

Approved, DCN# 543-1068-23



Science, Technology, Engineering & Mathematics

Outreach / Workforce Development



Blue Integrated Partnerships - Building & Mentoring a Diverse Workforce Ready to Solve The Grand Challenges of 2050 through utilizing the Summer Institute for Sustainability & Climate Change



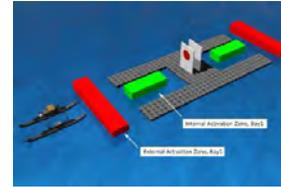
Veterans to Energy Careers (VTEC)- A national program that helps student veterans translate their military experience into sustainable energy careers through internships and professional development.



The Naval Diversity Equity and Inclusion Workforce Development (NDEI-WD) Roadmap will outline an ONR-wide strategy for stabilizing and strengthening the science, technology, engineering, and math (STEM) workforce across the NRE



Penn State Intern PipelinE Links to Navy Engineering (PIPELINE) is a workforce development program to prepare students for jobs as civilian engineers and scientists for the U.S. Navy



Virtual Environment to Support Ocean Robotics/Virtual RobotX Challenge (VRX)- Support the advancement of Maritime Autonomy with innovative, open-source robotic simulation, and use this simulation to execute the Virtual RobotX (VRX) Competition



Naval Innovation, Science and Engineering (NISE) - Create workforce development programs in key technology, entrepreneurship, and policy areas to meet the Navy's and Marine Corps' needs



Center for Naval Research & Education – Increase number of STEM graduates that join Navy/DoD/academia and Develop a diverse community of researchers who conduct research in thematic areas relevant to the Navy.



Consortium on Naval Enterprise Pathways – CoNEP - Mission is to train and broaden the next generation of engineers for the Naval R&D Enterprise and Industry. Participants include GWU, Howard Univ. & Catholic Univ.

Providing a capable and knowledgeable future workforce

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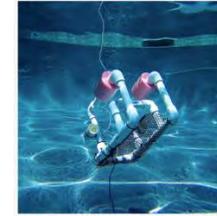


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Naval Enterprise Partnership Teaming with Universities for National Entrepreneurship (NEPTUNE) aligns university research with the National Defense Strategy (NDS) and establishes entrepreneurial practices to accelerate delivery of university-derived technologies and products to the defense and commercial sectors.



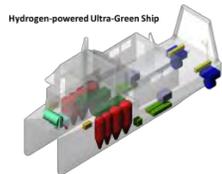
SeaPerch - An integrated STEM education program that engages students and educators through a real-world engineering design project oriented around building an underwater remotely-operated vehicle



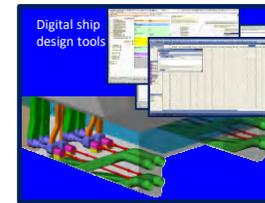
Promoting Electric Propulsion (PEP) - Provide an education and competition program to promote electric propulsion for small craft at US universities.



Naval Undersea Research Program (NURP) Increase the number of engineers and scientists in Navy laboratories developing undersea weapon and vehicle technology



Center for Innovation in Ship Design (CISD) - Ensure the Future Capability (People, Tools & Knowledge) of the Nation to Develop Innovative Ship Designs to Effectively Meet Defense Needs



Centers for Innovation in Naval Technology (CINT) - To sustain the capability i.e., people, tools, and knowledge, to develop future innovative naval technologies



Maritime RobotX Challenge - Expand the community of researchers and innovators capable of substantive contributions to the emerging field of autonomous, maritime vehicles operating in multiple domains (surface, underwater, air).



Electric Ship Research and Development Consortium (ESRDC) - Training Future Navy Workforce in Modelling and Simulation, Energy, Power, and Thermal Management of Advanced High Power Density Systems for Sea Platforms

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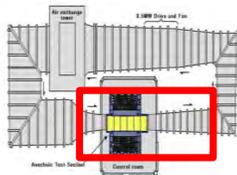
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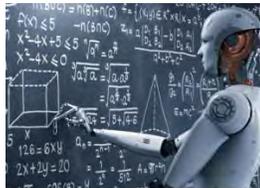
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Expanding Capacity for STEM Careers in Higher Education - Increase capability to offer workforce development and higher education in STEM disciplines to meet US Navy and Defense industry supply chain employers' workforce development and recruitment needs.



Common Research Wind Tunnel - Engage and train the STEM workforce in the areas of hydrodynamics and hydro acoustics



Scientific Artificial Intelligence (SciAI) - Balance research and workforce development in high priority technology domains which are evolving rapidly through a multi-university partnership focused on the realization of a human-machine partnership in scientific discovery



Alaska Regional Collaboration for Technology Innovation and Commercialization (ARCTIC)- Holistic approach that incorporates STEM education into all programmatic aspects, with specific focus on Education and Workforce Development



RoboBoat Student Competition - Annual competitions in the United States, utilizing a surface platform which student-led teams have designed and built, outfitting with sensors, propulsion, and controls.



Center for Turbulence Research (CTR) Postdoctoral training center with a focus on data-enabled computations and experiments of interest to the Navy



STEM Education for Tomorrow's Energy Leaders – Increase the development of renewable energy and energy efficiency (together, “clean energy”) in Alaska through collaboration, education and training



Let's Go Boys & Girls- provides support and resources to students from underrepresented communities from 9th grade onwards, including those transitioning into the workforce for the first time.

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ONR Sea Warfare and Weapons Department Science, Technology, Engineering & Mathematics *Outreach / Education*



Intelligent Data Management for Distributed Naval Platforms- Develop decision making tools for data management on board distributed naval platforms. The framework will include a combination of AI/ML- and physics-based models. Integer and Louisiana State Univ.



National Society of Black Physicists in and National Society of Hispanic Physicists Outreach - Organize workshops in conjunction with the NSBP Annual Conference focused on strengthening engagement to ONR/Navy to increase the pipeline and opportunities for NSBP members at all stages of their careers



Resilient Innovative Sustainable Economies via University Partnerships (RISE-UP)- Three states collaborating to build a world class model for solving dual-use maritime challenges by leveraging the states' unique assets. In the process, elevate the states' technology-based economies and workforces.



STEM Boot Camp Academy Educating public school science teachers in year-long professional development training to learn STEM, problem-based learning and other STEM pedagogies.

Providing a capable and knowledgeable future workforce