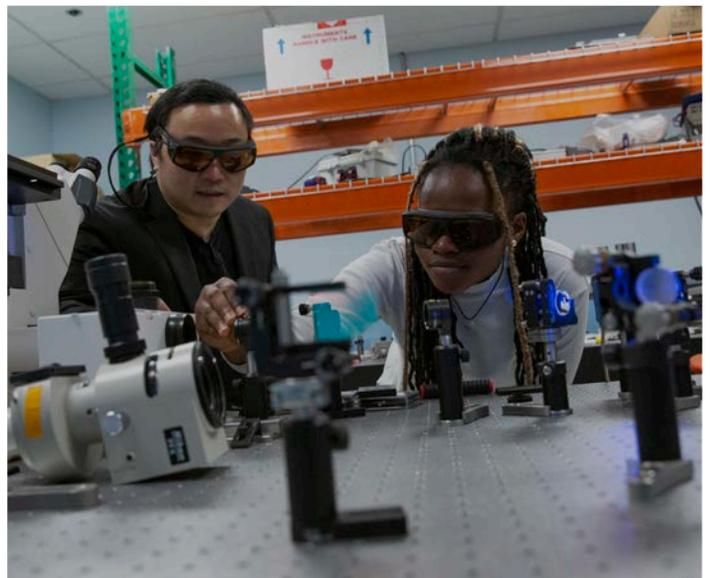




# Director Search

School for Engineering of Matter, Transport and Energy

**Ira A. Fulton Schools of Engineering**



**ASU** Ira A. Fulton Schools of  
**Engineering**  
Arizona State University

# School for Engineering of Matter, Transport and Energy

**The Ira A. Fulton Schools of Engineering (Fulton Schools or FSE) at Arizona State University (ASU)** seek a highly accomplished scholar and strategic leader as the **director of the School for Engineering of Matter, Transport and Energy (SEMTE)**. SEMTE is one of seven schools in the Fulton Schools of Engineering with 98 faculty members and over 4,600 students enrolled in fall 2022 on the Tempe campus and online. With use-inspired research and highly regarded degree programs in aerospace engineering, biological design, chemical engineering, materials science and engineering, mechanical engineering, modern energy production and sustainable use, and robotics and autonomous systems, SEMTE faculty, staff, students and strategic partners are pushing the boundaries of innovation and academic excellence on an ever-increasing scale. SEMTE is a key element of ASU's major evolution of the Fulton Schools to position them as one of the top 15 engineering schools in the U.S., and the director has

an unparalleled opportunity to grow and transform the school to increase our impact as we address critical scientific, applied and societal challenges together.

The director of the school reports to the Dean of the Fulton Schools of Engineering and will be the academic and administrative leader of SEMTE. The director is responsible for visioning, strategic planning, operations, finance, academic affairs, external relations and advancement. These activities include working with faculty and staff to recruit and retain high quality students, hiring, developing and retaining faculty, supervising support staff, creating opportunities for externally funded research, fundraising and development and building strong interactions with industry, local, state and federal agencies and the greater community of Phoenix and Arizona.

One of the nation's top public universities and ranked #1 in Innovation by U.S. News & World Report, ASU is well underway in its bold reinvention

of higher education as the New American University. ASU has developed numerous new programs and units that bridge transdisciplinary boundaries to enable the exploration and discovery of new knowledge, while developing practical solutions to serve our communities and the world at large. **ASU has strong and simultaneous commitments to educational access, research and teaching excellence** and assumes significant responsibility for the cultural, social and economic vitality of its surrounding communities in the metropolitan Phoenix region and beyond.

One of the fastest growing academic research enterprises in the U.S., **ASU has created a vibrant environment of discovery, interdisciplinary research and innovation** focused on addressing society's greatest challenges. Its research expenditures have nearly tripled over the last decade, totaling \$831 million last year. The Fulton Schools play a pivotal role in this continued expansion.

# New Economy Initiative

The state of Arizona enjoys its current position as a leader in job growth and economic prosperity. To ensure this growth and prosperity, the Arizona Board of Regents has developed a plan to serve the state in the face of significant new forces that will transform our economy. **The New Economy Initiative: Enhancing Arizona's Competitiveness** is based on accelerating the transformation of Arizona's three universities to adaptive drivers of Arizona's economic success:

**Enhance** the universities' capacity to prepare more graduates for critical New Economy areas that will allow Arizona to compete in the new high speed, digital economy of the fourth industrial revolution (where technologies combine hardware, software and biology, informed by high-speed change from AI, autonomous systems, 3D distributed manufacturing, etc.);

**Support** the universities to compete more aggressively for major, national research grants

that focus on transformative ideas, innovative technology and emerging economy business startups that drive productivity for Arizona;

**Continue** the Governor's efforts to expand career and technical training in specialized areas; and

**Raise** the high school graduation rate and the college-going rate of Arizonans, particularly those least likely to complete high school and attend college.

# Science and Technology Center Outcomes



## Creation of high-value jobs

Technology startups with AZ founders and innovators

Retention of more than **4,000 skilled engineering grads** per year

Partnerships with established AZ technology companies



## Workforce training

Hands-on research experience produces thought leaders

Entrepreneurial training paves way from lab to captured value



## Attraction and retention of leading corporations

People, facilities, intellectual leadership

Partnerships and acquisition opportunities for established companies

# Return on Investment for Arizona in the New Economy

	FSE Current	Goal	Arizona Benefit
<b>Students</b>	<b>20,500</b> In-person	<b>25,000</b> In-person	<b>\$14B</b> over 20-year increased income impact
	<b>9,700</b> Online	<b>15,000</b> Online	
	<b>5,000</b> Graduates	<b>6,000</b> Graduates	
	<b>4,000</b> First-generation students	<b>&gt;90%</b> Average starting salary	
	<b>7,200</b> Female students	<b>#1</b> U.S. producer of technical talent	
	<b>4,800</b> Hispanic students		
	<b>\$85,000</b> Average starting salary		
<b>Faculty</b>	<b>390</b> Faculty	<b>100</b> New faculty	<b>&gt; 15x</b> return on public investment
	<b>33</b> NSF CAREER Awards*	<b>#5</b> Worldwide in patents (2x output)	
	<b>#26</b> Worldwide in patents		
	<b>804</b> Invention disclosures*		
	<b>31</b> Startups*		
<small>*in last three years</small>			
<b>Research</b>	<b>\$119M</b> Research output	<b>\$215M</b> Research output	<b>5x</b> multiplier on job growth
	<b>2</b> Engineering Research Centers	<b>250+</b> New industrial partnerships	
	<b>\$44M</b> DARPA awards		
	<b>8</b> Industry-University Cooperative Research Centers		
			<b>New industry attraction and formation</b>

# ASU New Economy Initiative

ASU's New Economy Initiative represents a bold effort to ensure that Arizona is prepared for the fourth industrial revolution — which will fundamentally change the way we live, work and relate to one another — and the accompanying future of high employment, strong economic growth and resilience to economic shocks. The initiative is comprised of three primary components:

## Grow the Fulton Schools of Engineering

Invest in the Fulton Schools of Engineering to:

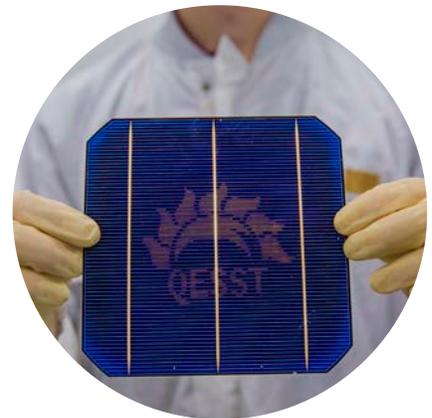
- Grow FSE's world class faculty to accelerate research activity to the levels of Stanford, MIT and Georgia Tech.
- Broaden student access and increase the number of graduates in engineering, computer science and technology.
- Complete the launch of a global school alliance for engineering design.
- Emerge as a top 15 U.S. engineering college.
- Make the Phoenix metro one of the largest producers of technology, talent and innovation.

## Science and Technology Centers

Invest to establish five Science and Technology Centers (STCs) that will foster the growth of the New Economy industries in energy, materials and devices; human performance; extreme environments; advanced manufacturing and future communications technologies. These STCs will produce significant return on public investment — driving job creation, hundreds of new industrial partnerships and startups and advancing STEM education and workforce training. Together with ASU faculty, the STCs will empower engineering linkages around the world and propel ASU forward as a top 5 university patent provider and a top 10 university tech transfer center.

## Development and Expansion of Education Programs

Invest in faculty, instructional space, experiential learning programs and student support services. This investment will shorten the time to earn a degree and increase education options for current students. It will also be used to accelerate the development and deployment of new ways of learning across New Economy fields as well as new hybrid learning and training models for workforce readiness. In addition, this investment will be used to develop content packaged as stackable certificates, micro-degrees, badges and other credentials that provide a flexible and cost-effective way to keep skills up to date in areas that are experiencing unprecedented change. New adaptive learning platforms, AI-infused advising platforms and portals will be included and faculty numbers increased to serve an expanded student and lifelong learning population.





## School for Engineering of Matter, Transport and Energy

The School for Engineering of Matter, Transport and Energy, with 98 tenured and tenure-track faculty, research faculty, lecturers and professors of practice, more than 3,500 undergraduate students and over 1,000 graduate students on campus and online, houses four undergraduate degrees and seven graduate degrees. Its faculty members are responsible for more than \$28M in annual research expenditures and more than \$164M in proposals. The faculty includes 20 NSF CAREER awards in the past ten years, a member of the National Academy of Engineering (NAE) and a member of the National Academy of Sciences (NAS).

SEMTE's faculty excellence, research impacts, growth in both its current programs and the development of innovative new academic programs, both on campus and online, have attracted national and international attention.

### SEMTE Research

**\$164M**  
research  
proposals  
FY2022

**\$25M**  
research  
awards  
FY2022

**\$28M**  
research  
expenditures  
FY2022

### SEMTE Faculty

**86** tenured/  
tenure track

**10** teaching

**2** research

**48** research scientists,  
postdocs,  
faculty associates

### SEMTE Students

**4,625**  
total enrollment  
Fall 2022

**3,551**  
undergraduates

**1,074**  
graduates



## The Ira A. Fulton Schools of Engineering

are the largest and one of the most comprehensive engineering schools in the nation and are excelling in their mission to educate engineers and inspire innovation. In fact, one out of every five students at ASU is a Fulton Schools engineer or technologist. FSE's strategic goals center on advancing research and innovation at scale, revolutionizing engineering education, and expanding global outreach and partner engagement.

FSE's differentiating hallmark is the "Fulton Difference" that is grounded in the following principles:

- A focus on student success in the classroom and beyond.
- Excellence in research from discovery to application and in engineering education.
- An acceleration of use-inspired research and entrepreneurial engagement.
- Engagement with stakeholders in industry and the community.
- Drive to make global impacts.

**33** **NSF CAREER awards**  
over past three years

**266** **patents**  
**31** **startups**  
in the last three years

**390**  
tenured and  
tenure-track  
faculty

Lead institution on two  
National Science Foundation Engineering Research Centers



Lead institution on the Department of  
Homeland Security Center of Excellence



**42%**  
faculty  
from diverse  
backgrounds

**#3** **Issued U.S. Patents**  
Ahead of Penn and MIT

**#5** **Startups**  
Ahead of Northwestern and Purdue

**#6** **IP Disclosures**  
Ahead of Georgia Tech and Cornell

**\$141M**  
research awards  
FY 2022

**#7** **Licenses and Options**  
Ahead of Princeton and MIT

U.S. Patent and Trademark office, 2020.  
Comparative performance per \$10 million in research expenditures



## Diversity and Inclusion

Arizona State University is deeply committed to positioning itself as one of the great new universities by **seeking to build excellence**, enhance access and have a positive impact on its community, state, nation and the world. To do that requires ASU faculty and staff to reflect the intellectual, ethnic and cultural diversity of our nation and the world at large so that students learn from the broadest perspectives and we engage in the advancement of knowledge with the most inclusive understanding possible of

the issues we are addressing through our scholarly activities. Diversity and inclusion are integral to ASU's commitment to excellence in research, engagement and education.

Candidates who have demonstrated experience in fostering an inclusive environment and incorporating diverse perspectives in research and the classroom are strongly encouraged to apply.

# Arizona State University

has developed a new model for the American research university, creating an institution committed to excellence, access and impact — the New American University: A comprehensive public research university, measured not by whom it excludes, but by whom it includes and how they succeed; advancing research and discovery of public value; and assuming fundamental responsibility for the economic, social, cultural and overall health of the communities it serves.

Eight design aspirations guide the ongoing evolution of ASU. These institutional objectives are integrated in innovative ways throughout the university to achieve excellence, access and impact.

- Leverage Our Place
- Enable Student Success
- Transform Society
- Fuse Intellectual Disciplines
- Value Entrepreneurship
- Be Socially Embedded
- Conduct Use-Inspired Research
- Engage Globally

For the eighth year in a row, Arizona State University was named the most innovative university in the nation, recognizing the university's culture of groundbreaking research and partnerships, as well as its commitment to helping students thrive in college and beyond.

The ASU faculty is at the forefront nationally in advancing research and discovery. The university's more than 4,700 faculty members inspire new ways of thinking, innovating and solving problems socially, culturally and economically in our region and in the international community. ASU has nearly tripled its research funding and been recognized as one of the fastest-growing research universities in the nation over the past 10 years. ASU reported more than \$831 million last year in research expenditures in 2022, up from \$677 million the prior year.

- 8 MacArthur fellows
- 5 Nobel laureates
- 11 Pulitzer Prize winners
- 9 National Academy of Engineering members
- 42 Guggenheim fellows
- 151 National Endowment for the Humanities fellows
- 279 Fulbright U.S. Scholars
- 24 National Academy of Sciences members
- 3 National Academy of Medicine members
- 7 National Academy of Education members
- 9 National Academy of Public Administration members

# Greater Phoenix

**is known for year-round sun, desert beauty, sophisticated urbanscapes, southwest culture and so much more.**

## **Climate**

Enjoy 300 days of sunshine a year and an average temperature of 76 degrees.

## **Arts and Culture**

Greater Phoenix is a rich arts and culture environment with diverse museums, theater, concert halls and cultural centers, such as the renowned Heard Museum, Phoenix Art Museum, Arizona Science Center, Phoenix Symphony, Arizona Opera, Ballet Arizona and the Arizona Theatre Company.

## **Outdoors**

Phoenix has a number of lakes just a short drive away offering opportunities for boating, sailing, windsurfing, water and jet skiing, fishing and more. The area is home to dozens of parks and preserves — both in and around the city — with hundreds of miles of multi-use trails for hiking and biking. The state is home to three national parks, including the Grand Canyon, and other popular destination spots like Sedona.

## **Sports**

All four of Arizona's major professional sports teams — Arizona Cardinals (NFL), Phoenix Suns (NBA), Arizona Diamondbacks (MLB) and Arizona Coyotes (NHL) — call the metro Phoenix area home, as do the Phoenix Mercury (WNBA), Arizona Rattlers (IFL) and Phoenix Rising FC (USL). The area has over 170 golf courses.

## **Cost of Living**

Greater Phoenix offers the diverse amenities of a major metropolitan region without the high cost of living. As the fifth largest state in the U.S. and one of the most dynamic and rapidly growing regions in the nation, living and working here is both exciting and affordable.

## **Low Tax Position**

Low personal income taxes and low effective property tax rates offer affordability and opportunities for everyone to thrive.

## **Business and Industry**

Arizona is home to a surging industrial ecosystem, early stage entrepreneurs and tech-savvy millennial talent who are breaking new ground across a wide range of industry growth sectors. What's more, Arizona offers a robust portfolio of programs and resources supporting both large and emerging tech companies. The state's rich startup culture continues to thrive and is a preferred choice for technology companies seeking growth. Leading startups have collectively taken advantage of Arizona's high-skills talent base. Arizona's solid reputation and assertive stance on innovation led Fast Company to rank Arizona No. 1 in the country for "entrepreneurial activity."

# Qualifications and desired attributes for the Director of the School for Engineering of Matter, Transport and Energy

**ASU seeks a school director with the following qualifications, professional experiences and attributes:**

- ➔ A PhD in a SEMTE engineering discipline or related field and a distinguished record of teaching and research appropriate for appointment at the rank of professor with tenure in SEMTE.
- ➔ An innovative, curious and creative thinker who will leverage the Fulton Schools' foundational strength and institutional resources and create a clear vision for the growth and transformational impact of SEMTE.
- ➔ Demonstrated leadership excellence of people, programs and resources within a complex organization.
- ➔ Strong interpersonal skills and relationship management capabilities; ability to interact with and engage diverse internal and external constituencies.
- ➔ Leadership style that energizes and inspires others and fosters clear communication, collaboration and a respectful and collegial work environment.
- ➔ Readiness to serve as the chief ambassador for the school, fostering industry and community relationships and enhancing the school's national and international reputation at large.
- ➔ Demonstrated commitment to diversity, equity and inclusion.

**AGB Search is pleased to assist ASU with this exciting search.**

To apply for the director of the School for the Engineering of Matter, Transport and Energy position, candidates are requested to submit the following: a curriculum vitae; a letter of interest (not to exceed two pages); and contact information for four references (to be contacted with candidate's permission at a later date). Application materials should be sent to **ASUDirectorSEMTE@agbsearch.com** by **December 2, 2022** for best consideration. Additional materials, such as a vision statement and diversity statement, will be requested at a later point in the search process.

Nominations and expressions of interest in the director of the School for the Engineering of Matter, Transport and Energy opportunity are encouraged. Please direct them to the AGB search consultants listed below.

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**AGB  
SEARCH**

*A background check is required for employment. Arizona State University is a VEVRAA Federal Contractor and an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, or any other basis protected by law. (See <https://www.asu.edu/aad/manuals/acd/acd401.html> and <https://www.asu.edu/titleIX/>)*

*In compliance with federal law, ASU prepares an annual report on campus security and fire safety programs and resources. ASU's Annual Security and Fire Safety Report is available online at <https://www.asu.edu/police/PDFs/ASU-Clery-Report.pdf>. You may request a hard copy of the report by contacting the ASU Police Department at 480-965-3456.*

**COVID-19 Vaccination** - Arizona State University is a federal contractor and subject to federal regulations which may require you to produce a record of a COVID-19 vaccination. For questions about medical or religious accommodations, please visit the Office of Diversity, Equity and Inclusion's webpage at <https://cfo.asu.edu/workplace-accommodations>.