

Request for Information

Request for Information: OUSD/R&E STEM/BIO RFI-WHS-07222020

Agency/Office: Washington Headquarters Services/Acquisition Directorate (WHS/AD) on behalf of the Office of the Under Secretary of Defense (Research & Engineering)

Title: National Defense Education Program (NDEP) Request for Information for the Office of the Under Secretary of Defense (Research & Engineering)

Location: Not applicable at this time

Customer Description: The Department of Defense (DoD) may use responses to this request for information (RFI) to inform future solicitation. The purpose of this RFI is to survey industry (to include non-profits, academia, large, and small businesses (e.g., 8(a), service-disabled Veteran-owned small business, HUBZone small business, small disadvantaged business, Veteran-owned small business, and woman-owned small business)) for relevant information. Hence, submitted responses should not be worded as proposals. In accordance with FAR 15.201(e), responses to this notice are not offers and cannot be accepted by the Government to form a binding contract. The Government will not reimburse respondents for any costs associated with submissions of the RFI being requested or reimburse expenses incurred to interested parties for responses.

Background/Overview: This RFI consists of three focus areas, which are outlined below:

- I. Science Technology, Engineering and Mathematics (STEM) education, outreach, and workforce development,
- II. Biotechnology education and workforce development, and
- III. Enhanced civics education.

NOTE: Respondents are not required to address all three focus areas, but should direct their responses to one of the areas, I, II, or III, listed above and background information is provided below. If respondents want to answer multiple foci, they can submit separate responses following the instructions in the [submission requirements](#).

I. STEM Education, Outreach, and Workforce Development – In accordance with 10 USC §2192, *Improvement of education in technical fields: general authority regarding education in science, technology, engineering, and mathematics*, NDEP through WHS/AD, is conducting market research to investigate effective approaches in STEM education, outreach, and workforce development, or STEM activities. The Federal STEM Strategy states, “The pace of innovation is accelerating globally, and with it the competition for scientific and technical talent. Now more

than ever the innovation capacity of the United States—and its prosperity and security—depends on an effective and inclusive STEM education ecosystem”. DoD is the largest employer of scientists and engineers in the United States. Therefore, the Department must maintain a robust pipeline of STEM talent by investing in pre-kindergarten through postsecondary STEM activities to ensure the DoD has enduring access to the best and brightest talent in the near-, mid-, and long-term.

This RFI explicitly encourages projects that improve the capacity of education systems and communities to create impactful STEM educational experiences for students and teachers, and prepare an agile, diverse 21st century technical workforce.

Response(s) to the question(s) below should focus on effective models with specific efforts in at least one of the following:

- Reaching/attracting military connected students to STEM opportunities ¹
- Providing meaningful STEM experiences for students and teachers especially those from underserved populations ²
- Fostering/leveraging partnerships and ecosystems to amplify reach and impact of STEM activity

Questions to address:

Respondents can answer any of the questions #1 - #6, but are not required to respond to all questions #1 - #6. However, **all responses must address question #7.**

1. In light of the recent COVID-19 pandemic and its disruption of K-12 and higher education teaching and learning, what are effective alternative methods of delivering services or executing programs?

¹ FY2020 National Defense Authorization Act, Section 211, 10 USC §2192b Program on enhancement of preparation of dependents of members of armed forces for careers in science, technology, engineering, and mathematics

² DoD STEM defines Underserved populations as students that are dependents of members of the military, national guard and reserves or military connected; students who are eligible to receive Free and Reduced-price Meals—FARMS; Students belonging to racial and ethnic minorities that are historically underrepresented in STEM (i.e., Alaska Natives, Native Americans, Blacks or African Americans, Latinx/Hispanics, Native Hawaiians and other Pacific Islanders); Students with disabilities; Students who are English language learners (ELLs); First-generation college bound students;; Students in rural, frontier, or other Federal targeted outreach schools; and Females in certain STEM fields where they remain underrepresented (Gender) (e.g., physical science, computer science, mathematics, or engineering)

2. What educational programs can be developed and implemented at K-12 and/or postsecondary education to support DoD science and technology priority areas (<https://www.cto.mil/modernization-priorities/>)?
3. What are effective ways in preparing postsecondary STEM students to easily transition into STEM careers in the defense industrial base?
4. Where are the gaps in promoting computational and digital learning in K-12 education? What activities can lend to filling these gaps?
5. What are effective ways to engage students where disciplines converge through transdisciplinary teaching and learning, innovation, and/or invention education in formal and informal settings?
6. What are effective ways to address problems in the retention of students, especially underserved students, in undergraduate science and engineering classes/majors?
7. What are effective metrics in measuring program impact relative to STEM education, outreach, and workforce development?

II. Biotechnology Education and Workforce Development - To ensure enduring US leadership in the bioeconomy³, it is critical to support education and training in biotechnology⁴ to develop a robust bioindustrial workforce. WHS/AD invites responders to provide information in support of a potential future solicitation for a biotechnology education and workforce development (EWD) program. We ask respondents to align their inputs with one or more of the three following areas of interest:

- Competition model; to inspire the next-generation biotechnology workforce
- Education and/or curriculum support; to develop a foundation in biotechnology and related fields
- Training/re-training support; to support reskilling or upskilling towards careers in biotechnology

³ <https://www.whitehouse.gov/wp-content/uploads/2019/10/Summary-of-White-House-Summit-on-Americas-Bioeconomy-October-2019.pdf>

⁴ <https://www.cto.mil/modernization-priorities/>

Questions to address:

1. What is the current state of the biotechnology education and workforce in the US and what are the limits of current practice?
2. What skill sets and capabilities are most important to foster in the future biotechnology workforce? Are there different skills and capability needs for different components of the biotechnology workforce?
3. What existing biotech or non-biotech EWD programs, program elements, or models could be leveraged or applied to support biotechnology EWD? What are the strengths and/or weaknesses of these example(s)?
4. At what educational level would future workforce benefit the most from EWD support (e.g.K-12, post-secondary, adult training)?
5. How can inclusion and participation of minority and under-represented groups be encouraged in biotechnology? What are the current barriers to increased minority and under-represented group participation in biotechnology? How can these barriers be addressed and overcome?
6. What metrics could be used to measure progress or success?
7. What level of investment would be meaningful?

III. Enhanced Civics Education - WHS/AD is requesting information from interested parties on potential capabilities or programs that might address the requirement to establish a pilot program on enhanced civics education program, as directed by Section 234 of the National Defense Authorization Act for Fiscal Year 2020. The purpose of the pilot program is to provide enhanced civics education in collaboration with DoDEA and/or JROTC on the following topics:

- Critical thinking and media literacy.
- Voting and other forms of political and civic engagement.
- Interest in employment, and careers, in public service.
- Understanding the United States law, history, and Government.
- The ability of participants to collaborate and compromise with others to solve problems.

Specifically, these capabilities or programs should contribute to the types of support authorized under this pilot, including:

- the development or modification of curricula relating to civics education;
- classroom activities, thesis projects, individual or team projects, internships, or community service activities relating to civics;

- collaboration with government entities, nonprofit organizations, or consortia of such entities and organizations to provide participants with civics-related experiences;
- civics-related faculty development programs;
- recruitment of educators who are highly qualified in civics education to teach civics or to assist with the development of curricula for civics education;
- presentation of seminars, workshops, and training for the development of skills associated with civic engagement;
- activities that enable participants to interact with government officials and entities;
- expansion of civics education programs and outreach for members of the Armed Forces, dependents and children of such members, and employees of the Department of Defense; and
- opportunities for participants to obtain work experience in fields relating to civics.

Such support as described can only be provided to eligible entities, which are limited to either a local education agency that hosts a unit of the Junior Reserve Officers' Training Corps, or a school operated by the Department of Defense Education Activity (or some combination of these two).

Questions to address:

1. In light of the recent COVID-19 pandemic and disruption of traditional in-person classroom teaching and learning, what are effective alternative methods of delivering services or executing programs in civics?
2. What are effective ways in engaging students in meaningful experiences in civics relative to the topics mentioned above?
3. What metrics should be used to measure program impact?
4. What are effective ways in scaling up these types of programs? What are some of the challenges in scaling programs?

Requirement: All qualified, experienced, and capable sources are welcome to respond to this RFI.

Responses for:

[I. STEM Education, Outreach, and Workforce Development](#) - should include capability statements and no more than three (3) specific examples of prior successful programs. Large-scale and small-scale examples of programs are of equal interest. Your capabilities should cover any and all areas of focus delineated above. There is no target of years in relevant experience if a program has evidence-based effectiveness and proven results.

[II. Biotechnology Education and Workforce Development](#) may include capability statements and examples of prior successful program, but are not required.

[III. Enhanced Civics Education](#) should include capability statements and no more than three (3) specific examples of prior successful programs. Large-scale and small-scale examples of programs are of equal interest. Your capabilities should cover any and all areas of focus delineated above. There is no target of years in relevant experience if a program has evidence-based effectiveness and proven results.

In addition, please provide the following Point of Contact information for all responses:

Company:

Address:

Point of Contact:

Phone Number:

Email Address:

Business Size and Classification: *[example, Large Business, Small Business, 8(a), Woman-Owned/Economically Disadvantaged Woman-Owned, Historically Underutilized Business Zone (HUBZone), Veteran-Owned, Service-Disabled Veteran-Owned)]*

Security Clearance: No security clearance is required for this requirement

NAICS recommendations:

- 541713 Research and Development in Nanotechnology
- 541714 Research and Development in Biotechnology
- 541715 Research and Development in the Physical, Engineering, and Life Sciences;
- 541720 Research and Development in the Social Sciences and Humanities;
- 611110 Elementary and Secondary Schools;
- 611310 Colleges, Universities, and Professional Schools;
- 611430 Professional and Management Development Training;
- 611519 Other Technical and Trade Schools;
- 611691 Exam Preparation and Tutoring;
- 611710 Educational Support Services;
- 712110 Museums;
- 813211 Grantmaking Foundations
- 923110 Administration of Education Programs;

Submission Requirements: All responses to the RFI should be submitted via e-mail to osd.dodstem@mail.mil following the [Schedule of Events](#) below. The government is contemplating holding an informational workshop/webinar after the close of the RFI. If you

would like to participate, RSVP to the email address provided and state I, II, and/or III from the areas of interest on page 1. **Please no phone calls.**

Schedule of Events		
Event	Date	Time
Questions Regarding RFI	10 August 2020	11:59 PM Eastern
FAQ Posting	14 August 2020	
RFI Responses Due	28 August 2020	11:59 PM Eastern

There is a maximum page limitation of six (6) pages:

- four (4) pages for the responses to questions under I, II, or III
- two (2) pages for the capability statement

All responses must be typed, single spaced using 12 point, Times New Roman, font, within an 8.5 by 11 inch page size, in Adobe Acrobat PDF (.pdf) or Microsoft Word files. No hard copy or facsimile submissions will be accepted. Cover letters and extraneous materials (brochures, etc.) will not be considered.

All submissions shall be at the UNCLASSIFIED level and shall clearly mark proprietary information. All submissions shall include contact information for the individual and/or organization (as appropriate) making the submission.

At the discretion of the Office of the Under Secretary of Defense (Research & Engineering), responders may be contacted for further clarification or additional information; if you do not wish to be contacted please indicate so in your response.