



DEPARTMENT OF THE NAVY  
OFFICE OF THE SECRETARY  
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WASHINGTON DC 20350-1000

SECNAVINST 3900.45A  
CNR  
13 May 2019

SECNAV INSTRUCTION 3900.45A

From: Secretary of the Navy

Subj: NAVAL SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS  
POLICY AND COORDINATION

Ref: (a) 10 U.S.C. Chapter 111

Encl: (1) Structure

1. Purpose. To define policy, responsibilities, and authorities for the coordination and alignment of Naval Science, Technology, Engineering, and Mathematics (STEM) education and outreach programs.

2. Cancellation. SECNAVINST 3900.45.

3. Applicability. This instruction applies to all U.S. Navy and Marine Corps installations, commands, activities, units, field offices executing STEM education and outreach programs, and all programs, activities, and projects, including those that operate under reference (a).

4. Policy. The Department of the Navy (DON) shall give special consideration to STEM education and outreach programs in order to foster a highly competent and diverse Total Force STEM talent pipeline and to meet mission-critical Naval STEM workforce goals.

5. Objective

a. The DON must be able to recruit, employ, and develop a competent, diverse STEM workforce. The STEM workforce includes Naval civilians and active duty Sailors and Marines, as well as Navy and Marine Corps Reserve components. The focus of DON STEM programs is threefold:

(1) To inspire, engage, and educate the next generation of scientists and engineers, technology professionals, and medical professionals;

(2) To employ, retain, and develop our diverse civilian and military technical workforce;

(3) To collaborate across the Naval STEM enterprise and with other agencies to maximize benefits to the DON.

b. The Naval STEM program shall focus on measuring and improving the proficiency of the DON workforce in relevant STEM-intensive fields, and shall work to complement the efforts of other agencies engaged in STEM funding and programs.

6. Background. A world-class, diverse STEM workforce enables the DON to maintain technological superiority across missions and protect its Sailors and Marines at home and abroad. STEM programs are deliberate investments in the current and future DON workforce, which enhance the Department's ability to meet present and future warfighting challenges. STEM development begins with DON STEM outreach programs at the pre-kindergarten through 12th grade levels, continues through undergraduate and graduate school, supports student advancement into post-doctoral work, and continues through all stages of their STEM professions.

## 7. Responsibilities

a. Assistant Secretary of the Navy (Manpower and Reserve Affairs) (ASN (M&RA)). ASN (M&RA) has responsibility for personnel policies and functional community management of the military (Active and Reserve) and civilian workforce. As such, ASN (M&RA) will monitor DON implementation of STEM workforce policies as they pertain to DON personnel and community management.

b. Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN (RD&A)). ASN (RD&A), in coordination with ASN (M&RA), will monitor DON implementation of STEM workforce-related community management policy for civilian personnel.

c. Chief of Naval Research (CNR). The CNR is the DON Science and Technology Executive and the Naval STEM Executive. As the Naval STEM Executive, CNR shall provide direction to the Naval STEM Coordination Office and shall serve as the Chair of the Naval STEM Executive Board (NSEB) to provide organizational structure for the review of policy and alignment of Naval STEM

efforts. Additionally, the CNR shall issue implementing directives, as necessary, to define and delineate further STEM responsibilities and duties, as set forth in this instruction.

8. Structure. See enclosure (1).

9. Action

a. Naval STEM stakeholder organizations shall identify, to the Naval STEM Coordination Office, Senior Executive Service (SES), or Flag STEM champions and federal STEM action officers.

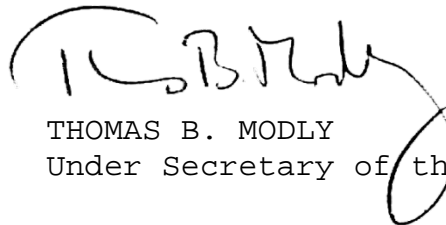
b. The NSEB shall review this instruction to assess its effectiveness and propose any required changes.

10. Records Management

a. Records created as a result of this instruction, regardless of format or media, must be maintained and dispositioned according to the records disposition schedules found on the Directives and Records Management Division (DRMD) portal page:

<https://portal.secnav.navy.mil/orgs/DUSNM/DONAA/DRM/SitePages/Home.aspx>.

b. For questions concerning the management of records related to this instruction or the records disposition schedules, please contact your local Records Manager or the DRMD program office.



THOMAS B. MODLY  
Under Secretary of the Navy

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<https://www.secnav.navy.mil/doni/>.

**STRUCTURE**

To efficiently align STEM efforts across the Navy and Marine Corps, the following have been formed:

1. The NSEB. This board provides organizational structure for the review of policy and alignment of Naval STEM efforts, thus ensuring a coordinated and effective, Navy-wide and Marine Corps-wide STEM strategy. The board will convene annually, or as requested by the Naval STEM Executive, and shall:

a. Provide recommendations to the Secretary of the Navy, Chief of Naval Operations, and Commandant of the Marine Corps regarding STEM education and outreach goals and priorities;

b. Approve the Naval STEM Strategic Plan;

c. Serve as the coordinating body for Total Force (uniformed and civilian) STEM skills gap identification and analysis;

d. Develop policies to remove institutional barriers to Navy-wide and Marine Corps-wide STEM program collaboration and workforce goals;

e. Inform and approve yearly plans for particular areas of programmatic emphasis;

f. Define the STEM workforce requirements and provide guidance how that workforce is identified; and

g. Include the following Flag Officers and Senior Executives or their designees as members of the NSEB:

(1) Chief of Naval Research (Chair);

(2) ASN (M&RA) (Member);

(3) Chief of Naval Personnel (Member);

(4) Commander, Marine Corps Combat Development Command (Member); and

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(5) Superintendent, United States Naval Academy  
(Member).

2. The Naval STEM Coordination Office. This office serves as the central coordination and information resource for Naval STEM efforts and will be managed by the Naval STEM Executive. Day-to-day tasks and responsibilities of the Naval STEM Executive, Management of Department of Defense STEM funding, as well as overall Navy-wide and Marine Corps-wide STEM reporting and coordination will be managed out of this office. This office will also be responsible for drafting and refining the Naval STEM Strategic Plan, in coordination with Naval STEM Stakeholder Organizations.

3. Naval STEM Stakeholder Organizations. Localized and community Naval STEM education and outreach efforts will be managed and executed at the command or organization level. The Naval STEM Stakeholder Organizations shall designate SES or Flag STEM champions and federal action officers to implement STEM education and outreach activities. Occasionally, a meeting of the SES and Flag STEM champions will be convened.

4. The Naval STEM Stakeholder Working Group (NSSWG). This working group directly supports Naval STEM Executive and the members and activities of the NSEB. The NSSWG will be established by the Naval STEM Executive and facilitated by the Naval STEM Coordination Office, located at the Office of Naval Research. The NSSWG will meet quarterly and shall:

a. Provide recommendations to the NSEB regarding policies, implementation strategies, metrics and evaluation tools, and reporting processes;

b. Draft the Naval STEM Strategic Plan (in collaboration with the Naval STEM Coordination Office) for approval by the NSEB;

c. Report to the NSEB annually on STEM activities, budgets, and other information deemed important by the NSEB;

d. Include action officer federal designees from Naval STEM Stakeholder Organizations. These organizations include:

(1) ASN (M&RA);

(2) ASN (RD&A);

(3) Deputy Chief of Naval Operations (Manpower, Personnel, Training and Education), including the Naval Recruiting Command;

(4) Deputy Commandant (M&RA);

(5) DON Chief Information Officer;

(6) Bureau of Medicine and Surgery;

(7) Naval Systems Commands;

(8) Commander, Navy Installations Command;

(9) Office of Naval Research;

(10) Naval Research Laboratory;

(11) Director, Innovation, Technology Requirements, and Test and Evaluation (OPNAV N84);

(12) Marine Corps University;

(13) Naval Postgraduate School;

(14) United States Naval Academy;

(15) Naval Operational Type Commands (as appropriate);

and

(16) Additional Naval STEM Stakeholder Organizations will be included, as recommended by the Naval STEM Executive in consultation with the NSEB. Other representatives may be invited by the Naval STEM Executive based upon the meeting agenda.