

UNIVERSITY OF
THE
DISTRICT OF
COLUMBIA
1851

Emerging Research Models at Universities
President's Council of Advisors on Science & Technology

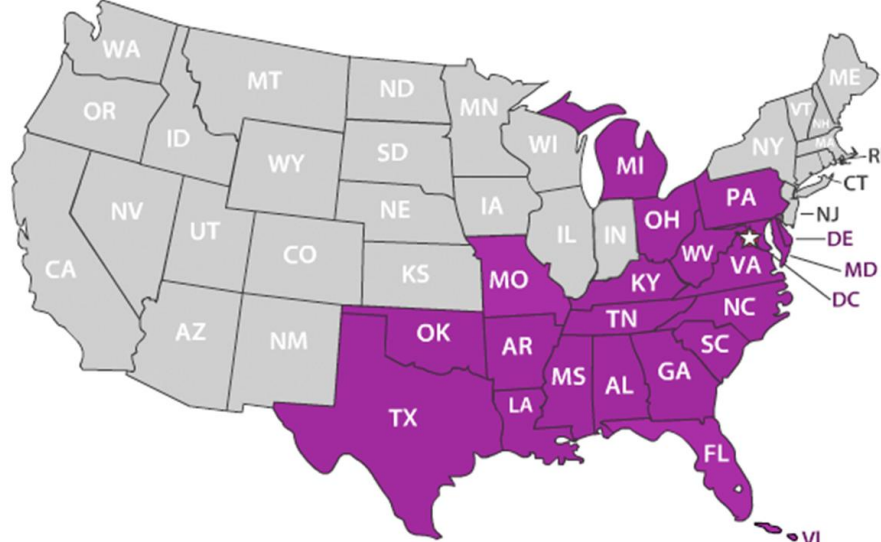
May 22, 2024

Victor McCrary, PhD

Vice President for Research

University of the District of Columbia

HBCU: *Fast Facts**



- 101 Accredited HBCUs
- HBCUs are 3% of the Nation's Colleges & Universities
- HBCUs enroll 10% of the Nation's Black students (300,000)
- HBCUs produce 20% of all Black graduates
- HBCUs generate \$14.8B in economic impact
- HBCUs account for 24% of Blacks in STEM fields (30% in engineering at the 4-year degree level)
- The top eight institutions which produced Blacks who went on for STEM PhDs were HBCUs

* Source: UNCF

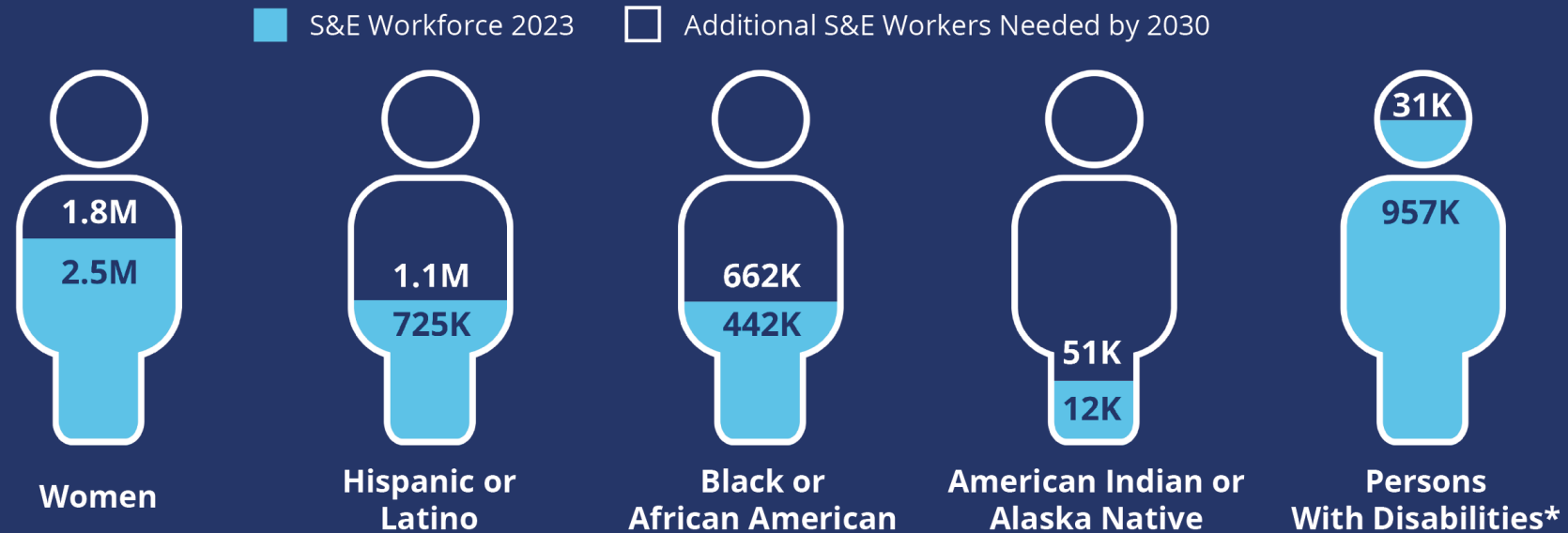
**Carnegie
Research
Designated
HBCUs in
2022**

Entity	Carnegie Designation 2022	All Research Expenditures (2021)	All Research Expenditures (2020)	Federal Expenditures (2020)	NSF Expenditures (2020)	DoD Expenditures (2020)	USDA Expenditures (2020)
Clark-Atlanta	R2	\$8.9M	\$8.4M	\$5.3M	\$1.7M	\$0.7M	\$0.041M
FAMU	R2	\$47.1M	\$41.3M	\$33.1M	\$4.1M	\$0.7M	\$8.8M
Howard	R2	\$52.4M	\$44.9M	\$29.2M	\$4.9M	\$2.5M	\$0.0M
Jackson State	R2	\$16.1M	\$15M	\$13.7M	\$7.7M	\$0.65M	\$0.0M
North Carolina A&T	R2	\$40.7M	\$36.1M	\$22.3M	\$8.7M	\$3.1M	\$4.6M
Morgan State	R2	\$20.6M	\$17.2M	\$14.1M	\$2.4M	\$1.6M	\$0.052M
Prairie View A&M	R2	\$17.6M	\$18.7M	\$9.2M	\$1.9M	\$1.4M	\$4.9M
Southern University A&M	R2	\$4.9M	\$3.8M	\$3.0M	\$1.8M	\$0.4M	\$0.12M
Tennessee State	R2	\$26.8M	\$15.3M	\$8.7M	\$1.1M	\$0.7M	\$5.7M
Texas Southern	R2	\$10.1M	\$9.1M	\$2.9M	\$1.1M	\$0.0M	\$0.0M
UDC	M2	\$8.1M FY2022 =\$10.8M	\$4.6M	\$2.6M	\$0.75M	\$0.6M	\$0.9M
UMES	R2	\$8.6M	\$8.0M	\$8.0M	\$1.3M	\$0.0M	\$2.3M

Leadership Risk: the Missing Millions

Missing Millions: Closing the Diversity Gap in the S&E Workforce by 2030

Over the past decade, the United States has seen significant growth in underrepresented groups in the science & engineering (S&E) workforce. However, the National Science Board is urging an even swifter expansion to create a more diverse workforce that mirrors the U.S. population and meets the demands of 2030.



*Visual (30%), Cognitive (29%), Hearing (26%), Lifting (8%), and Walking (7%) disabilities

Source: Estimates are based on projections from the U.S. Census and Bureau of Labor Statistics, together with data from the National Center for Science and Engineering Statistics, and assume that participation of these groups in the S&E workforce increases at current rates.



UDC at Glance – DC's only Public HBCU

University Identity

- HBCU/1862 Land Grant
- **Only public university in the District of Columbia**
- 5 Campuses
- ABET Engineering program
- Emerging Research Institution “R3 by 2025”
- ***‘DC Government’s Research Laboratory’***

Research Strengths/Assets

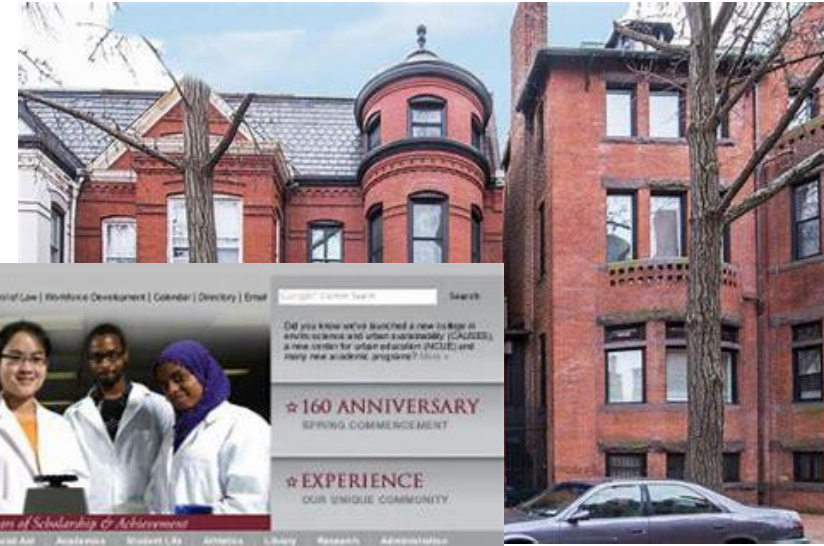
- Advanced Manufacturing
- Biomedical Engineering
- STEM Education
- **Urban Farming/Aquaponics**
- **143 Acre Farm**
- Aviation Maintenance @DCA
- **Water Resource Research Lab**
- Machine Learning/Cyber
- First patents in 2021

The University of the District of Columbia: "The District of Columbia Government's Research Laboratory"

Urban areas are the new hubs for **innovation**

Research Theme:

Urban Sustainability & Urban Resiliency



UDC's Impact in the District of Columbia

4:1 Return to DC Economy on DC Government Investment

**\$406 Million
in Annual
Total
Economic
Impact to DC**

\$189 million

Operations

\$12.9 million

Student &
Visitor Spending

\$29 million

Capital
Investments

\$175 million

Wage Premium

**\$535 Million
Annual
Economic
Impact to the
Washington
Metropolitan
Region**

HBCU Partnerships

HBCU S&T Research Council

- Founded August 2022
- One of the Councils under USRA
- VPRs/VCRs comprise the Council
- Focus on research partnerships for NASA & DoD
- Exchange of best practices



NORTH CAROLINA
AGRICULTURAL AND TECHNICAL
STATE UNIVERSITY



UNIVERSITY OF THE
DISTRICT OF
COLUMBIA
1851

