024

## ATTACHMENT

This analysis and the attached "Schedule of Uncorrected Misstatements (Adjustments Passed)" reflect the effects on the financial statements if the uncorrected misstatements identified were corrected.

### QUANTITATIVE AND QUALITATIVE ANALYSIS

	Before Misstatements	Misstatements	Subsequent to Misstatements	% Change
Current Assets	1,559,657	6,595	1,566,252	0.42%
Non-Current Assets	9,391,523	(1,175)	9,390,348	-0.01%
Current Liabilities	(799,678)	(14,795)	(814,473)	1.85%
Non-Current Liabilities	(2,896,361)	0	(2,896,361)	0.00%
Current Ratio	1.95		1.92	-1.38%
Total Assets	10,951,180	5,420	10,956,600	0.05%
Total Liabilities	(3,696,039)	(14,795)	(3,710,834)	0.40%
Restricted Net Position	(4,964,716)	4,596	(4,960,120)	-0.09%
Unrestricted Net Position	(2,290,425)	4,779	(2,285,646)	-0.21%
Total Net Assets	(7,255,141)	9,375	(7,245,766)	-0.13%
Total Revenue	(5,534,239)	(1,023)	(5,535,262)	0.02%
Total Expense	4,740,401	(2,699)	4,737,702	-0.06%
Change in Net Position	(793,838)	(3,722)	(797,560)	0.47%

Impact on Change in Net Posit	(3,722)
Impact on Restricted Net Posit	9,375