**DOD Science and Engineering Best Practices in STEM Outreach**

As the first part of a multi-year effort funded by DoD STEM to improve STEM education and increase DoD STEM career awareness, 72 DoD scientists and engineers from representing the 6 Armed Forces attended a workshop in DoD emergent technologies.

**DON Science and Engineering Best Practices in STEM Outreach**

In a continuing effort to expand and improve Naval STEM Outreach, USNA STEM provided virtual training to Department of Navy scientists and engineers from around the nation, sponsored by ONR and Ernst Volgenau.

**STEM Outreach to DoDEA Schools**

USNA STEM Center supported DoDEA schools with a STEM Fair and session at the Pac South Virtual Teaching Conference. Newly-trained DoD scientists and engineers also participated in hands-on, virtual classroom visits with DoDEA schools in Americas, Europe, and Pacific, leading students in interactive science and engineering projects.
FIRST Robotics Competition
Ten Midshipmen, with the support of STEM Center staff, provided volunteer time in a remote format to FIRST Robotics FTC competitions, which were held in-person in small groups per local COVID guidelines in Maryland and Virginia.

Girls Only STEM Day Virtual Events
Using hands-on interactive modules, Midshipmen provided virtual, interactive sessions to hundreds of middle school girls to foster their interest in STEM subjects, through the sponsorship of ONR, Ernst Volgenau and the Naval Academy Foundation. This multi-day event including virtual classroom visits to regional schools as well as a webinar.

Maryland Regional SeaPerch Virtual Competition
In this virtual event, USNA STEM Faculty and Midshipmen interviewed teams and scored their submitted documents detailing the build of a SeaPerch underwater remotely operated vehicle (ROV), sending five teams to the International Competition this June.

High School Girls STEM Night
Young women from across the globe attended a virtual program focused on aerospace science and engineering. A joint effort with the USNA Departments of Physics and Aerospace, the program was sponsored by ONR, Ernst Volgenau, Maryland Space Grant Consortium, and the Naval Academy Foundation. Sessions included hands-on projects and a live tour of the Aero lab.

Maryland MESA Interactive STEM Day
USNA Midshipmen led a virtual STEM event for elementary schoolers throughout the state in the Maryland Mathematics Engineering Science Achievement (MESA) program. In a collaboration with Johns Hopkins Applied Physics Lab, the program led students in observation, hypothesis, scientific method, measurement and engineering design.

NESA STEM Merit Badge Jamboree
Midshipmen led the virtual day-long Jamboree for over 700 Scouts, providing requirements for a variety of STEM Merit Badges, virtual Laboratory tours, and an Admissions briefing. USNA STEM Center supports Midshipmen volunteers for this annual event with technical expertise, project-based activities, and event logistics.
Baltimore Building STEPS STEM Event
Faculty and Midshipmen led virtual hands-on activities for participants in the Baltimore Building STEPS program, a community non-profit encouraging high school, college and career success. USNA STEM Center, with support from Office of Naval Research, provided supply kits to the students for engineering and science projects.

Chicago Schools STEM Initiative
A new initiative to provide STEM programming for Chicago area high schoolers, was held virtually in conjunction with the USNA Office of Admissions, with sponsorship from Avantor Corporation, ONR, and Ernst Volgenau. Midshipmen served as near-peer mentors for 9th and 10 graders via repeated virtual visits with 3 participating schools.

Hood College Pre-Service Educator Workshop
As part of the Hood College STEM 101 event to introduce STEM majors to the Noyce scholarship for teacher certification, USNA STEM led a virtual session to immerse participants in STEM project-based learning methodology. ONR sponsors USNA STEM educator programs to promote high quality STEM education.

Philadelphia Pre-Service Educator Workshop
In collaboration with Philadelphia Regional Institute for STEM Educators (PRISE) and with support from ONR, teachers from the Philadelphia area, including pre-service and early service Noyce scholars, attended a USNA STEM virtual workshop in project-based learning aligned with real-world applications.

DoDEA Europe JSHS Awards
The Hydromechanics and Aerospace labs and Ocean and Aerospace Engineering Departments worked with USNA STEM to present the Keynote Program at the Regional JSHS Awards Ceremony for DoDEA Europe. The event included video lab tours and live panel discussions with USNA Faculty and Midshipmen.

Navy Medicine STEM Outreach
Hospital Corpsmen from Naval Health Clinic Annapolis conducted STEM outreach through virtual classroom visits and a video clinic tour with local elementary, middle and high schools in Anne Arundel County Public Schools.
Thank you for your generous support and ongoing acknowledgement of the positive impact these programs have on our nation’s students and educators.

STEM Spotlight: With the Navy Office of Community Outreach (NAVCO) and sponsored by ONR, USNA STEM supported the Office of Admissions with midshipmen ‘STEM Spotlight’ Videos highlighting content from the majors with STEM activities that can be done at home. Videos were used to support virtual Navy Weeks.

**NAVY WEEK: FLORIDA**
Midn 1/C Kamila Lamud, Computer Science, discusses conditional statements in computer programming.

**NAVY WEEK: TEXAS**
Midn 4/C Maximilian Kimmel, Aerospace Engineering, explores Bernoulli’s Principle in a hands-on rotor demonstration.

**NAVY WEEK: WASHINGTON**
Midn 1/C Christina Domanowski, Operations Research, discusses optimization as it applies to a humanitarian mission.

**Midshipmen Awards**
Thirteen graduating 1/C STEM Midshipmen were honored for their outstanding commitment to STEM educational outreach during their USNA careers, receiving the Military Outstanding Volunteer Service Medal for 500 hours of community service. Midn 1/C Elana Kozak was also awarded the annual USAA Service and Leadership Award in STEM Education and Outreach.

**Upcoming Events Summer 2021**

**Summer Heroes Youth Program**
Sponsored by Naval Academy Foundation and Exelon Corporation, middle schools in the region will participate in over 100 virtual, interactive classroom sessions in June led by Midshipmen mentors, promoting interest and confidence in STEM skills and topics.

**Summer STEM Program**
In collaboration with the USNA Office of Admissions, 840 high school students will participate in week-long virtual sessions held in June. Extensive supply kits sent to each student will be used to complete science and engineering projects directed by STEM Faculty and Midshipmen. With the Society of Military Engineers (SAME), USNA STEM will also provide a week-long virtual Engineering Camp for 100 high school students.

**Navy Week: Buffalo, NY**
USNA STEM will support Buffalo Navy Week in June with a live, virtual session designed to highlight Navy technology and STEM, presented by midshipmen.

**Set Sail Summer: STEM Educator Training**
Educators from schools around the nation and DoDEA schools overseas will attend STEM Educator Training in Annapolis, MD, sponsored by ONR and DoDEA. Week-long professional development sessions will be offered in July.

**Sea Air Space STEM Expo**
USNA STEM will present a hands-on science station at the Navy League’s Global Maritime Exposition at National Harbor, MD on August 1.