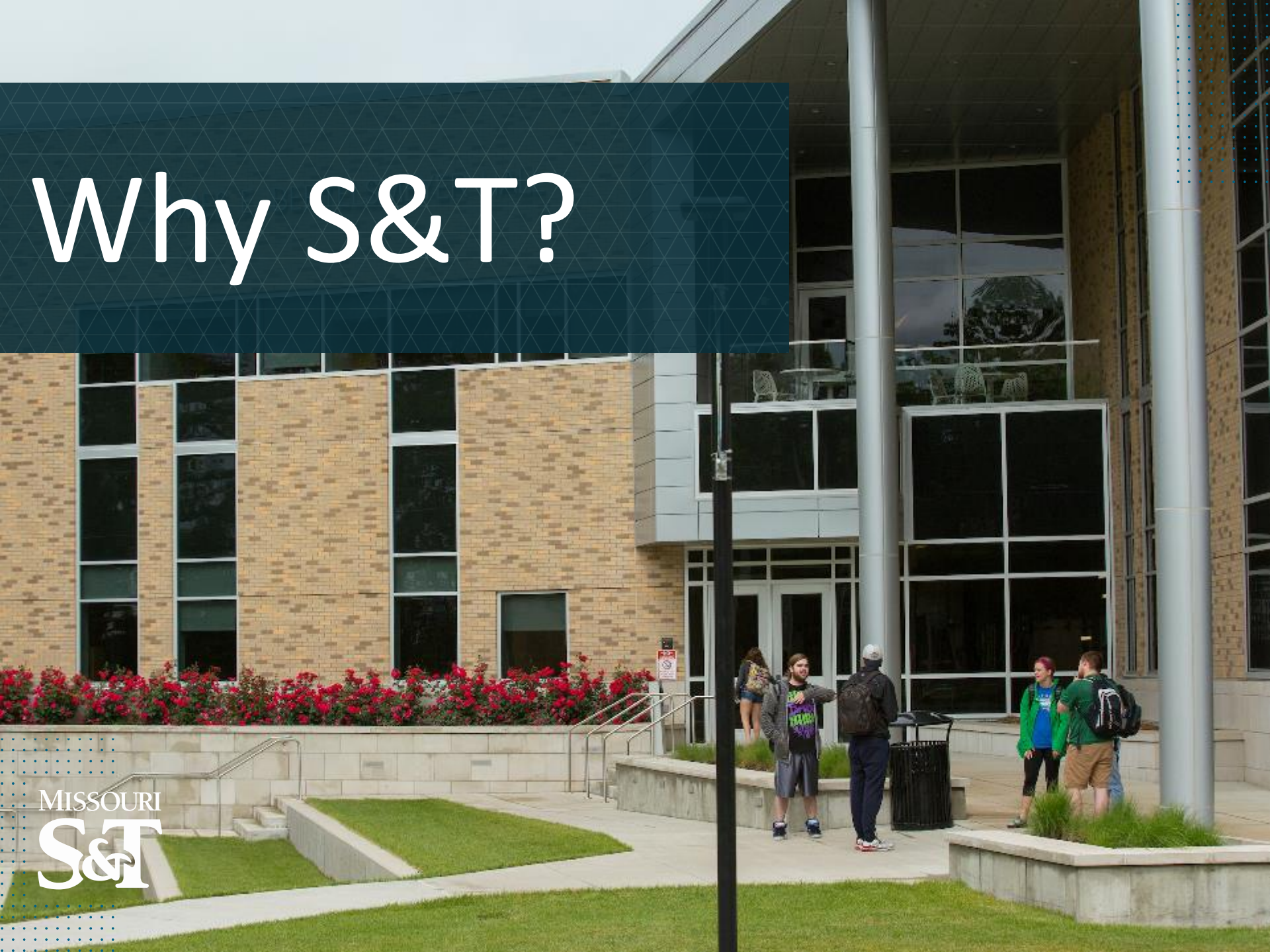


Graduate School at Missouri S&T



Why S&T?

MISSOURI
S&T



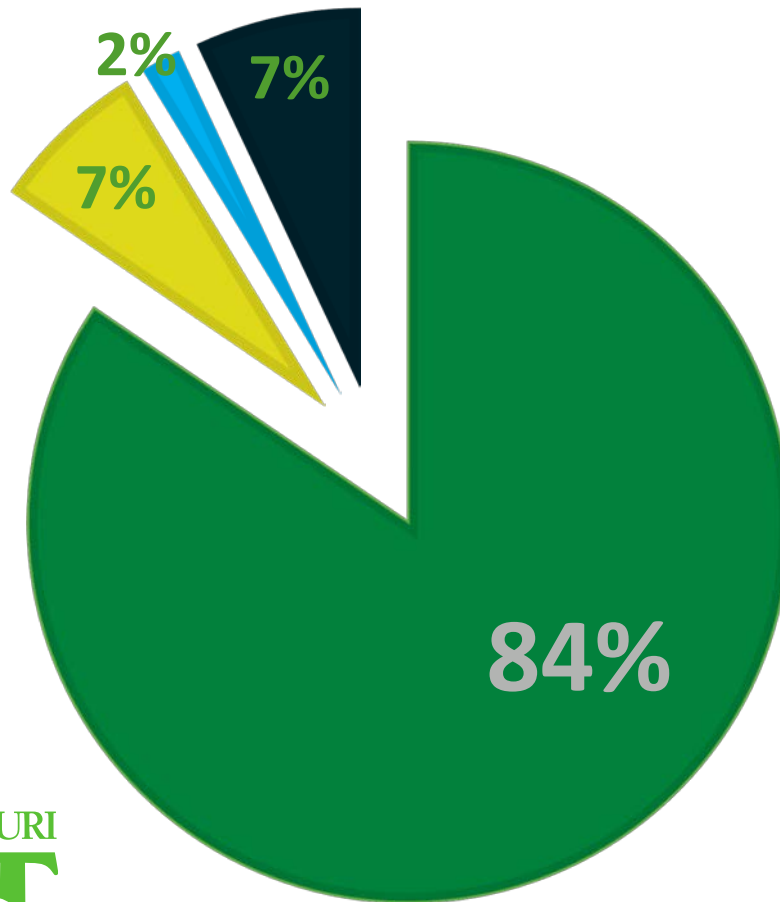
A Premier Technological Research University

Mission:

- > Missouri S&T integrates education, research and application to create and convey knowledge that serves our state and helps solve the worlds greatest challenges.

Grad Student Population

91% Science, Technology, Engineering & Math (STEM)



■ Engineering & Computing

■ Business & IST

■ Arts & Social Sciences

■ Math & Science

ACCREDITATION

- > NCAHLC university wide accreditation
- > ABET accredited engineering programs
- > AACSB accredited programs in Business Administration and Information Science and Technology
- > Intensive English Program accredited by CEA



ONE OF AMERICA'S GREAT UNIVERSITIES

- > No. 3 Engineering College
- > (USA Today, 2019; College Factual, 2018)
- > No. 6 university in the nation for annual return on investment (Payscale.com, April 2018)
- > No. 15 public college with the highest-earning graduates (Forbes, August 2017)
- > Number 18 "best schools for internships" (Princeton Review, 2018)
- > Number 24 top STEM college (Forbes, August 2017)

Excellent Faculty Scholarship

- > 350 faculty members
- > 900+ publications per year
- > 6.000+ citations per year
- > 30+ patents per year
- > \$50.000.000 research funding
- > 100+ PhD graduates
- > 500 MS graduates
- > 450 certificate graduates

Outstanding Chinese Professors at S&T (48)

- > Materials Science and Engineering (3)
- > Engineering Management (2)
- > Chemical Engineering (1)
- > Nuclear and Mining Engineering (2)
- > Psychological Science (1)
- > Chemistry (3)
- > Biological Sciences (1)
- > Mathematics and Statistics (6)
- > Business and Information Technology (4)

Outstanding Chinese Professors at S&T (48)

- > Civil, Architectural, & Environmental Engineering (10)
- > Electrical and Computer Engineering (4)
- > Geosciences and Geological and Petroleum Engineering (5)
- > Mechanical and Aerospace Engineering (6)

14 executives and 29 scholars out of 367 alumni

366 out of 1,291 alumni (10 yrs) responded to the survey

Executives	
CEO	2
Founder and CEO	1
Owner	4
President	3
Vice President	2
Chief Executive	2
Executives	14

Scholars	
Professor	7
Associate Professor	9
Assistant Professor	10
Research Assistant Professor	2
Adjunct Assistant Professor	1
	29

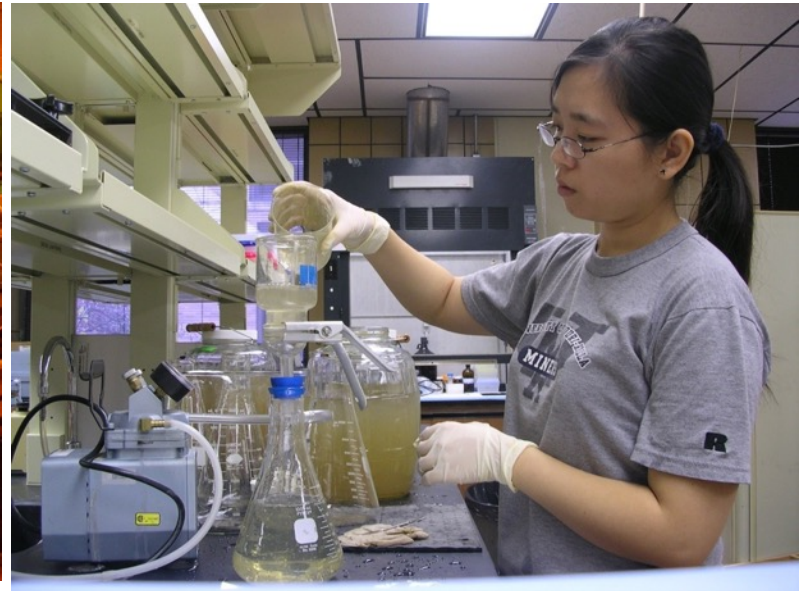
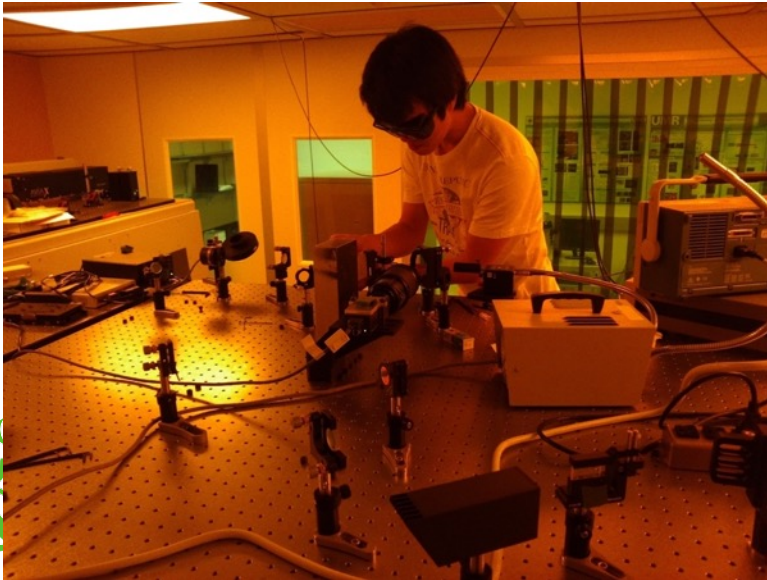
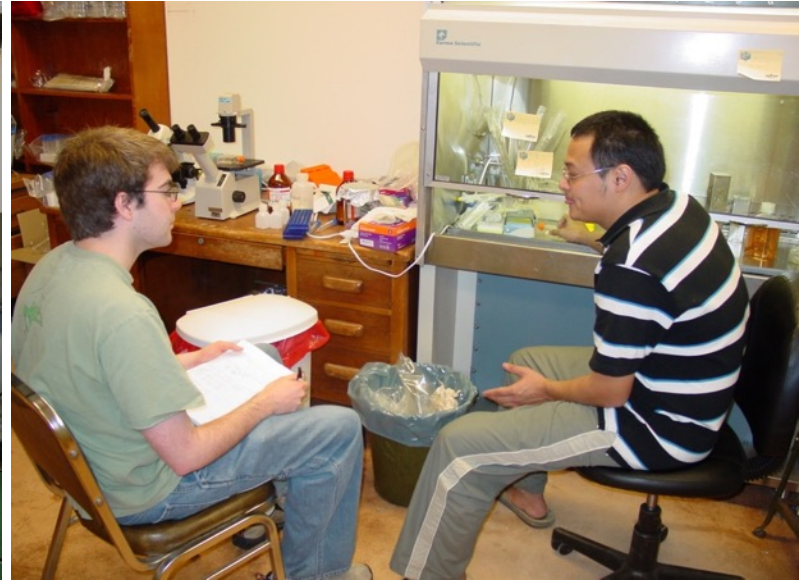
Outstanding Taiwan Professors at S&T (7)

- > Mechanical Engineering (2)
 - Fu-Wen Frank Liou; Ming Leu
- > Chemical Engineering (1)
 - Jee-Ching Wang
- > Biological Sciences (1)
 - Yue-Wern Huang
- > Business and Information Technology (3)
 - Vincent Yu; Bea-Rui Lea; Yu-Hsien Chiu

Vibrant Taiwanese Community in Rolla



Diligent Taiwanese Students



Available Degrees



21 PhD PROGRAMS

Aerospace Engineering
Ceramic Engineering
Chemical Engineering
Chemistry
Civil Engineering
Computer Engineering
Computer Science
Electrical Engineering
Engineering Management
Explosives Engineering
Geological Engineering
Geology and Geophysics
Materials Science & Engineering
Mathematics
Mechanical Engineering
Metallurgical Engineering
Mining Engineering
Nuclear Engineering
Petroleum Engineering
Physics
Systems Engineering



31 MASTER'S PROGRAMS

Aerospace Engineering

Applied & Environmental Biology

Applied Mathematics

Business Administration

Ceramic Engineering

Chemical Engineering

Chemistry*

Civil Engineering

Computer Engineering

Computer Science

Electrical Engineering

Engineering Management

Environmental Engineering

Explosives Engineering

Explosives Technology

Geological Engineering

Geology and Geophysics

Geotechnics

Industrial-Organizational Psychology

Information Science and Technology

Manufacturing Engineering

Materials Science & Engineering

Mathematics*

Mechanical Engineering

Metallurgical Engineering

Mining Engineering

Nuclear Engineering

Petroleum Engineering

Physics*

Systems Engineering

Technical Communication



*Offers an M.S. for Teachers

Outstanding Research

MISSOURI
S&T

SIX CORE RESEARCH STRENGTHS

Electrical & Cyber Systems

Adaptive & Intelligent Systems

Cyber Security

Electro-magnetic Compatibility

Sensors & Sensor Networks

Energy

Advanced Nuclear Reactors

Hydrokinetics

Smart/Micro Grid Technologies

Transportation Fuels

Environment

Atmospheric Particles & Pollutants

Nanoparticle Toxicity

Phyto-technologies

Safe Drinking Water

Civil Infrastructure

Blast Resistant Structures

Geotechnical Engineering

Innovative Construction Technologies

Repair & Rehabilitation of Structures

Manufacturing

Composites Manufacturing

Laser Materials Processing

Machining

Direct Digital Manufacturing

Materials

Biomaterials for Regenerative Medicine

Composites & Steel

Materials for Energy Applications

Materials for Extreme Environments

SIGNATURE RESEARCH AREAS



Advanced Manufacturing



Advanced Materials for Sustainable Infrastructure



Enabling Materials for Extreme Environments



Smart Living

EXAMPLES

1. Smart Living Signature Area:

<https://isc.mst.edu/media/research/isc/documents/Smart%20Living.pdf>

2. Center for Infrastructure Engineering Studies:

<https://cies.mst.edu/media/research/cies/documents/CIES%20Quad%20Charts%20-%20Nov.%202019.pdf#191122012524>

3. Intelligent Systems Center:

[https://isc.mst.edu/media/research/isc/documents/ISC%20Overview%20with%20Members%20and%20Research%20Activities%20update1%20\(3\).pdf#191030044715](https://isc.mst.edu/media/research/isc/documents/ISC%20Overview%20with%20Members%20and%20Research%20Activities%20update1%20(3).pdf#191030044715)

An Example: Advanced Analytical Chemistry in Renovated Laboratories



Chromatography & Mass Spec:

Shimadzu & Varian GC-MS
 Agilent & HP GC
 Perkin-Elmer & Thermo GC
 Agilent & Hitachi HPLC
 Perkin Elmer & Dionex HPLC
 Shimadzu & Dionex UPLC
 AB SCIEX LC-MS/MS
 Varian ICR LC-MS/MS
 Dionex IC-MS, Postnova FFF
 Beckmann & HP CE



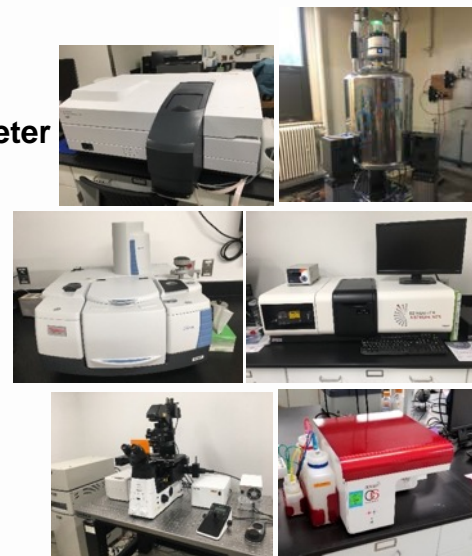
Elemental & Thermal Analyzer:

Perkin Elmer ICP-MS
 TA TGA & DSC
 Exeter CHN analyzer



Spectroscopy:

Bruker 200 & 400 MHz NMR
 Agilent UV/Vis spectrophotometer
 Jasco polarimeter
 Edinburgh spectrofluorometer
 Nicolet FTIR
 X-ray diffractometer
 BD flow cytometer



Imaging:

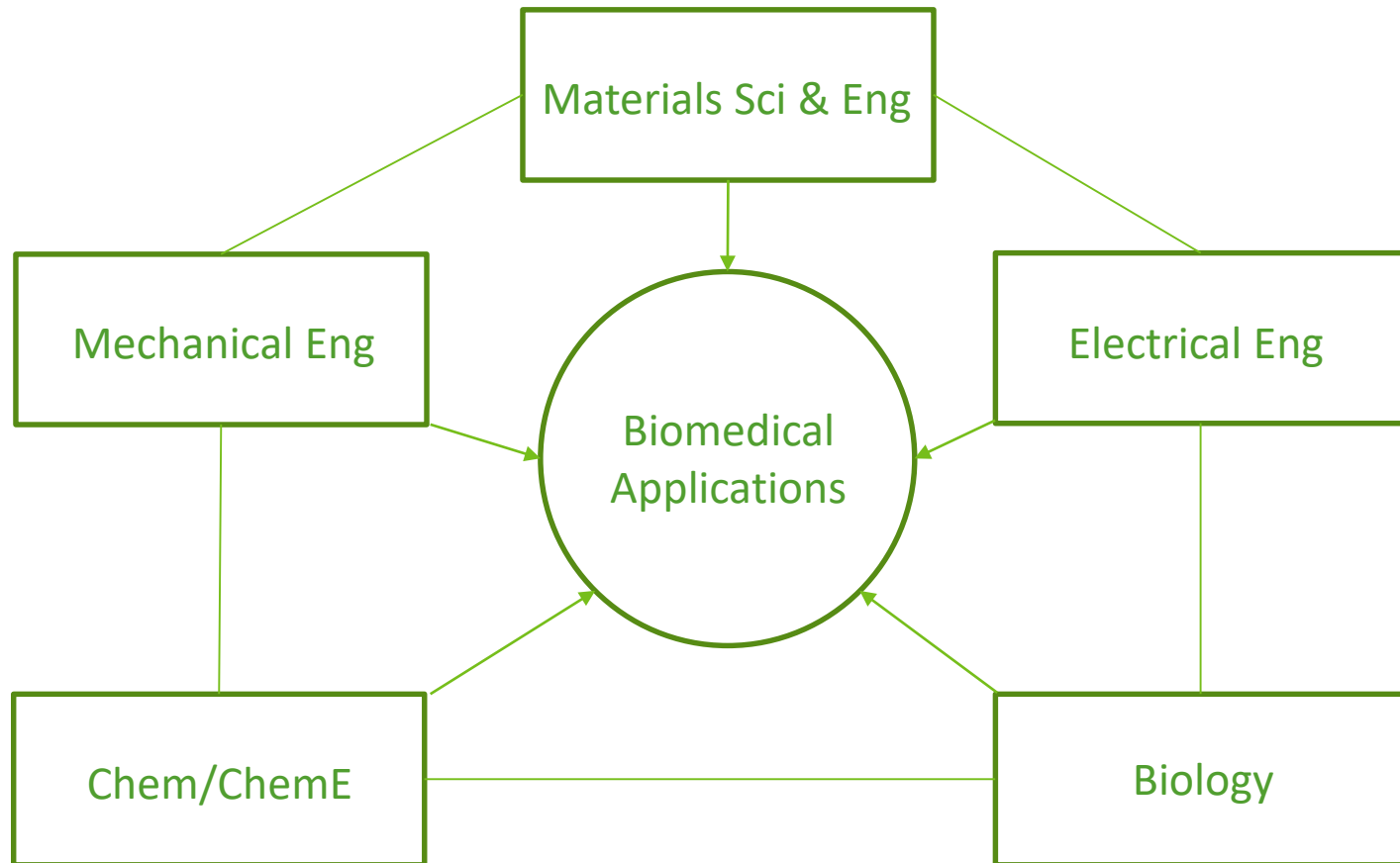
Nikon confocal microscope
 Bruker atomic force microscope



Others:

Autoclaves, Fume & biosafety hoods
 Ultralow freezers, Glove boxes
 Ultrapure water systems, Centrifuges

INTERDISCIPLINARY RESEARCH



RESEARCH CENTERS

State-Supported Centers

- Center for Biomedical Research
- Center for High Performance Computing
- Center for Infrastructure Engineering Studies
- Center for Research in Energy and Environments
- Center for Science, Technology, and Society
- Intelligent Systems Center
- Materials Research Center
- Rock Mechanics and Explosives Research Center

Industrial Consortium

- Center for Aerospace Manufacturing Technologies
- Kent D. Peaslee Steel Manufacturing Research Center
- Microgrid
- Missouri Consortium for Construction Innovation

Externally-Funded Centers

- NSF Industry/University Cooperative Research Centers
 - Center for Electromagnetic Compatibility
- US DOT National University Transportation Center

Highlighted Research Facilities

- Experimental Mine
- Nuclear Reactor
- Materials Research Center
- Eco-village

CAMPUS & COMMUNITY



CAMPUS



STUDENT ACTIVITIES

200+ Student Organizations

- > Council of Graduate Students
- > Intercultural
- > Academic & Departmental
- > Faith Based & Spiritual
- > Honorary & Professional
- > Design Teams
- > Radio & Newspaper
- > Intramural Sports
- > Service & Social



SAFETY

Safety is a top priority at S&T. We offer:

- > Police escorts on campus for after hours travel
- > 22 Emergency Phone locations for immediate police connection
- > Parking and sidewalks are well lit
- > Very low crime rate

Law Enforcement in/around campus:

- > University Police:
 - 12 state-commissioned police officers
 - 6 security guards
 - 9 campus service officers
- > Rolla Police Department
 - 30 police officers and detectives
- > Phelps County Sheriffs Department
 - 28 law enforcement officers
- > Missouri State Highway Patrol – Troop I
 - 67 uniformed officers

Phelps County Population: 44,807

- > Rolla Population: 19,831 (not including students)



EXPLORE ROLLA

- > S&T Student Rec Center
 - Racquet ball courts
 - Intramurals
 - Weight room
 - Exercise equipment
 - Indoor track
 - Fitness classes
- > Rolla area:
 - Tennis courts, basketball courts, soccer/football fields, sand volleyball courts, skateboard park
 - 20+ parks and playgrounds
 - 7.75 miles of trails
- > Kokomo Joe's
 - Miniature golf
 - Go carts
 - Batting cages
 - Golf driving range
- > The Centre
- > Splash Zone (outdoor water park)
- > The Zone
 - Roller skating
 - Laser tag
- > Golf Course
- > Leach Theatre
- > Movie Theatre



EXPLORE MISSOURI



> Did you Know-

- Missouri has many famous individuals that call it home. Here are just a few!
 - Mark Twain - Hannibal, Missouri
 - (Author) Tom Sawyer & Huckleberry Finn
 - Walt Disney - Marceline, Missouri
 - (Animator) Mickey Mouse
 - Edwin Hubble - Marshfield, Missouri
 - (Astronomer, Scientist) Hubble Telescope
- Missouri has over 89 State Parks
 - Mark Twain National Forest borders Rolla
- Missouri is the home of:
 - St. Louis Cardinals Baseball
 - Kansas City Royals Baseball
 - St. Louis Blues Hockey
 - Kansas City Chiefs Football
- Missouri has 14 major museums and many more attractions like theatre, amusement parks, and more!

EXPLORE MISSOURI

Rolla: The Center of Everywhere



> Rolla is:

- 1.5 hours from St. Louis
- 1.5 hours from Springfield
- 1.25 hours from Lake of the Ozarks
- 3.5 hours from Kansas City
- 1 hour from Jefferson City

EXTRAORDINARY SUCCESS



ASTRONAUT ALUMNI



Dr. Sandra Magnus
Physics & Electrical
Engineering



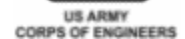
Dr. Janet Kavandi
Chemistry
Director, NASA
Glenn Center



Col. Tom Akers
Applied Math

EMPLOYERS

600+ CORPORATE PARTNERS / HIRING ORGANIZATIONS



CAREER SUCCESS

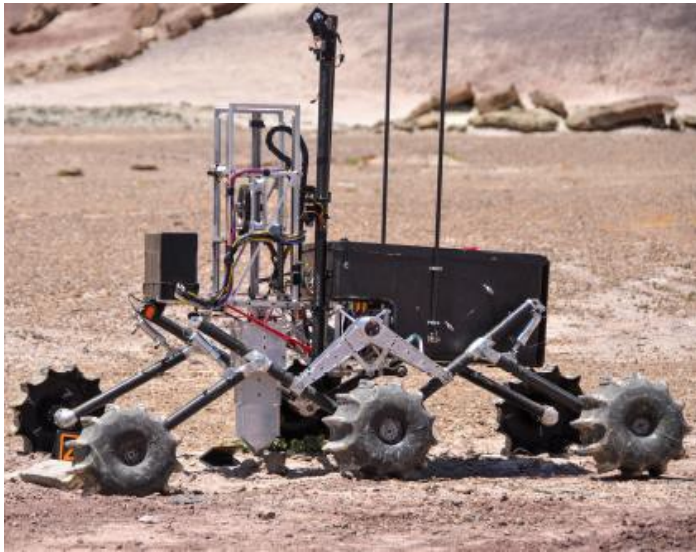
ONE OF THE REGION'S LARGEST CAREER FAIRS

- Average starting salary for graduate students:
 - Master's Students: **\$76,070** avg. annually
 - PhD Students: **\$80,852** avg. annually
- Over 1,020 students completed a co-op or internship for 300+ companies around the world
 - Graduate Co-op: **\$3,975** avg. monthly salary
 - Graduate Intern: **\$3,865** avg. monthly salary
- **82%** of grads have secured firm plans at graduation
- Many top corporations, such as Boeing, Caterpillar, Shell Oil and Toyota list Missouri S&T as a “**top 20 key school**” for finding their future leaders



STUDENT DESIGN

Mars Rover Design Team won second place at the 2018 University Rover Challenge!



STUDENT DESIGN

Solar Car Design Team won fourth place in the American Solar Challenge in 2016!



ADVISING AND EDITING

> Graduate Studies Advising

- Advisors interpret the graduate rules and regulations as listed in the Graduate Catalog
- Format check all thesis/dissertations

> Technical Editing

- Thesis
- Dissertations
- Journal articles
- Conference papers
- More!

OPPORTUNITIES

THREE MINUTE THESIS (3MT®)

- > 3 minutes and 1 slide to present research
- > 3MT® challenges students to present a compelling oration on their thesis or dissertation and its significance in just three minutes, in language appropriate to a non-specialist audience.

OPPORTUNITIES

THESIS/DISSERTATION WRITING CAMP

- > 5 days of writing sessions and workshops
- > Technical Editor available throughout to help with writing



OPPORTUNITIES

WORKSHOPS FOR GRAD STUDENTS

- > Formatting and Submitting Your Thesis/Dissertation
- > Academic Writing Skills for ESL Graduate Students
- > Learning about EndNote
- > Learning about iThenticate
- > Using LaTeX

APPLICATION INSTRUCTIONS

Submit the Following:

> Application

- Access the online application at <http://apply.mst.edu>
- Deadlines:
 - > Fall Semester: July 15
 - > Spring Semester: December 15
 - > Summer Semester: May 1

Institution Codes

GRE and TOEFL are **6876**
GMAT program code is **RWQ-TL-82**

> Transcripts

- Can accept copies of your transcripts for evaluation purposes, but official copies will be required before you enroll.

> GRE or GMAT scores

- Some departments will accept self-submitted GRE/GMAT scores for evaluation purposes, but official scores will be required before you enroll.

> TOEFL or IELTS scores (if applicable)

- Some departments will accept self-submitted TOEFL/IELTS scores for evaluation purposes, but official scores will be required before you enroll.

> Statement of Purpose

> 3 references

- S&T will contact your references for a recommendation letter
- References not needed for non-thesis applications

> Resume

Admission Requirements

MISSOURI S&T IS A SELECTIVE, COMPETITIVE UNIVERSITY THAT IS COMMITTED TO HOLISTIC EVALUATION OF EACH INDIVIDUAL APPLICANT. SUCCESSFUL APPLICANTS WILL HAVE SCORES NEAR THE AVERAGES LISTED BELOW.

Meeting minimum requirements does not guarantee admission



PROGRAM	TOEFL	PTE	IELTS	GRE V	GRE Q	GRE V+Q	GRE WR	GMAT	GPA
Aerospace Engineering	80	53	6.5		155	302	3.5		
Applied & Environmental Biology	79	53	6.5	144	148		4.0		
Ceramic Engineering	80	53	6.5			302	3.5		3.0
Chemical Engineering	79	53	6.5		155	300	4.0		
Chemistry	80	53	6.5		154	300	3.0		
Civil Engineering	80	53	6.5		150	300	3.5		3.0
Computer Engineering	80	53	6.5		155	305	3.5		For MS: BS 3.3 For PhD: BS 3.5 (w/o MS), MS 3.5 (w/MS)
Computer Science	80	53	6.5	144	MS: 155; PhD: 159		4.0		MS: 3.0; PhD: 3.2
Electrical Engineering	80	53	6.5		155	305	3.5		For MS: BS 3.3 For PhD: BS 3.5 (w/o MS), MS 3.5 (w/MS)
Engineering Management	80	53	6.5	155	148		4.0		
Environmental Engineering	80	53	6.5		150	300	3.5		3.0
Explosives Engineering	80	53	6.5						3.0
Geological Engineering	79	53	6.5		150	300	3.0		3.0
Geology/Geophysics	79	53	6.5		150	300	3.0		3.0
Geotechnics	79	53	6.5		150	300	3.0		3.0
Information Science & Tech.	79	53	6.5	144	148		3.5	500	3.0
Industrial Organizational Psychology	88	53	6.5			300			3.0
Manufacturing Engineering	80	53	6.5		157	302	3.5		
Materials Science & Eng.	80	53	6.5			302	3.5		3.0
Mathematics/Statistics	79	53	6.5		155		3.5		
Master of Business Admin.	79	53	6.5			297	3.5	500	3.0
Mechanical Engineering	80	53	6.5		155	302	3.5		
Metallurgical Engineering	80	53	6.5			302	3.5		3.0
Mining Engineering	79	53	6.5		148		3.5		BS to MS: 3.0 MS to PhD: 3.0 BS to PhD: 3.5
Nuclear Engineering	80	53	6.5		150		3.5		
Petroleum Engineering	79	53	6.5		150	300	3.0		3.0
Physics	85 (MS) 88 (PhD)	53	6.5		158		3.0		
Systems Engineering	80	53	6.5	155	148		4.0		
Technical Communication	79	53	6.5						

International Tuition

	MS/MBA (9 Month I-20)	Doctoral (12 Month I-20)
Tuition & Fees	\$28,726	\$33,527
Books, Supplies, Personal Needs, Health Insurance	\$7,979	\$9,457
Housing & Dining	\$7,264	\$9,080
TOTAL	\$43,969	\$52,065

***Students on at least 25% FTE appointment receive in-state tuition rates**

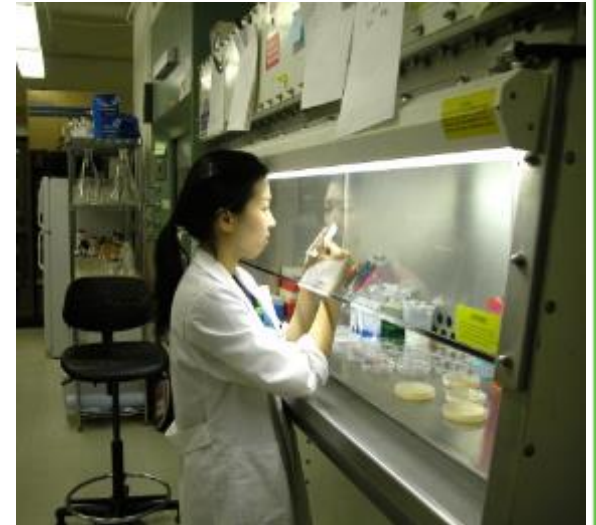
GRADUATE FUNDING

Master's:

- > Approximately 40% of on-campus, eligible Master's students receive various levels of funding

Doctoral:

- > Approximately 90% of on-campus, eligible PhD students receive various levels of funding



GRADUATE FUNDING

- > Fully funded Graduate Research Assistants and Teaching Assistants can receive a stipend ranging from \$18,546 (9 month) to \$24,728 (12 month) **plus** tuition assistance.
- > Partially funded GRA and GTAs typically receive stipends ranging from \$9,273 (9 month, 25% appt) to \$13,909 (9 month, 37.5% appt) **plus** partial tuition assistance

RETURN ON INVESTMENT

- > Undergraduate Degree
 - The average starting salary \$63,892
- > Starting Salaries of our Graduates (examples)

	Masters	Ph.D.
Aerospace Eng.	70,700	98,900
Chem Eng.	79,250	n/a
Comp Sci.	85,857	n/a
Electrical Eng.	80,195	100,000
Eng. Management	97,500	n/a
Explosive Eng.	70,000	85,000
Geological Eng.	68,250	76,306
Mechanical Eng.	72,800	74,531
Mining	64,496	n/a
Materials Sci. & Eng.	76,632	n/a

CONTACT US!

- > **Dr. Costas Tsatsoulis**

Vice Chancellor for Research & Dean for Graduate Studies

- tsatsoulisc@mst.edu

- > **Dr. Yue-Wern Huang**

Professor Biological Sciences & Chair, Institutional Animal Care & Use Committee, Institutional Biosafety Committee & Faculty Fellow, VCRDGS

- huangy@mst.edu

- > **Adrienne Neckermann**

Manager, Graduate Studies

- neckermann@mst.edu

- > <https://www.facebook.com/MissouriSandT/>

- > <https://www.youtube.com/user/MissouriSandT>