NEW LEADERSHIP

Neil Outar
Interim Chief Diversity Officer
August 2017

Dr. Richard Wlezien
Vice Provost & Dean, College of Engineering and Computing
August 2017

Cuba Plain
Interim Vice Chancellor, Finance and Operations
September 2017
NEW LEADERSHIP

NEW CHAIRS FOR FALL 2017

Dr. David Borrok
Geosciences, Geological & Petroleum Engineering

Dr. David Duvernell
Biological Sciences

Dr. George Markowsky
Computer Science
Update on Transitions – Effectiveness Driven

- ~9% Budget reduction from State for UM System
- Vice Chancellor for Research & Dean of Graduate Studies
  - Search under way
  - Will report to chancellor and provost
- CDO departments
  - Student diversity, outreach and women’s programs (SDOWP) renamed Student Diversity Initiatives
  - Equity and inclusion programs named Equity and Title IX
- Eliminated 36 vacant & 15 occupied staff positions
HOW WE RANK

PayScale
- #24 (In-State) Best Value Colleges in Missouri [ROI type: 20-yr net]
- #34 (Out-of-State) Best Value Colleges in Missouri [ROI type: 20-yr net]
- #8 (In-State) Best Value Colleges [ROI type: Annual %]
- #9 (In-State) Best Value Colleges [ROI type: Annual % - with financial aid]
- #83 (Out-of-State) Best Value Colleges [ROI type: Annual %]

USAToday/College Factual
- #3 Best University for Engineering, for the fourth consecutive year in 2017
- #3 Best University for Veterans Studying Engineering
- #5 Best Value for Civil Engineering
- #5 Best Value for Mechanical Engineering
- #8 Best Investment for Engineering Degrees in 2017
HOW WE RANK

U.S. News & World Report
The Top Schools - #89 Schools of Engineering (Graduate); #61 (Undergraduate)
Best Colleges Rankings - #77 Top Public Schools
Best Online Programs - #72 Best Online MBA Rankings
Best Online Programs - #9 Best Online Graduate Engineering
Best Online Programs - #22 Best Online Graduate Business (Excluding MBA)
Best Online Programs - #8 Best Online Graduate Computer Information Technology

Princeton Review
Top 50 - Colleges That Pay You Back - #37
Colleges That Pay You Back Without Aid - #21

Forbes
#21 in the Midwest
#41 in Public Colleges
#73 in Research Universities
#123 in America's Best Value Colleges
Fall 2017 Enrollment

6,920 Undergraduates

1,964 Graduates

8,884 Total  +0.5%
Steady Enrollment

<table>
<thead>
<tr>
<th>Year</th>
<th>Graduates</th>
<th>Undergraduates</th>
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<tbody>
<tr>
<td>2011</td>
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<td>2012</td>
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<td>2017</td>
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Fall 2017 Enrollment

- 1,929 Grad Students 2016
- 1,964 Grad Students 2017
- 1.8% Increase
STeady Enrollment

Fall 2017 Enrollment
1,426 New Freshmen
1,482 Fall 2016
(3.8%) Decrease
ENROLLMENT TRENDS

Fall 2017 Enrollment

8.1% URM 2015
8.4% URM 2016
8.6% URM 2017

Fall 2017 Enrollment

28.1 ACT 2016
28.0 ACT 2017
3.79 GPA 2016
3.88 GPA 2017

Fall 2017 Enrollment

32.6% Out-of-state 2015
29.2% Out-of-state 2016
27.7% Out-of-state 2017
Overall Challenges and Opportunities for Improvement

- 20% observed exclusionary conduct within the last year at Missouri S&T
- 18% personally experienced exclusionary conduct within the last year at Missouri S&T
- Only 31% of Faculty respondents felt Missouri S&T provided adequate resources to help them manage work-life balance
- 69% of Faculty and 54% of Staff respondents seriously considered leaving Missouri S&T
Overall Strengths and Successes

83% of Student and Faculty respondents were comfortable with the classroom climate

86% of Staff respondents felt that supervisors provided adequate support for them to manage work-life balance

75% of respondents were comfortable with the overall campus climate

85% of Graduate Student respondents were satisfied with the quality of advising they have received from their departments
BECOMING A NATIONAL LEADER

Advanced Construction and Materials Laboratory

Missouri S&T, UM System to fund project through gifts & university funds
S&T Legislative Priorities

> UM System priority:
  - University of Missouri System core funding

> S&T campus priorities:
  - Graduate engineering degree programs in North Kansas City ($1M)
  - Mechanical engineering partnership with Missouri State University in Springfield ($1M)
  - Expansion of Project Lead The Way ($400,000) to the state’s poorest school districts in southern Missouri

> S&T capital priority:
  - Biosciences Complex (Phase 3), including Bertelsmeyer Hall and Schrenk Hall ($54M)
BUILDING ON SUCCESS

Biosciences Complex

Phase I: James E. Bertelsmeyer Hall
$22.3M—100% S&T + donors
Opened Fall 2014

Schrenk Hall upgrade
(Phases II & III)

- Phase II: $20M
  ($12M State; $8M S&T)
- Phase III: $54M request (~56% total project cost)
FY2017 – a record-breaking year at Missouri S&T for technology transfer

- $540,396 received in royalty income (>2X 2013)
- $187,998 in royalties paid to inventors and authors
- $121,177 in royalty income returned to S&T departments (~ $25,000 more than 2016)
- 47 new invention disclosures, including five software disclosures
FOCUS ON FACULTY & RESEARCH STAFF SUCCESS

Research, Teaching, and Service

- Graduate student and post-doctoral support
- Appropriate facilities and equipment
- Streamlined processes, but safeguards
- Recognition, advocacy, and telling the story in RTS
- Support for the non-RTS functions
- Increased faculty and staff diversity
- Clear compensation strategy for faculty and staff
2017 NEW FACULTY

Areas of expertise and research include:

- American Revolution
- Asphalt applications
- Astronautical engineering
- Comparative politics
- Computer networks
- Complex electricity markets
- Computational mathematics
- Cybersecurity
- Environmental economics
- Isotopic and environmental geochemistry
- Genetics
- Hydraulic fracturing
- Industrial organization
- Infrastructure sustainability
- International relations in high-tech sectors
- Irradiation effects in materials
- Modeling electromagnetic fields
- Music history
- Neural networks
- Partial differential equations from fluid dynamics
- Petroleum engineering
- Piezoelectric nanomaterials
- Plasma dynamics
- Power system planning
- Smart buildings
- Smart transportation
- Social & political theory
- Transportation engineering
- Ultra-high temperature materials
- Wireless and sensor networks
New faculty come from these universities:
FACULTY AWARDS & RECOGNITION

Dr. Ma named American Chemical Society Fellow

Dr. Bachman receives Leavey Award for Excellence in Private Enterprise Education

Dr. Ferguson named Royal Society of Arts Fellow

Dr. Medvedeva leading $1.6M NSF grant on amorphous materials

Dr. Yang leading $2.1M NSF grant on Permian extinction
College of Arts, Sciences, and Business

> $800,000 NSF grant on energy management in smart homes
  Dr. Denise Baker

> $100,000 NEH grant for Latin American studies
  Dr. Kathryn Dolan
  Dr. Kathryn Northcut
  Dr. Kathleen Sheppard
  Dr. Jorge Porcel
FACULTY AWARDS & RECOGNITION

College of Engineering and Computing

> NSF CAREER Awards
  - Dr. Jie Gao, optical metasurfaces
  - Dr. Ed Kinzel, scaling metasurface manufacturing
  - Dr. Xiaodong Yang, optical metasurfaces research
  - Dr. Caizhi Zhou, metallic composites

> ONR Young Investigator
  Dr. Xiaodong Yang
STATE & NATIONAL TRENDS

- Decrease in State Support
  - ~9% this year
  - Likely more each year for the next several years

- Tuition Cap
  - Particularly problematic when coupled with decreasing state support

- Increased Competition for Excellent Students, Faculty, & Staff
  - Especially prevalent for out-of-state students & underrepresented groups

- Changing Demographics
  - High-school graduation generally flattening
  - High-school diversity generally increasing

- Changing Demands for Degrees, Certificates, & Locations
  - Increasing emphasis on post-graduate degrees and certificates
  - Students increasingly want degrees & certificates to come to them (jobs too!)

- Cost/Benefit of Attending College
  - Loans and student debt increasing
  - More students with credits in hand (dual enrollment, transfer credits, etc.)
  - Increasing disparity between haves and have-nots
Missouri Compact for Education, Research, Engagement and Economic Development

- **Excellence in Student Success**
  - Experiential learning focus (18 student design teams, internships, co-ops, study abroad, service learning/research); employer satisfaction; student services

- **Excellence in Research and Creative Works**
  - Unique labs and facilities, productive faculty & staff, record year in IP

- **Excellent Community Engagement & Economic Development**
  - Project Lead The Way for Missouri, UTCs, local businesses

- **Inclusive Excellence**
  - Climate Survey (full report at climatesurvey.mst.edu); celebration of nations

- **Excellence in Planning, Operations, & Stewardship**
  - Geothermal project (reduced deferred maintenance by $60 million, saves $1.2 million/year in reduced energy costs); ahead in strategic planning
THE S&T EXPERIENCE: GENUINE CRITICAL THINKING

Missouri S&T Mars Rover Design Team
Winners of the 2017 University Rover Challenge
S&T SUCCESS BEGINS NOW WITH EACH OF US!

TEAMWORK

Coming together is a beginning. Keeping together is progress. Working together is success.

Henry Ford
THANK YOU! QUESTIONS?