Our charter is what we do

ASU is 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.
Our responsibility and public trust

The charter is a *promise* to the citizens of Arizona.

ASU has a *responsibility* to fulfill the requirements of the Arizona Constitution to provide public education.

The responsibility is not one that is conditional upon the actions of the legislature; it is ASU’s responsibility to find the means to fulfill its charter while seeking appropriate and fair public investment in the costs of education for Arizona resident students.
Our design aspirations is how we do it

Leverage Our Place
ASU embraces its cultural, socioeconomic and physical setting.

Transform Society
ASU catalyzes social change by being connected to social needs.

Value Entrepreneurship
ASU uses its knowledge and encourages innovation.

Conduct Use-Inspired Research
ASU research has purpose and impact.

Enable Student Success
ASU is committed to the success of each unique student.

Fuse Intellectual Disciplines
ASU creates knowledge by transcending academic disciplines.

Be Socially Embedded
ASU connects with communities through mutually beneficial partnerships.

Engage Globally
ASU engages with people and issues locally, nationally and internationally.
Economic and Social Imperative
Arizona’s educational attainment is lower than most states

Data: Arizona Board of Regents analysis of ACS and CPS data
Per capita GDP correlates with educational attainment

Bachelor’s Degree Attainment and Real Per Capita GDP by State (2016)

Data: US Census Bureau, ACS, S1501 and Bureau of Economic Analysis, Regional Economic Accounts
The future economy will need higher educational attainment

AZ Employment by Occupation, Minimum Education Required & Probability of Job Loss Due to Automation

Size reflects May 2015 employment in Arizona
Red color reflects high chance of job loss due to automation
Data: BLS and Frey and Osborne (2013)
Adults with college degrees earn more

Mean Earnings of Workers 18 Years and Over by Educational Attainment (1975-2016)

Data: US Census Bureau, CPS Historical Time Series Table A-3
65% Estimated percentage of children who will ultimately perform new types of jobs that do not yet exist.
Arizona lags in state postsecondary investment

Higher Education Spending per $1,000 in Personal Income (FY2016)

Data Source: Center for the Study of Education Policy at Illinois State University
Higher education per capita spending has declined by 75%

Arizona Higher Education Spending per $1,000 in Personal Income (1979-2018)
Educational attainment is unevenly distributed by ethnicity

Arizona’s Educational Attainment By Race (2017)

Data: ASU analysis of 2017 American Community Survey Microdata
Hispanics are Arizona’s fastest growing demographic

Arizona Population Projections by Ethnicity (2018-2055)
Educational attainment is unevenly distributed by geography
Investment in ASU is critical to metro Phoenix

Undergraduate Enrollment in the 15 Largest US Metros by School (Fall 2017)
Performance and Accomplishments to Date
ASU partnerships and infrastructure launched in 2018

Barrett & O'Connor Washington Center

UBER – ASU

Knowledge Exchange for Resilience

Watts College for Public Service and Community Solutions

Biodesign C

Roden Crater
ASU excellence earns recognition

#1 in U.S. for innovation
ASU Ahead of Stanford and MIT

Among best graduate schools in the U.S.
—U.S. News & World Report, 2018

Top 1 percent of world’s most prestigious universities
—Times Higher Education, 2018

A top producer of the world’s elite scholars
—Frank Office of National Scholarships Advisement

Top 100 world’s best for research and teaching
—Times Higher Education, 2018

Highest-ever: Sun Devil Athletics Academic Progress rate
—NCAA, 2018

‘Best Bang for Tuition Buck’
—Princeton Review, 2018

Top producer of Fulbright students
—Chronicle of Higher Education, 2018

Top university for undergraduate education
—U.S. News & World Report, 2019

#2 online undergraduate degree program in the nation
—U.S. News & World Report, 2019

A leader in undergraduate education
—Princeton Review, 2019

Top 10 fine arts programs
—U.S. News & World Report, 2018

#5 in the nation for producing the best-qualified graduates
—The Wall Street Journal

Top-10 university for research
—National Science Foundation Education Research and Development rankings
<table>
<thead>
<tr>
<th>Rank</th>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Top 10 in the U.S., Canada for preparing students in science, tech</td>
<td>—Institute of International Education, 2018</td>
</tr>
<tr>
<td>2</td>
<td>Top 10 for students studying abroad</td>
<td>—Institute of International Education, 2018</td>
</tr>
<tr>
<td>3</td>
<td>#3 producer of TFA teachers</td>
<td>—Peace Corps Top Volunteer-Producing Colleges and Universities, 2018</td>
</tr>
<tr>
<td>5</td>
<td>#5 online MBA program in nation</td>
<td>—U.S. News &amp; World Report, 2018</td>
</tr>
<tr>
<td></td>
<td>Recipient: Carnegie Foundation Community Engagement Classification</td>
<td>—Carnegie Foundation</td>
</tr>
<tr>
<td></td>
<td>A world leader in executive education</td>
<td>—Financial Times, 2018</td>
</tr>
<tr>
<td></td>
<td>A best-in-U.S.: health and well-being programs for students</td>
<td>—Active Minds, 2018</td>
</tr>
<tr>
<td></td>
<td>A top world university</td>
<td>—Center for World University Rankings</td>
</tr>
<tr>
<td></td>
<td>#1 in the world: Thunderbird global management degree</td>
<td>—Times Higher Education / Wall Street Journal, 2019</td>
</tr>
<tr>
<td></td>
<td>#1 in the world: business management</td>
<td>—Shanghai Ranking, Academic Ranking of World Universities, 2018</td>
</tr>
<tr>
<td></td>
<td>Top 10 in the U.S.</td>
<td>—Military Times, 2018</td>
</tr>
</tbody>
</table>
Key areas of ASU accomplishment

Student Success
1. Access
2. Affordability
3. Outcomes

Research
1. Expenditures
2. Top Rankings
3. Tech Transfer

Financial Health
1. Cost Containment
2. Growth in Revenue
3. Growth in Net Assets
Students
ASU is committed to student success

More ASU students are earning prestigious scholarships than ever before

Shantel Marekera
2019 Rhodes Scholarship

Frank Smith III
2018 Marshall Scholar

Charity Bhebhe
2018 Gates Cambridge Scholar

Alexa Scholl
2018 Truman Scholar
Undergraduate enrollment is up 45% in 5 years

Undergraduate Enrollment Actual and Metric Goals (2003-2025)
Graduate enrollment is up 46% in 5 years

Graduate Enrollment Actual and Metric Goals (2003-2025)
Freshman class grows in diversity and inclusion

Arizona freshmen from underrepresented populations

This percentage reflects the entire domestic (in- and out-of-state) freshman class.
Freshman diversity grew markedly in 15 years

First-Time Freshmen Enrollment by Race (Fall 1980 – Fall 2018)
ASU is far more accessible to low-income students


All incomes adjusted to 2018 dollars using CPI.
Number of ASU first-generation students has more than tripled

First-Generation Students at ASU (2002-2018)
ASU is committed to low annual tuition adjustments

Tuition & Fees For New Resident Freshman Entering (Fall 2013 – Fall 2018)

<table>
<thead>
<tr>
<th>Year</th>
<th>University of Arizona</th>
<th>Northern Arizona University</th>
<th>Arizona State University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2013</td>
<td>$9,738</td>
<td>$10,002</td>
<td>$10,391</td>
</tr>
<tr>
<td>Fall 2014</td>
<td>$9,989</td>
<td>$10,157</td>
<td>$10,957</td>
</tr>
<tr>
<td>Fall 2015</td>
<td>$10,358</td>
<td>$10,157</td>
<td>$11,403</td>
</tr>
<tr>
<td>Fall 2016</td>
<td>$10,640</td>
<td>$10,764</td>
<td>$11,769</td>
</tr>
<tr>
<td>Fall 2017</td>
<td>$10,792</td>
<td>$11,059</td>
<td>$12,228</td>
</tr>
<tr>
<td>Fall 2018</td>
<td>$10,822</td>
<td>$11,564</td>
<td>$12,447</td>
</tr>
</tbody>
</table>
ASU gift aid is crucial to affordability

Resident Undergraduates Average Gift Aid Awards by Family Income (2017-2018)

Tuition and Mandatory Fees = $10,800

State Median Income = $67K
First-year freshman retention is nearing 90% goal

First-Year Freshman Retention Rates (2002-2017)

Cohort Entry Year

- '02: 76.7%
- '03: 85.5%
- '04: 78.0%
- '05: 87.0%
- '06: 74%
- '07: 76%
- '08: 78%
- '09: 80%
- '10: 82%
- '11: 84%
- '12: 86%
- '13: 88%
- '14: 90%
- '15: 87.0%
- '16: 85.5%

Arizona Freshman
All Freshman
ASU 4-year graduation rate is up 85% since 2002

Resident Freshman Cohort Graduation Rate (2002-2013)
ASU 4-year graduation rate compares well with UIA peers

4-Year Graduation Rate of University Innovation Alliance (UIA)
The number of degrees awarded is up 33% since 2013

Undergraduate and Graduate Degrees by Year (2003 -2025)
Degrees awarded in high demand fields are up 46% since 2013

High Demand Degrees Awarded (2009-2018)
STEM degrees awarded are up 55% since 2013

STEM Degrees Awarded (2009-2018)

Doctoral
Master's
Bachelor's
ASU Fulton Schools of Engineering experienced major growth

2009 vs 2018

<table>
<thead>
<tr>
<th>Total enrollment</th>
<th>Undergraduates</th>
<th>Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>6,407 Fall 2009</td>
<td>4,253 Fall 2009</td>
<td>2,154 Fall 2009</td>
</tr>
<tr>
<td>22,406 Fall 2018</td>
<td>17,960 Fall 2018</td>
<td>4,446 Fall 2018</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Degrees granted</th>
<th>Research expenditures</th>
<th>T/TT faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,391 2008-2009</td>
<td>$73M FY2009</td>
<td>214 Fall 2010</td>
</tr>
<tr>
<td>4,197 2017-2018</td>
<td>$104M FY2018</td>
<td>350 Fall 2018</td>
</tr>
</tbody>
</table>
Research
ASU produces groundbreaking research

Game-changing, use-inspired discovery happens here

- Solar cell record
- Discovery of earliest stars
- Cancer-fighting nanorobot
ASU research expenditure growth has been rapid

Research Expenditures has Doubled Every 6-8 Years (in Millions)
ASU research expenditure growth is competitive

Higher Education Research and Development Rankings (2017)

<table>
<thead>
<tr>
<th>Total Research Expenditures: 44 of 876 ahead of</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE UNIVERSITY OF CHICAGO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Research Expenditures among Institutions without a Medical School: 9 of 718 ahead of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caltech</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-Medical School Expenditures: 22 of 876 ahead of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanford University</td>
</tr>
<tr>
<td>Discipline</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>Psychology</td>
</tr>
<tr>
<td>Non-Science and Engineering</td>
</tr>
<tr>
<td>Humanities</td>
</tr>
<tr>
<td>Business and Management</td>
</tr>
<tr>
<td>Funding Source</td>
</tr>
<tr>
<td>-----------------------------------</td>
</tr>
<tr>
<td>HHS (including NIH)</td>
</tr>
<tr>
<td>NASA</td>
</tr>
<tr>
<td>NSF</td>
</tr>
</tbody>
</table>
DOE Funded Expenditures: 29 of 345 ahead of

DOD Funded Expenditures: 33 of 450 ahead of
ASU outperforms the median of its peers in tech transfer

U.S. Patents Issued

Licenses & Options Executed

Start-up Companies

ASU

Median
Financial Health
ASU demonstrates financial health

Entrepreneurial and philanthropic strategies support success
ASU uses 17% fewer resources per degree awarded than the national median

Tuition & State Appropriation per Degree Awarded (FY2017) Public Very High Research Universities

source: IPEDS
ASU uses 8.3% fewer resources per degree awarded than the median for universities without a medical school.

Tuition, Fees, & State Appropriations per Degree Awarded Very High Research Public (FY 2017)

source: IPEDS

Universities without Medical Schools IPEDS
Cost discipline, application of technology, and economies of scale are projected to maintain current cost levels.
For 5 years, ASU has operated with about half the staff per student as its peers.

FTE Employees Per 100 FTE Students (FY2012 - FY2018)

<table>
<thead>
<tr>
<th></th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona State University</td>
<td>12.91</td>
<td>12.93</td>
<td>12.92</td>
<td>12.85</td>
<td>12.52</td>
<td>12.36</td>
<td>12.90</td>
</tr>
<tr>
<td>Florida State University</td>
<td>15.3</td>
<td>15.8</td>
<td>16.1</td>
<td>16.0</td>
<td>16.1</td>
<td>16.2</td>
<td>16.8</td>
</tr>
<tr>
<td>Indiana University-Bloomington</td>
<td>20.1</td>
<td>20.5</td>
<td>20.1</td>
<td>20.8</td>
<td>20.3</td>
<td>20.8</td>
<td>22.1</td>
</tr>
<tr>
<td>Michigan State University</td>
<td>22.7</td>
<td>21.5</td>
<td>21.3</td>
<td>21.6</td>
<td>21.9</td>
<td>22.8</td>
<td>22.9</td>
</tr>
<tr>
<td>Ohio State University-Main Campus</td>
<td>24.3</td>
<td>23.0</td>
<td>23.0</td>
<td>22.9</td>
<td>22.7</td>
<td>22.9</td>
<td>23.5</td>
</tr>
<tr>
<td>Pennsylvania State University-Main Campus</td>
<td>28.6</td>
<td>28.0</td>
<td>28.8</td>
<td>29.0</td>
<td>29.6</td>
<td>29.3</td>
<td>30.1</td>
</tr>
<tr>
<td>Rutgers University-New Brunswick</td>
<td>23.0</td>
<td>23.9</td>
<td>25.7</td>
<td>25.0</td>
<td>24.7</td>
<td>25.9</td>
<td>29.9</td>
</tr>
<tr>
<td>The University of Texas at Austin</td>
<td>28.8</td>
<td>32.8</td>
<td>26.0</td>
<td>26.7</td>
<td>27.4</td>
<td>27.7</td>
<td>27.2</td>
</tr>
<tr>
<td>University of California-Los Angeles</td>
<td>27.3</td>
<td>26.7</td>
<td>28.4</td>
<td>26.4</td>
<td>26.9</td>
<td>26.7</td>
<td>27.1</td>
</tr>
<tr>
<td>University of Connecticut</td>
<td>26.9</td>
<td>28.1</td>
<td>28.3</td>
<td>27.6</td>
<td>27.2</td>
<td>27.9</td>
<td>28.5</td>
</tr>
<tr>
<td>University of Illinois at Urbana-Champaign</td>
<td>24.3</td>
<td>24.4</td>
<td>25.1</td>
<td>25.2</td>
<td>25.2</td>
<td>24.2</td>
<td>24.0</td>
</tr>
<tr>
<td>University of Iowa</td>
<td>23.2</td>
<td>23.3</td>
<td>23.5</td>
<td>24.1</td>
<td>24.2</td>
<td>23.5</td>
<td>23.2</td>
</tr>
<tr>
<td>University of Maryland-College Park</td>
<td>24.9</td>
<td>25.8</td>
<td>26.0</td>
<td>27.4</td>
<td>25.5</td>
<td>25.6</td>
<td>25.0</td>
</tr>
<tr>
<td>University of Minnesota-Twin Cities</td>
<td>29.6</td>
<td>30.3</td>
<td>30.9</td>
<td>31.2</td>
<td>31.6</td>
<td>31.7</td>
<td>31.9</td>
</tr>
<tr>
<td>University of Washington-Seattle Campus</td>
<td>25.6</td>
<td>24.4</td>
<td>25.3</td>
<td>25.6</td>
<td>21.7</td>
<td>25.6</td>
<td>24.7</td>
</tr>
<tr>
<td>University of Wisconsin-Madison</td>
<td>26.4</td>
<td>26.9</td>
<td>26.9</td>
<td>27.6</td>
<td>27.5</td>
<td>27.8</td>
<td>28.0</td>
</tr>
<tr>
<td>Peer Median</td>
<td>24.9</td>
<td>24.4</td>
<td>25.7</td>
<td>25.6</td>
<td>25.2</td>
<td>25.6</td>
<td>25.0</td>
</tr>
</tbody>
</table>
ASU is highly efficient in its use of space compared to its peers

Space Density: Net Assignable Square Footage by FTE

- Ohio State University
- UCLA
- University of Iowa
- University of Texas, Austin
- University of Illinois
- University of Florida
- Texas A&M University
- University of Arizona
- University of Maryland
- ASU
ASU has grown and diversified its revenues over the last decade

ASU Gross Revenues: All Funds (FY2008 & FY2018)

- $1.56B (FY2008)
- $2.94B (FY2018)

Tuition Revenues

ASU has diversified its sources of revenue over the last decade, with significant growth in Gross Revenues from $1.56B in FY2008 to $2.94B in FY2018. The chart illustrates the composition of these revenues, which include various categories such as Research & F&A (External Only), Financial Aid Grants (Mostly Pell), Fees and Summer Session, and more. Each category's contribution to the overall revenue is visually represented, highlighting the diversity and growth in ASU's financial landscape.
The Campaign ASU 2020 goal of $1.5B has been exceeded

ASU Gifts and Commitments (2011-2025)
ASU’s net position has doubled since 2009

Net Position and Component Units in Millions (2009-2018)
ASU has made substantial progress on its metric goals since 2008-09.
ASU’s approach is driven by its mission and goals

- Demonstrate **leadership** in academic excellence and accessibility
- Establish **national standing** in academic quality and impact of colleges and schools in every field
- Establish ASU as a **global center** for interdisciplinary research, discovery and development by 2025
- Enhance our **local impact** and social embeddedness
Progress is measured against ASU's 2025 metric goals

Demonstrate **leadership** in academic excellence and accessibility

- Maintain the fundamental principle of accessibility to all students qualified to study at a research university.
- Maintain university accessibility to match Arizona’s socioeconomic diversity, with undifferentiated outcomes for success.
- Improve freshman persistence to **greater than 90 percent**.
- Enhance university graduation rate to **greater than 85 percent** and more than 32,000 graduates.
- Enhance quality while reducing the cost of a degree.
- Enroll **100,000** online and distance-education degree-seeking students.
- Enhance measured student development and individual student learning to national leadership levels.
- Engage all learners on all levels.
Establish **national standing** in academic quality/impact of colleges/schools in every field

- Attain national standing in academic quality for each college and school (top 5 percent).
- Attain national standing in the learning value added to our graduates in each college and school.
- Become the leading university academically (faculty, discovery, research, creativity) in at least one department or school within each college and school.
Establish ASU as a **global center** for interdisciplinary research, discovery and development

- Become the leading American center for discovery and scholarship in the integrated social sciences and comprehensive arts and sciences.
- Enhance research competitiveness to more than $815 million in annual research expenditures.
- Transform regional economic competitiveness through research and discovery and value-added programs.
- Become a leading American center for innovation and entrepreneurship at all levels.
Progress is measured against ASU's 2025 metric goals

Enhance our **local impact** and social embeddedness

- Strengthen Arizona’s interactive network of teaching, learning and discovery resources to reflect the scope of ASU’s comprehensive knowledge enterprise.

- Co-develop solutions to the critical social, technical, cultural and environmental issues facing 21st-century Arizona.

- Meet the needs of 21st-century learners through the universal learner initiative by increasing individual success through personalized learning pathways and promoting adaptability to all accelerated social-technical changes.
The 2025 metrics require ASU to increase its proportional share of performance.

<table>
<thead>
<tr>
<th>Share of Total Enrollment</th>
<th>Share of Total Degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Act 08-09'</td>
<td>Act 12-13'</td>
</tr>
<tr>
<td>150,000</td>
<td>120,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Share of High Demand Degrees</th>
<th>Research Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Act 08-09'</td>
<td>Act 12-13'</td>
</tr>
<tr>
<td>16,000</td>
<td>14,000</td>
</tr>
</tbody>
</table>

University of Arizona
Northern Arizona University
Arizona State University
What It Will Take
ASU will continue to lead as an enterprise

### Higher Education Governance Logic

<table>
<thead>
<tr>
<th></th>
<th>Academy Model</th>
<th>State Control Model</th>
<th>Market Model</th>
<th>Enterprise Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Animating Purpose</strong></td>
<td>Enlightenment of individual students</td>
<td>Organizational preservation</td>
<td>Profit maximization for owners and shareholders</td>
<td>Social transformation Economic success</td>
</tr>
<tr>
<td><strong>Path to Achieving Public Value</strong></td>
<td>Immersive instruction</td>
<td>Achievement of state-specified goals</td>
<td>Efficiency and cost reduction</td>
<td>Connecting instruction to knowledge generation at society-impacting scale</td>
</tr>
<tr>
<td><strong>Assumptions of Faculty</strong></td>
<td>Self-governing professionals</td>
<td>Bureaucrats responding to rules</td>
<td>Commodity labor; faculty not entrepreneurial</td>
<td>Knowledge entrepreneurs</td>
</tr>
<tr>
<td><strong>Assumptions of Management</strong></td>
<td>Management drawn from and blended with faculty</td>
<td>Traditional public managers distinct from faculty</td>
<td>Professional management distinct from faculty and acting entrepreneurially</td>
<td>Management drawn from and blended with faculty but acting entrepreneurially</td>
</tr>
<tr>
<td><strong>Accountability Mechanisms</strong></td>
<td>Faculty and Management Professionalism</td>
<td>Audits, public reporting, standardized testing</td>
<td>Student choice, standardized testing</td>
<td>Demonstrated economic and social progress</td>
</tr>
<tr>
<td><strong>Primary Funding Mechanisms</strong></td>
<td>Enrollment funding from state, endowments</td>
<td>Enrollment funding from state</td>
<td>Vouchers, performance based funding from state</td>
<td>Diverse; institutional entrepreneurship</td>
</tr>
<tr>
<td><strong>Organizational Scale of Impact</strong></td>
<td>Individual or groups of individuals</td>
<td>Community or state</td>
<td>Indeterminate, any scale from which profit can be derived</td>
<td>Social scale with possible national and global reach</td>
</tr>
</tbody>
</table>
ASU continues to diversify its revenue sources

ASU continues to grow nationally

Eco / Sustainability Campuses

LA Center and Global City

Colleges at ASU
- Multiple theme campuses
- World-class research campus

DC Center and Global Center
ASU continues to grow internationally
ASU strengthens its core while growing as an enterprise
ASU continues its operational focus on expanding each unit

Example: Knowledge Enterprise

1. Advance Knowledge
2. Design & Build Transdisciplinary Programs & Initiatives
3. Foster Entrepreneurship, Innovation & Economic Development

Focus Areas
- Entrepreneurship & Innovation
- Corporate
- Foundation Partners
- Future Acquisitions

Institutes/Initiatives
- Strategic Partners
  National and global partners
  Clinical partners

Economic Development
Global Engagement
Deep dive: Expanding ASU’s research

Focus Areas

Mega Projects
- Green Chemistry
- Ubiquitous Health Technology
- Global LightWorks Laboratory
- Water for the Future
- Human Security Collaboratory

Solution Projects
- Lunar Reconnaissance Orbiter Camera (LROC)
- THEMIS Phase E Budget
- The MasterCard Foundation Scholars Program
- Quantum Energy and Sustainable Solar Technologies (QESSST)
- Center for Bio-Mediated and Bio-Inspired Geotechnics (CBBG)
- Center for Membrane Protein Drug Discovery (MEDD)
- Integrated Biodosimetry System (IBiS) for High Throughput Medical Care After Radiologic and Nuclear Events

Foundation Projects
- Effects of meditative movement on fatigued breast cancer survivors
- Morphological consequences of hybridization in primate and human evolution
- Identification of Alzheimer’s disease causes based on ApoE gene
- Obesity intervention focused on Latino youth
- Online marketplaces and mobile apps to reduce food waste
- Building leadership for change through school immersion
- Group size, scaling of work and metabolism in ant colonies
- Wireless brain implant for neurological disorders
- Preparing scholars for academia and beyond
- Adaptive multi-paddock grazing research project
- Using victim advocacy clinics and institutionalized training
- Expand Native American participation in solar energy
- Linking current and future hydrologic change to hydropower
- The WEAmericas Accelerator
- Responsible research and innovation in practice
ASU advances expansive and integrated research initiatives

Institutes/Initiatives
- Biodesign Institute (BDI)
- Global Futures Initiative (GFI)
- Julie Ann Wrigley Global Institute of Sustainability (GIOS)
- Global Security Initiative (GSI)
- Institute for Social Science Research (ISSR)
- Institute for Humanities Research (IHR)
- NewSpace Initiative
- Interplanetary Initiative
- MacroTechnology Works
- Decision Theater Network
- Complex Adaptive Systems Initiative (CAS@ASU)
- Institute for the Science of Teaching & Learning (ISTL)
- The McCain Institute for International Leadership

Emerging Transdisciplinary Programs
- Automated System
- Health Informatics
- Smart Cities
- Humanitarian Logistics
- Biodesign
- Resilience
- Global Security
- Future of Work
ASU expands partnerships with a myriad of corporations

Adidas
Amazon
American Express
Apple
AT&T Inc
Avnet, Inc
Bank of America
Bashas
Boeing
CenturyLink
Chevron
Cisco Systems, Inc.
Dell
Edward Jones
Fulton Homes Inc.
General Electric Company
Google, Inc
Honeywell
IBM Corporation
Intel Corporation
JPMorgan Chase
Liberty Mutual Insurance Group
Lockheed Martin Corporation
Microsoft Corporation
NTS
PayPal
PepsiCo
PetSmart
Pinnacle Airlines
Raytheon
Salt River Project
Starbucks
Shell Oil Company
Southwest Airlines
Sky Harbor Airport
Spirit Airlines
Ticketmaster
Uber
United Airlines
Verizon
Vanguard
Wal-Mart Stores, Inc
ASU grows the Fulton Schools of Engineering

<table>
<thead>
<tr>
<th>School of Biological and Health Systems Engineering</th>
<th>School of Computing, Informatics, and Decision Systems Engineering</th>
<th>School of Electrical, Computer and Energy Engineering</th>
<th>School for Engineering of Matter, Transport and Energy</th>
<th>School of Sustainable Engineering and the Built Environment</th>
<th>The Polytechnic School</th>
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</thead>
<tbody>
<tr>
<td>918 Students</td>
<td>6,735 Students</td>
<td>3,324 Students</td>
<td>3,820 Students</td>
<td>1,734 Students</td>
<td>5,454 Students</td>
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<tr>
<td>759 Undergraduate</td>
<td>5,276 Undergraduate</td>
<td>2,340 Undergraduate</td>
<td>3,154 Undergraduate</td>
<td>1,321 Undergraduate</td>
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<tr>
<td>159 graduate</td>
<td>1,459 graduate</td>
<td>984 graduate</td>
<td>666 graduate</td>
<td>422 graduate</td>
<td>366 graduate</td>
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<tr>
<td>• Biomedical Engineering</td>
<td>• Computer Engineering</td>
<td>• Electrical Engineering</td>
<td>• Aerospace Engineering</td>
<td>• Civil Engineering</td>
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<tr>
<td>• Biological Design</td>
<td>• Computer science Engineering</td>
<td>• Computer Engineering</td>
<td>• Chemical Engineering</td>
<td>• Construction Engineering</td>
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<td></td>
<td>• Computer systems Engineering</td>
<td>• Computer Engineering</td>
<td>• Materials Science and Engineering</td>
<td>• Construction Management</td>
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<td></td>
<td>• Engineering Management</td>
<td>• Mechanical Engineering</td>
<td>• Engineering Management</td>
<td>• Environmental Engineering</td>
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<td></td>
<td>• Industrial engineering</td>
<td>• Robotics</td>
<td>• Sustainable Engineering</td>
<td>• Sustainable Engineering</td>
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<tr>
<td></td>
<td>• Informatics</td>
<td>• Solar Energy Engineering and Commercialization</td>
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<td>• Robotics</td>
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<td></td>
<td>• Software Engineering</td>
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<tr>
<td>6 interdisciplinary programs</td>
<td>25 undergraduate programs</td>
<td>41 graduate programs</td>
<td>2 campuses</td>
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<td></td>
<td></td>
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<td>+ ASU Online</td>
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</tr>
</tbody>
</table>

Produce new kinds of graduates:
• Creators and innovators
• Entrepreneurs and problem solvers
• Global citizens who are the engineers and technologists of the future

Attract new kinds of learners:
• Diverse
• International
• Attract students with the ‘engineering design mindset’ and build skills along their learning path
ASU advances expanded digital pathways for all learners
ASU evolves the universal learning initiative

ASU is currently designing demonstration projects with corporate and nonprofit partners to test the bundling of learning enterprise assets to meet their needs and engage new types of learners. These projects will:

1. **Forge industry partnerships to remove barriers to learning**
   - Hub for network of learning providers connecting employers and their employees directly with in-demand skills training and credentials.

2. **Develop technology to advance and scale personalized learning**
   - Flexible and rigorous online offerings and offer high school courses through a direct-to-learner model.

3. **Create new pathways to expedite learning**
   - Translate informal learning to shorten time-to-completion with college-level courses starting with the MAT 117 College Algebra and Problem Solving course.

4. **Reimagine delivery models**
   - Pilot learning centers that serve as in-person hubs to augment digitally delivered undergraduate degrees with a suite of student support services such as success coaching.
ASU adds new, high quality online programs

### Fall 2018
- Art (Digital Photography), BFA
- Business Economics, BS
- Computer Information Systems, BS
- Digital Audiences, BS
- Economics, BS
- Electrical Engineering (Electric Power and Energy Systems), BSE
- Geographic Information Science, BS
- Religious Studies (Religion, Culture, and Public Life), BA
- Speech and Hearing Science, BS
- Tourism and Recreation Management, BS
- Communication, Minor
- Global Studies, Minor
- Technical Communication, Minor
- Computer Science, MCS (Coursera)
- Digital Audiences Strategy, MS
- Global Technology Development – Applied International Dev, MS
- Indigenous Education, MA
- Information Technology, MS
- Medical Nutrition, MS
- Special Education (Applied Behavior Analysis), MA
- Digital Audiences Strategy, Graduate Certificate
- Global Development and Innovation, Graduate Certificate

### Spring 2019
- Supply Chain Management, BS
- Technological Entrepreneurship and Management, Minor
- Emergency Management and Homeland Security (Cybersecurity Policy and Management), MA
- International Health Management, MIHM
- World War II Studies, MA

### Summer 2019
- MEd, Elementary Education (1-8) InMAC degree

### Fall 2019
- Applied Sciences (Early Childhood Studies), BAS
- Applied Science (Graphic Information Technology), BAS
- Astronomical and Planetary Sciences, BS
- Business (Human Resources Management), BA
- Global Management, BGM
- Physics, BS
- Mathematical Concepts of Engineering, Undergraduate Certificate
- Petroleum Engineering, Undergraduate Certificate
- American Media and Popular Culture, MAS
- Art History, MA (LA County Museum of Art - LACMA)
- Complexity Studies, MS (Santa Fe Institute)
- Global Education, MEd
- Graphic Information Technology, MS
- Modern Energy Production and Sustainable Use, MS
- Program Evaluation and Data Analytics, MS
- User Experience, MS
- Addiction and Substance Use Related Disorders, Graduate Certificate
- Applied Prevention Science, Graduate Certificate
Moderate increases in State investment to sustain current levels of financial aid and tuition growth

State Appropriation per Resident FTE (2004-2018)

State Appropriation by FTE

50/50 State Funding Request