

DEPARTMENT OF DEFENSE
SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS

DoD STEM

Cybersecurity Workforce Development
16th Annual Cybersecurity Day at IUP

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Office of the Under Secretary of Defense
for Research and Engineering
Basic Research Office
October 31, 2023

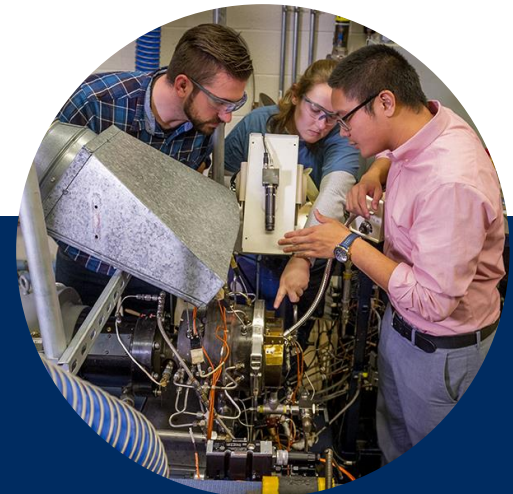


Department of Defense
DoDSTEM
Science · Technology · Engineering · Mathematics

Distro A: approved for public release

Why STEM?

The Department of Defense requires **diverse, high quality, and agile STEM talent.**



National security makes it imperative that the United States have available a **substantial, high quality STEM workforce.**

(National Academies of Sciences, 2012)

Why STEM?

The Need for Diversity in DoD STEM Workforce – **Diversity Drives Innovation!**

Shifting demographics: the U.S. population is projected to be **more than 40% minority** in upcoming decades.

(Census, 2020)



Why STEM?

Preparation of students for future STEM careers **starts at K-12.**

Only **20% of college bound seniors** are ready for courses typically required for a STEM major.

(National Science Foundation, 2018)



What encompasses DoD STEM?

DoD STEM is inclusive of Department-wide efforts that aim to **inspire, cultivate, and develop a diverse and exceptional STEM talent** through a continuum of meaningful STEM learning opportunities across the Pre-K-Postdoc continuum.

The **National Defense Education Program (NDEP)** is one of the largest STEM efforts in the Department.

DoD STEM reaches about **944K students** & **31K educators** annually



DoD STEM Vision

A **diverse and sustainable STEM talent pool** ready to serve our Nation and extend the DoD's competitive edge.

DoD STEM Mission

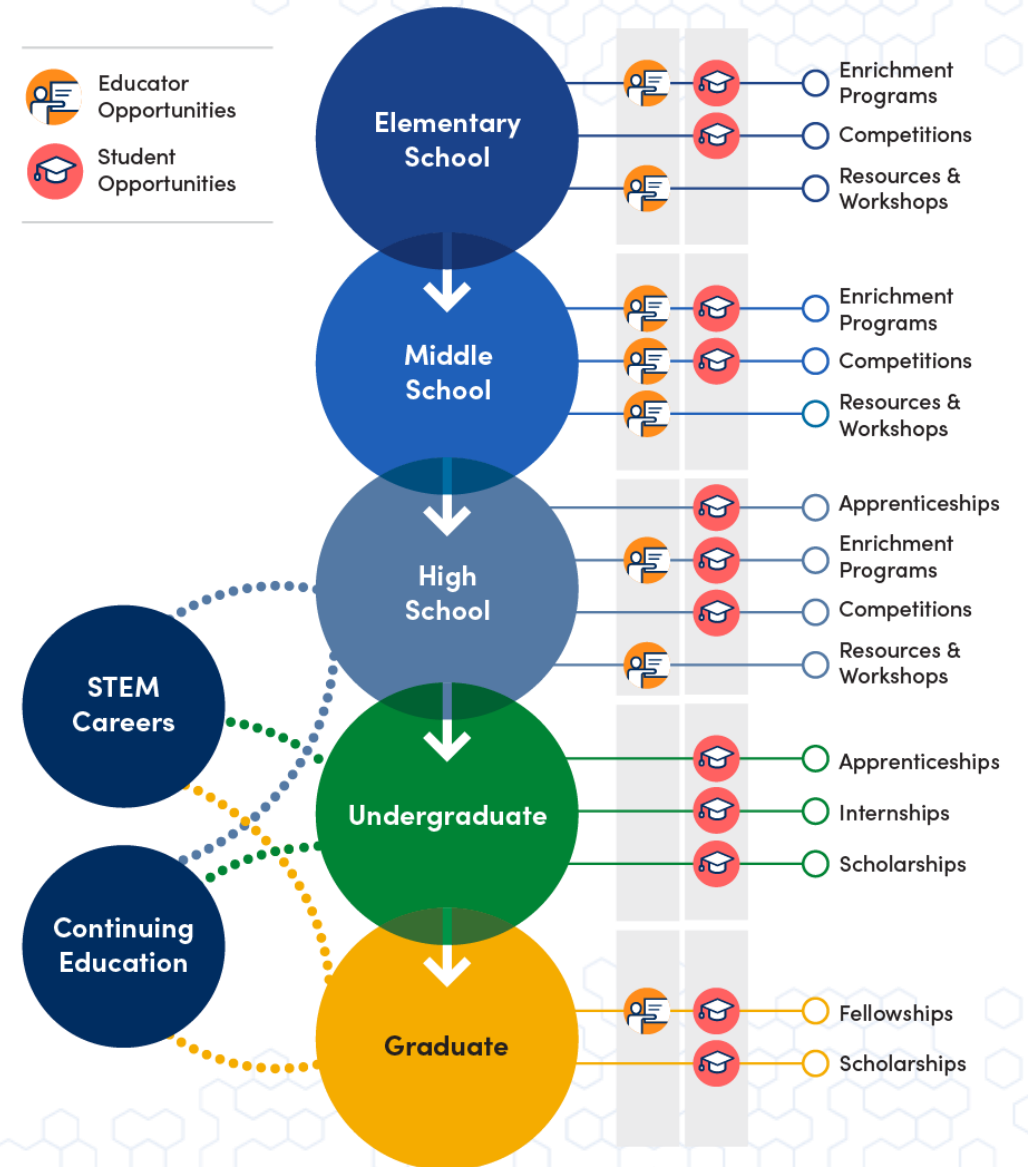
Inspire, cultivate, and develop **exceptional STEM talent** through a **continuum of opportunities** to enrich our current and future DoD workforce poised to tackle evolving defense technological challenges.



DoD STEM Programs and Reach

DoD STEM **engages** scientists and engineers at Defense laboratories and engineering centers, and Partner organizations to provide unique STEM learning experiences across the K-20 education continuum.

Opportunities include **educational programs, internships, scholarships, and career development for educators and students.**



SMART

SCIENCE, MATHEMATICS,
AND RESEARCH FOR
TRANSFORMATION

PART OF THE NATIONAL
DEFENSE EDUCATION PROGRAM

SMART Program Overview

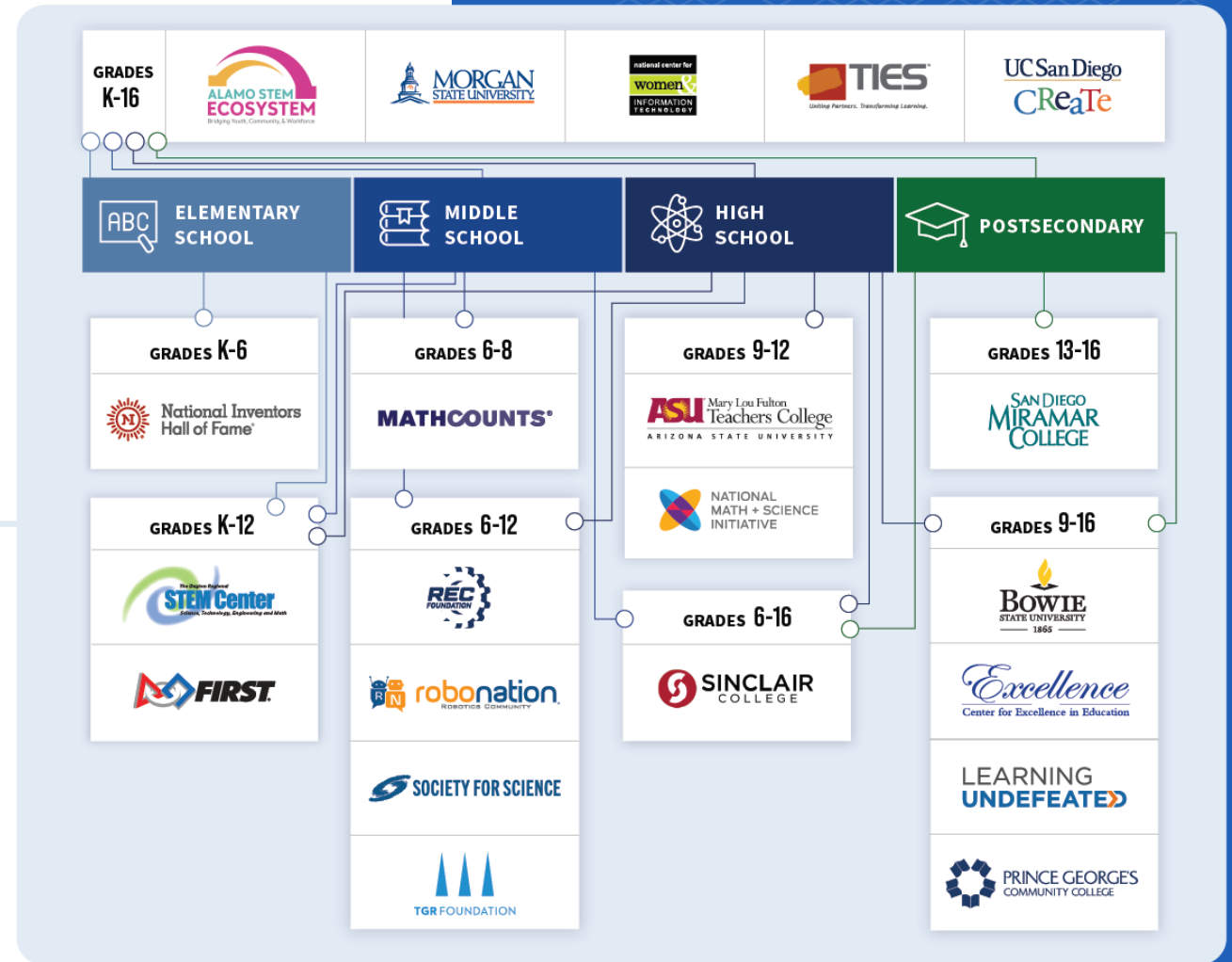
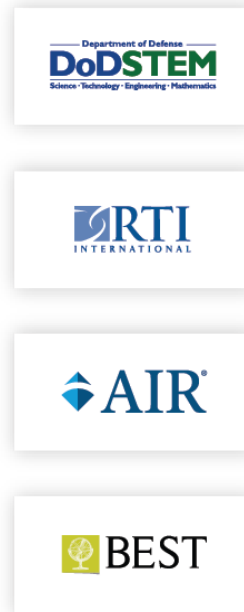
- SMART funds scholarships across 24 STEM disciplines critical to national security and serves as a workforce development program for the DoD
 - Increases the flow of new, highly skilled technical talent into the DoD
 - Enhances the technical skills of the current civilian workforce
- Awards can be made to students pursuing a BS, MS, or PhD in a STEM discipline
- Scholars serve a 1-for-1 Civilian employment commitment at a DoD lab or facility upon graduation
- smartscholarship.org

Defense Civilian Training Corps (DCTC): dctc.mil

- DCTC is a congressionally-mandated talent development program that **provides a multidisciplinary, active-learning curriculum** with summer internship projects at DoD organizations.
- Students are selected from **majors such as finance, engineering, sciences, business, and public policy** to join a DCTC cohort at host universities across the United States.
 - Pilot Universities: **North Carolina A&T, Purdue University, The University of Arizona and Virginia Tech**
- Curriculum includes **multidisciplinary capstone projects**.
- Upon graduation, **scholars join the DoD full time** with the support and accelerated **career advancement opportunities** necessary to achieve their professional ambitions

Defense STEM Education Consortium (DSEC)

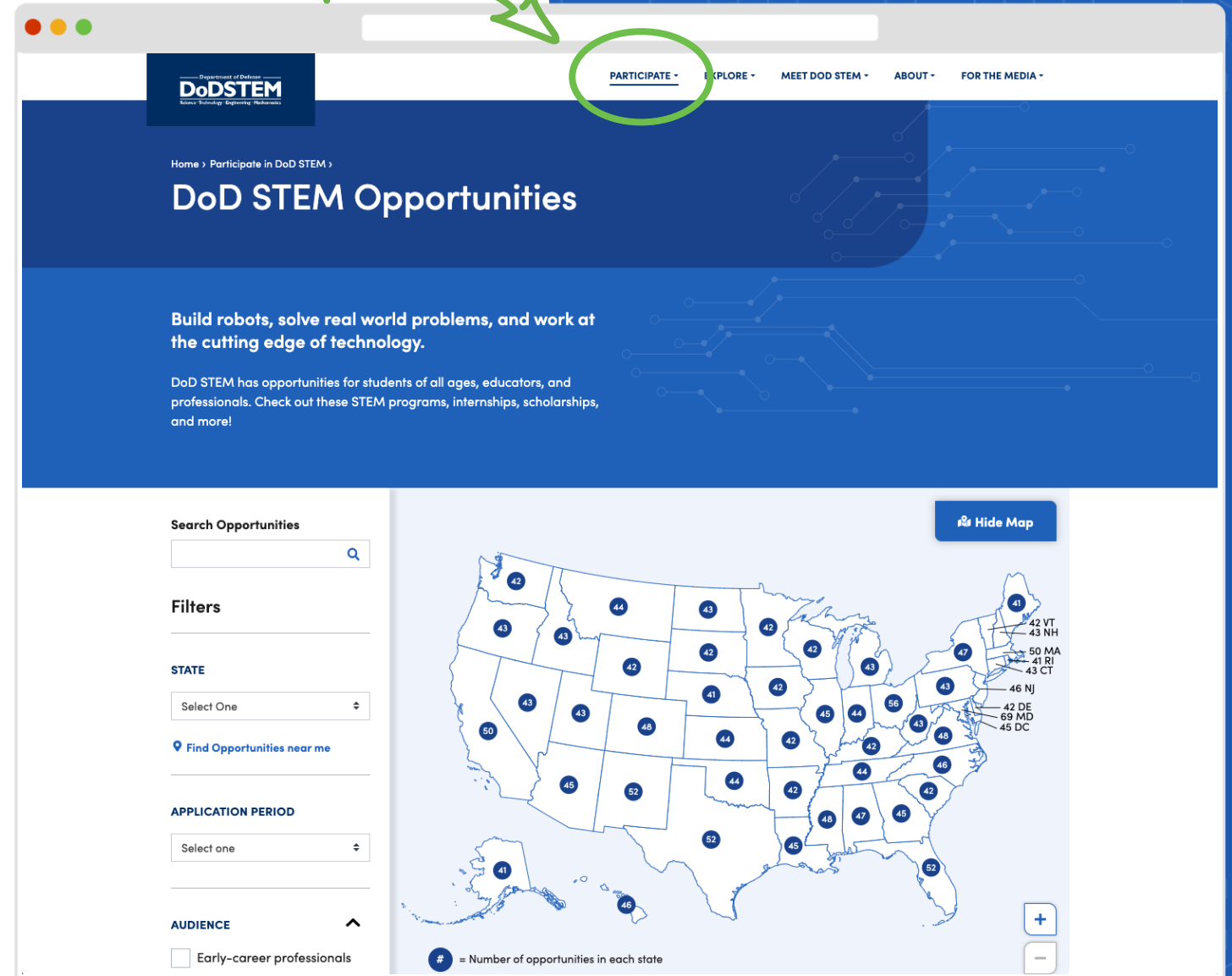
DSEC is a collaborative partnership between academia, industry, not-for-profit organizations, and government that aims to broaden STEM literacy and develop a diverse and agile future workforce to power the innovative defense infrastructure of the United States.



Participate in DoD STEM



[dodstem.us/
participate/
opportunities](https://dodstem.us/participate/opportunities)



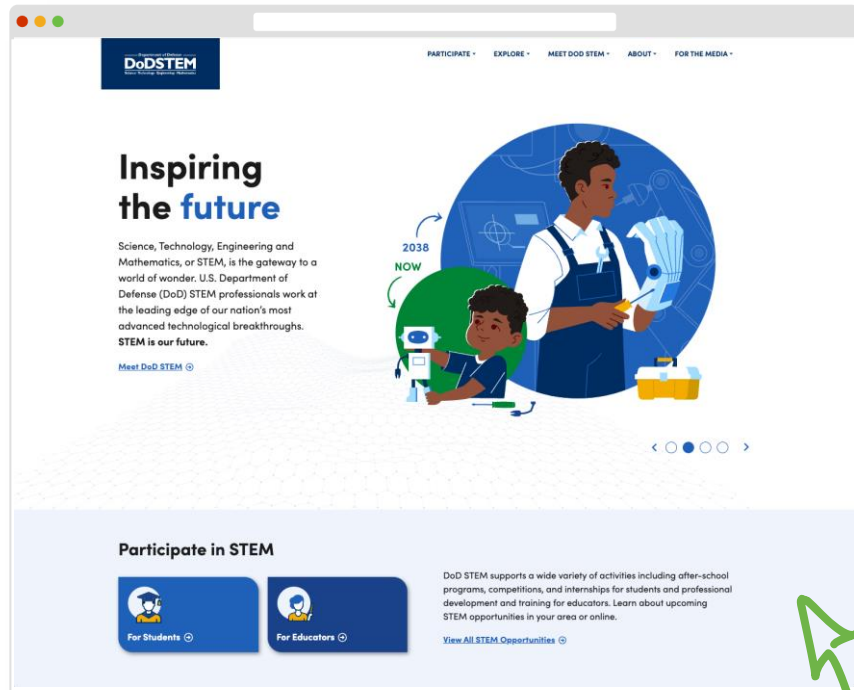
The screenshot shows the DoD STEM website interface. At the top, the navigation menu includes 'PARTICIPATE', 'EXPLORE', 'MEET DOD STEM', 'ABOUT', and 'FOR THE MEDIA'. The 'PARTICIPATE' link is circled in green, with a green arrow pointing to it from above. Below the navigation, the page title is 'DoD STEM Opportunities'. A sub-header reads: 'Build robots, solve real world problems, and work at the cutting edge of technology.' Below this, a paragraph states: 'DoD STEM has opportunities for students of all ages, educators, and professionals. Check out these STEM programs, internships, scholarships, and more!'

The lower section of the page features a search and filter interface on the left and a map of the United States on the right. The search bar is labeled 'Search Opportunities'. The filter section includes 'STATE' (a dropdown menu), 'Find Opportunities near me' (a location-based filter), 'APPLICATION PERIOD' (a dropdown menu), and 'AUDIENCE' (a checkbox for 'Early-career professionals').

The map shows the number of opportunities in each state, with a legend indicating '# = Number of opportunities in each state'. A 'Hide Map' button is located in the top right corner of the map area.

State	Number of Opportunities
AK	41
AL	46
AR	52
AZ	45
CA	50
CO	43
CT	43
DC	45
DE	42
FL	52
GA	48
IA	42
IL	42
IN	42
KS	44
KY	42
LA	42
MA	50
MD	49
ME	41
MI	42
MN	42
MO	44
MS	42
MT	44
NH	43
NJ	46
NM	42
NY	43
OH	42
OK	44
OR	43
PA	43
RI	41
SC	42
SD	42
TN	42
TX	44
UT	42
VT	42
WA	42
WI	42
WV	42
WY	42

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