Course Introduction

TOPIC LEARNING OBJECTIVES

Upon successful completion of this topic, the student will be able to:

1. Recognize the diverse backgrounds of classmates based on their career biographical introductions.
2. Relate Engineering Duty Officer (EDO) responsibilities to Navy priorities.
3. Identify major EDO competencies and sub-specialties.
4. Recognize what distinguishes EDOs from other Navy officers.
5. Recognize the purpose of the EDO Basic Course.
6. Identify major topics in the curricula of the Basic and Reserve courses.
7. Recognize the purpose of the EDO Senior Course.
8. Identify major topics in the EDO Senior Course Curriculum.
9. Given the Commanding Officer's expectations for and perspective on the Basic Course, identify student responsibilities.

STUDENT PREPARATION

Student Support Material

1. 2022 National Defense Strategy
2. CNO NAVPLAN 2022

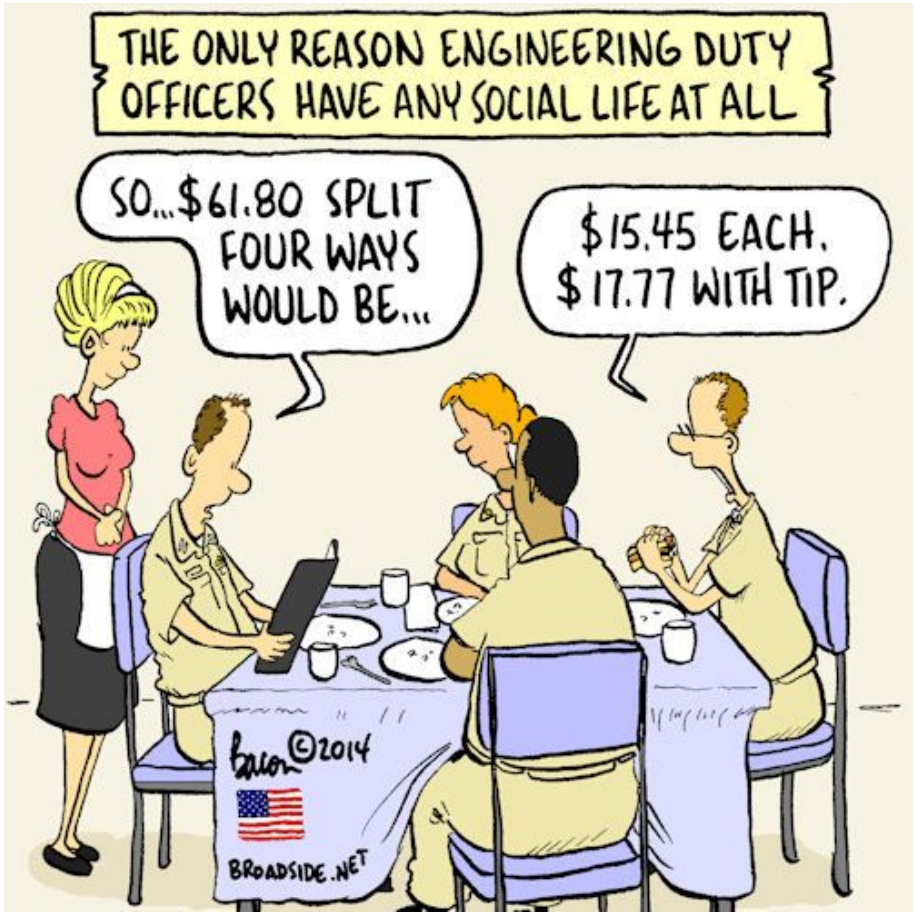
Primary References

1. Responsibilities and Procedures Concerning the Engineering Duty Officer School (NAVSEAINST 5400.56F)
2. EDO School Note "Non-Attribution Policy"

Additional References

1. Engineering Duty Officer Handbook
2. "Engineering Duty…A Career Perspective." NAVPERS 15310, December 1978
3. "Evolution of the Engineering Duty Officer in the United States Navy." CAPT Jerome J. Fee, USN (Ret.). Naval Engineers Journal, Winter 2001

EDOs as seen from the outside looking in…



Why Engineering Duty Officers usually drink alone

Welcome to Your School…and to the EDO Community!

Welcome

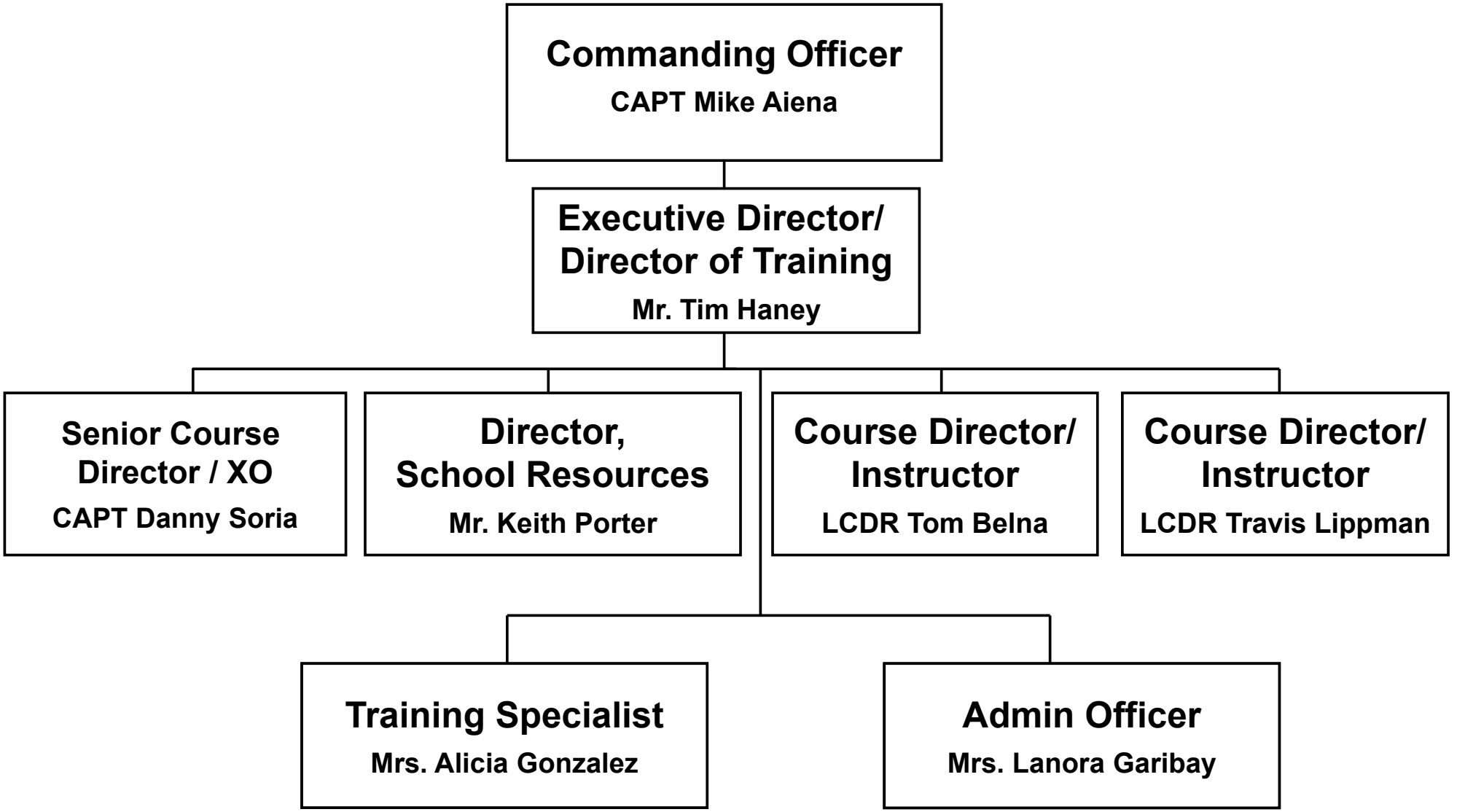
Naval Base Ventura County (NBVC)

Naval Education and Training Command (NETC)

Overview

- EDO School Organization
- Student Introductions
- EDO Community
- EDO School Courses
- CO Expectations

Engineering Duty Officer School Staff



CAPT Michael P. Aiena

- Born in New Orleans – GEAUX TIGERS!
- BS in History (USNA), MS in Applied Physics, (NPS)
- Surface Warfare Officer - USS ROBERT G. BRADLEY (FFG 49), USS LEYTE GULF (CG 55)
- Engineering Duty Officer - CSSQT Project Officer, NSWC Port Hueneme (Qual Tour)
- Assistant Program Manager (APM) for Mission Operations, PEO Space Systems, Navy Communications Satellite Program Office (PMW 146)
- US National Deputy for NATO SEASPARROW Project Office and Principal Assistant Program Manager for Surface EW and EO/IR, (PEO IWS 12, 2)
- Commanding Officer: NSWC Dahlgren Division Dam Neck Activity, NSWC Corona Division

CAPT Michael Aiena

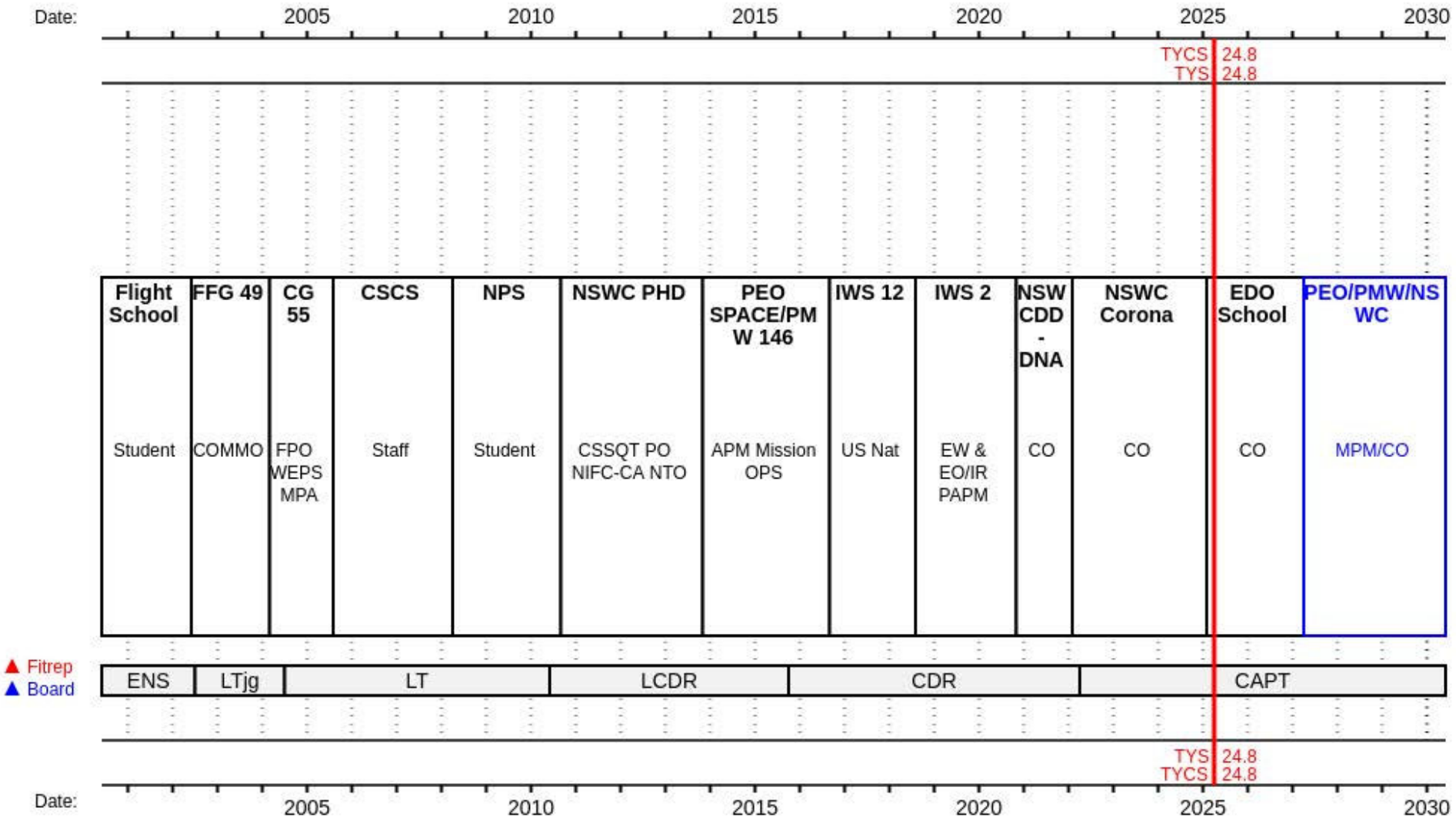
CO, EDO School

Career Goal: Major Program Manager, Combat Systems

Warfare Qual: Surface Warfare

Primary Mentor Group: CC
Secondary Mentor Group: IWE

DAWIA Certs: AA4 AN2 APM



Last Modified: 28-Feb-2025

Overview

- EDO School Organization
- Student Introductions
- EDO Community
- EDO School Courses
- CO Expectations

Introductions

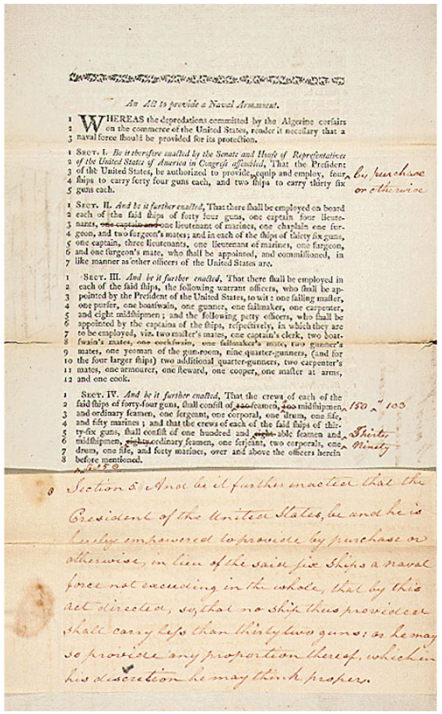
- ***PRINT*** the name you want to be called on the front and back of the tent card

Overview

- EDO School Organization
- Student Introductions
- EDO Community
- EDO School Courses
- CO Expectations

Establishing a Navy

- 1794 – U.S. House appoints a committee to prepare a report on what kind of naval force would be necessary to defend against the current threat (Pirates)
  - 20 Jan – Committee reported resolution to authorize the procurement of six Frigates
  - Act to provide naval armament (Naval Act of 1794)
    - Department of War recommends the construction of new frigates designed to be superior to any vessel of that class in European Navies
      - Acquisition Guidance (Some of the first)
        - » Minimize Labor cost by using government employees
        - » Distribute construction sites geographically to spread economic benefit



An Act to provide a Naval Armament.

WHEREAS the depredations committed by the Algerine corsairs on the commerce of the United States, render it necessary that a naval force should be provided for its protection.

SECT. I. Be it therefore enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the President of the United States, be authorized to provide, equip and employ, four ships to carry forty four guns each, and two ships to carry thirty six guns each. by purchase or otherwise

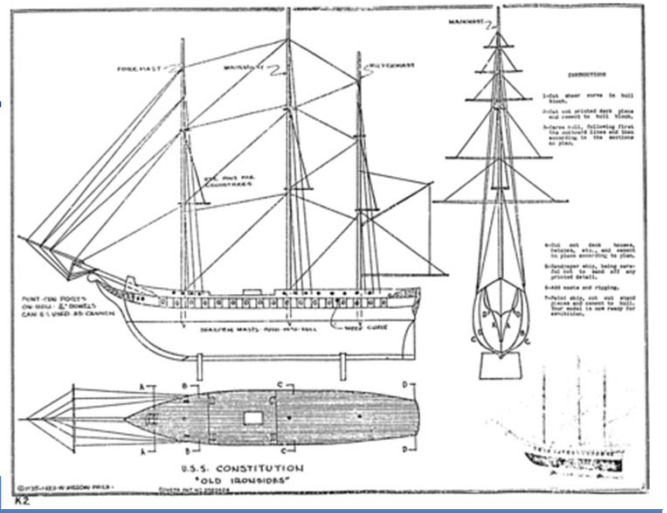
SECT. II. And be it further enacted, That there shall be employed on board each of the said ships of forty four guns, one captain four lieutenants, ~~one captain and~~ one lieutenant of marines, one chaplain one surgeon, and two surgeon's mates; and in each of the ships of thirty six guns, one captain, three lieutenants, one lieutenant of marines, one surgeon, and one surgeon's mate, who shall be appointed, and commissioned, in like manner as other officers of the United States are.

SECT. III. And be it further enacted, That there shall be employed in each of the said ships, the following warrant officers, who shall be appointed by the President of the United States, to wit: one sailing master, one purser, one boatswain, one gunner, one sailmaker, one carpenter, and eight midshipmen; and the following petty officers, who shall be appointed by the captains of the ships, respectively, in which they are to be employed, viz. two master's mates, one captain's clerk, two boatswain's mates, ~~one cockswain~~, one sailmaker's mate, two gunner's mates, one yeoman of the gun-room, nine quarter-gunners, (and for the four larger ships) two additional quarter-gunners, two carpenter's mates, one armourer, one steward, one cooper, one master at arms, and one cook.

SECT. IV. And be it further enacted, That the crews of each of the said ships of forty-four guns, shall consist of ~~two hundred~~ seamen, ~~two~~ midshipmen, and ordinary seamen, one sergeant, one corporal, one drum, one fife, and fifty marines; and that the crews of each of the said ships of thirty-six guns, shall consist of one hundred and ~~eighty~~ able seamen and midshipmen, ~~eighty~~ ordinary seamen, one serjeant, two corporals, one drum, one fife, and forty marines, over and above the officers herein before mentioned. 150 ~ 103 Thirty Ninety

Section 3. And be it further enacted that the President of the United States, be and he is hereby empowered to provide by purchase or otherwise, in lieu of the said six ships a naval force not exceeding in the whole, that by this act directed, so that no ship thus provided shall carry less than thirty two guns; so he may so provide any proportion thereof, which he his discretion he may think proper.

1st EDO Jobs



- To support the six construction sites
  - Naval Constructor hired at each site
  - Navy Captains appointed as superintendents

U.S. Frigate	Launched	Disposition
CONSTITUTION	21 Oct 1797	Survivor, still in commission
PRESIDENT	1800	Captured by British in Jan 1815. Broken up in Portsmouth England, 1817
UNITED STATES	10 May 1797	Lost to Confederates Apr 10, 1861. Broken up 1865 in Norfolk, VA.
CONSTELLATION	07 Sep 1797	Broken up in 1853, Norfolk, VA
CONGRESS	1799	Broken up in 1836, Norfolk, VA
CHESAPEAKE	1799	Captured by British, July 1813. Broken up 1820

EDO Forefathers & Notables

- Joshua Humphreys (1751-1838)
  - Principal Constructor of the Navy in 1794
  - Charged (with five other naval architects) with the construction of six war ships for the initial naval needs

- ADM Hyman G. Rickover (1900-1986)
  - Established the modern standards of technical excellence
  - “Father” of the Nuclear Navy
  - Only 4 star Engineering Duty Officer
  - Served 63 years on active duty (longest serving in military history)

EDO Forefathers & Notables

- RADM Wayne E. Meyer (1926-2009)
  - Father of AEGIS
  - Pioneer in systems engineering discipline
  - Developed the functional cornerstones of Detect, Control, Engage
  - Coined the phrase: “Build a Little, Test a Little, Learn a Lot”

- RADM Kate Paige
  - First ASN (RD&A) Chief Engineer
  - First Technical Director of Missile Defense Agency’s Ballistic Missile Defense System
  - Program Director, AEGIS Ballistic Missile Defense

Engineering Duty Mission and Vision

- ***Mission:*** We design, develop, deliver, and sustain combat-ready naval power for our nation to fight and win—wherever, whenever, and however it chooses

- ***Vision:*** Our Navy wins in all domains by enabling the warfighter through our excellence in engineering, acquisition, maintenance, modernization, repair, and life-cycle ownership, strengthened by forging strategic partnerships at each opportunity

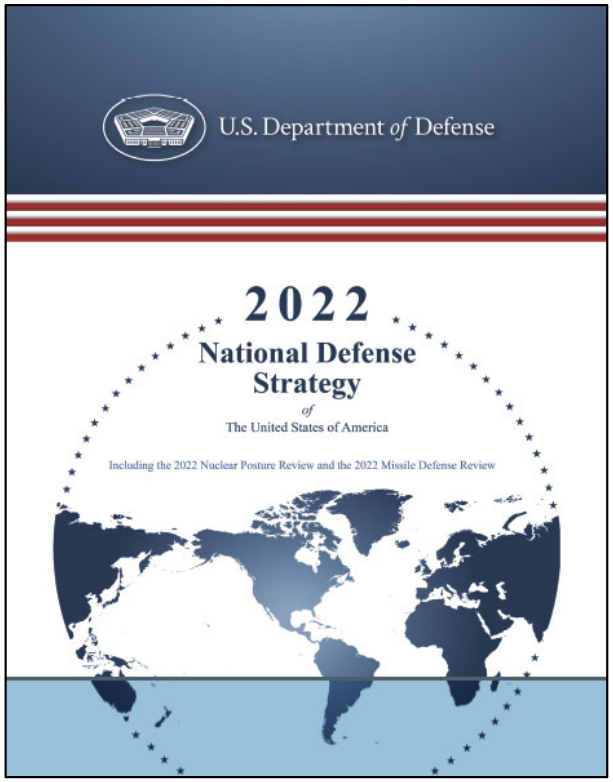
EDO Community Role

- To sustain combat readiness and build a Fleet for the future, the Navy requires a cadre of specialized, career Naval Officers who have:
  - Operational experience
  - Technical education and experience
  - Business savvy
    - Navy/DoD processes
    - Industry/business processes
  - Leadership skills
    - Large civilian personnel (CIVPERS) organizations
    - Peers of Industry leaders

Seapower through engineering

National Defense Strategy

- How DoD will contribute to advancing and safeguarding vital U.S. national interests – protecting the American people, expanding America's prosperity, and realizing and defending our democratic values
- The Defense priorities are:
  1. Defending the homeland, paced to the growing multi-domain threat posed by the Peoples Republic of China (PRC)
  2. Deterring strategic attacks against the United States, Allies, and partners
  3. Deterring aggression, while being prepared to prevail in conflict when necessary, prioritizing the PRC challenge in the Indo-Pacific, then the Russia challenge in Europe
  4. Building a resilient Joint Force and defense ecosystem



CHIEF OF NAVAL OPERATIONS NAVIGATION PLAN

FOR AMERICA'S WARFIGHTING NAVY
2024

WHO: UNITED STATES NAVY | **WHAT:** SEA CONTROL | **WHEN:** 2027 | **WHERE:** INDO-PACIFIC | **WHY:** READINESS FOR WAR | **HOW:** 2024 NAVIGATION PLAN

ACCELERATE

IMPLEMENT PROJECT 33

READY OUR PLATFORMS
Achieve and sustain 80% combat surge ready forces

OPERATIONALIZE ROBOTIC & AUTONOMOUS SYSTEMS
Move proven systems into the hands of the warfighters

FIGHT FROM THE MOC
Resource our MOCs as the weapons systems they are

RECRUIT AND RETAIN TALENT
Man deployers to 95%, reach 100% rating fill for AC and RC

DELIVER QUALITY OF SERVICE
Eliminate waitlists and provide quality Unaccompanied Housing

INVEST IN WARFIGHTER COMPETENCY
Improve Live, Virtual, and Constructive training

RESTORE INFRASTRUCTURE
Resource to sustain and recapitalize shore readiness

SUSTAIN

EXPAND THE WARFIGHTING ECOSYSTEM

5 KEY CAPABILITIES

HOW WE:
- SHOOT
- DENY
- MANEUVER
- DEFEND
- SUSTAIN

4 KEY ENABLERS

HOW WE:
- TRAIN
- COMMUNICATE
- OUTTHINK
- SCALE

INTENT

DELIVER THE NAVY THE NATION NEEDS

GET MORE READY PLAYERS ON THE FIELD

- We will fight in a **Joint and Combined warfighting ecosystem** to defeat the adversary's own system of war
- We must **build readiness and capability now** as we partner to scale industrial capacity and expand budgets
- We will **grow the force:** people, ships, submarines, aircraft, munitions, logistics, and networks

CLARITY OF PURPOSE

- We will **align the Navy Staff** to the needs of the **warfighters** and our **warfighting fleets**
- We do not need a radically new plan; **We need to move faster** with the plans we have
- To gain ground without losing speed, the Navy will execute the NAVPLAN **through existing processes**

OUR NORTH STAR: READINESS FOR SUSTAINED HIGH-END JOINT AND COMBINED COMBAT BY 2027

Distinguishing Characteristics

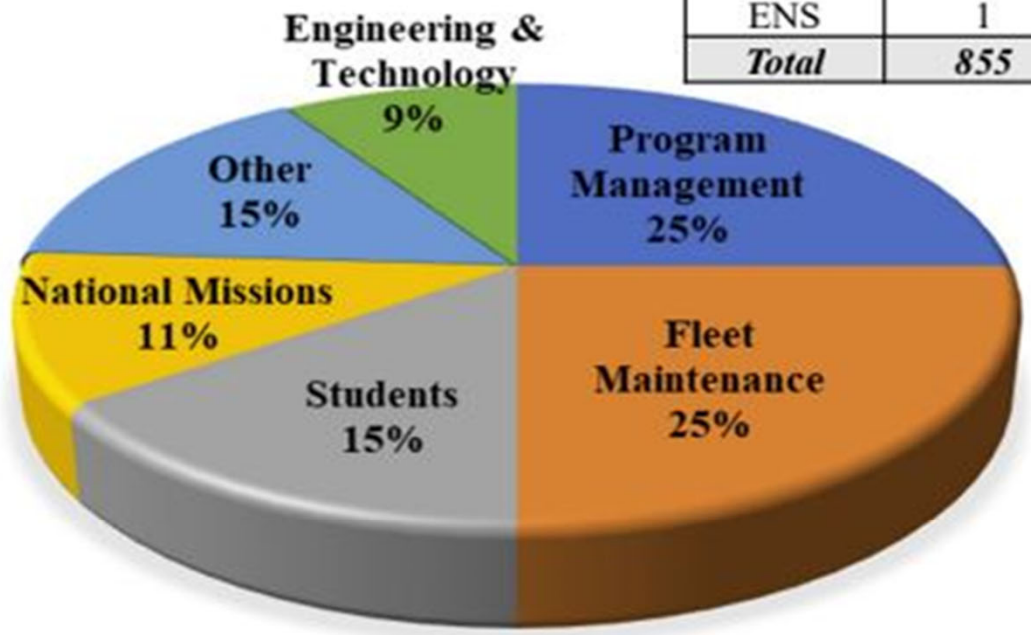
- We are Naval Officers….
  - Operational, warfighter experience
- We have an engineering/technical education
  - Technical master's degree
- We have a business education
  - DAWIA Career training & certification
- We are professionally trained
  - ED Basic Course
  - ED Senior Course
  - ED Captains Seminar
  - Engineering Duty Qualification Program [EDQP]
  - LEAN/Six Sigma

Unique within the acquisition/RL community

What EDs Do

- Fleet Maintenance (~25%)
  - Shipyards, RMCs, SRFs, TRFs (19%)
  - TYCOM Staffs (6%)
- Program Management (~25%)
  - PEOs (16%)
  - SUPSHIPs (9%)
- Students (~15%)
- National Missions (~11%)
  - Strategic Systems (6%)
  - Naval Reactors (3%)
  - Space (2%)
- Other (~15%)
  - Staffs (4%)
  - Sea Duty (4%)
  - Instructor Duty, Detailer, Other (3%)
  - TPPH (3%)
- Engineering & Technology (~9%)
  - Warfare/System Centers (5%)
  - HQ Directorates (4%)

	INV	BILLETS
Flag	12	10
CAPT	121	124
CDR	195	197
LCDR	250	254
LT	269	275
LTJG	5	7
ENS	1	0
Total	*855*	*867*



EDs provide Warfare-Qualified, Uniformed Leadership in Primarily Civilian Fields
~850 Officers Lead A Workforce of > 90,000 Civilians

Core Competencies

- Competencies of the Engineering Duty Officer community are common skills that should be understood and mastered by each officer:
  - Leadership
  - Technical acumen
  - Financial management
  - Contracting
  - DoD acquisition
  - Civilian Personnel (CIVPERS) management
  - Battle Damage Assessment and Repair (BDAR)

This course provides the foundation that you will build on the rest of your career

Sub-Specialty Areas

- Sub-specialties of the Engineering Duty Officer community:
  - Systems Engineering (SE)
  - Warfare Systems (WS)
  - Combat Systems (CS)
  - Hull, Mechanical & Electrical Systems (HME)
  - C4ISR Systems
  - Ordnance Engineering (ORD)
  - Fleet Maintenance (FM)
  - Program Management (PM)
  - Naval Architecture (NA)
  - Operational Engineering (OpE)
  - Diving & Salvage (D&S)
- Mentor Groups
  - Industrial Operations (IMG)
  - Surface Maintenance, Modernization & Readiness (SMMR) (formerly RMC)
  - Carriers (CVN CADRE)
  - Combat & Weapons Systems (Cannon Cockers)
  - Information Warfare (IWE)
  - Strategic Systems (SSP)
  - Submarines (UEDO)
  - Surface Ships (SURFPACK)

Sub-specialties and Mentor Groups are loosely correlated

Overview

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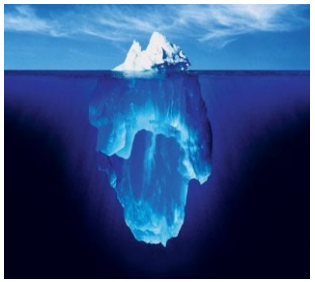
EDO School

- School mission
  - To improve the professional proficiency of Engineering Duty Officers through training
  - To foster and serve as a focal point for Engineering Duty Officer community development of officer competency and character
- Three primary courses
  - Basic Course (Active and Reserve Components)
  - Senior Course (Active and Reserve Components)
  - Captain Seminar (Active and Reserve Components)

Integrated Active-Reserve approach to competency and character development

Basic Course

- Purpose (stated)
  - Provide the fundamental skills and practical knowledge necessary to assume responsibilities for management of engineering tasks associated with
    - Research and Development (R&D)
    - Design
    - Acquisition
    - Construction
    - Maintenance and modernization of ships and systems
- Purpose (unstated)
  - Transition from URL to RL roles and responsibilities
  - Begin developing personal and professional networks
  - Familiarize with mentoring/career planning process/tools
  - Set foundation for self-awareness/self-improvement journey



Prepare you for an effective and rewarding initial EDO tour

Basic Course

- Highlights
  - 5-week course length
    - 2 weeks for Reserve Component
  - Mix of staff and visiting instructors
  - ACQ 1010, 2020, 2030 and PMT 2570V Equivalency
    - 4 of 6 DAU PM (Practitioner) training requirements
    - Active Component only
  - MBTI/CPI-260 assessments
    - Self-awareness
    - Team dynamics
  - One-on-one detailer and senior Mentor Group officer counseling

Basic Course Focus

- Obtain knowledge and awareness of:
  - Plans, programs, policies, and procedures used to accomplish life-cycle engineering of naval ships and ship systems
  - Organizations where EDOs have major responsibilities
    - Practical aspects of EDO career planning
  - Industrial technologies, processes and procedures used in the production & maintenance of naval ships and ship systems
  - Planning, Programming, Budgeting and Execution (PPBE)
  - Working with, for and leading civilians

Basic Course Focus

- Obtain knowledge and awareness of:
  - Program funding, field activity financial management and other financial topics
    - Shipyards, Supervisors of Shipbuilding, Regional Maintenance Centers and Warfare Centers
  - Acquisition and contracting laws
  - Leadership/Self-assessment/Warrior Toughness
- Practical application of:
  - Teambuilding
  - Leadership
  - Briefing techniques
  - Integrated case studies and scenarios
  - Critical thinking

Basic Course Outline – Active Duty

- ADMIN (1.x.x courses)
- Command Structures (2.x.x courses)
- Acquisition (3.x.x courses)
  - ACQ 1010, 2020, 2030, PMT 2570V
- Fleet Maintenance (4.x.x courses)
- Professional Development/Leadership (5.x.x courses)
- Civilian Personnel Management (6.x.x courses)

Basic Course Outline – Reserve Component

- ADMIN (1.x.x courses)
- Command Structures (2.x.x courses)
- Acquisition (3.x.x courses)
  - Not all of the course but a good dose
- Fleet Maintenance (4.x.x courses)
  - A few of the courses
- Professional Development/Leadership (5.x.x courses)
  - Presentations techniques and FITREPS

Main difference is less acquisition(DAU) and fleet maintenance coursework

Senior Course

For newly selected Commanders

- Purpose
  - Prepare newly selected commanders for increased responsibility associated with …
    - Research and Development
    - Design
    - Acquisition
    - Construction
    - Maintenance and modernization of ships and ship systems as senior Naval Officer
    - ***Organizational*** leadership

Same functions, different roles and responsibilities

Senior Course – Major Topics

- FLAG presentations:
  - Current Navy/EDO leadership issues and challenges
- CAPT presentations:
  - Leadership issues and challenges from EDO core areas
- EDO Community Plans and Policy
  - Career and professional development
- CPI 260 – Leadership Development/Self-awareness
- OPM 360 – Leadership Development
- Media and legal training
- Point papers & two-minute elevator speeches
- Reserve Engineering Duty Program

Community and leadership focus

Overview

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Basic Ground Rules

- ***Non-Attribution Policy***
  - Applies to speakers, staff and fellow students
  - See provided EDOSCOL Notice
- Academic environment
  - Do your homework!
  - You will demonstrate your knowledge through tests, presentations, papers and in class discussions
  - You will be called on in class to answer questions on the material
- Liberty
  - San Diego to Monterey
- Leave:
  - Generally not authorized for EDO Basic Course

Basic Ground Rules

- Cell phones ***not*** allowed in the classroom
  - Staff will provide storage and contact options
- Eating in the classroom is a privilege – don't lose it!
  - Use good judgement – it cannot be a distraction to the instructor/speaker or students
  - Ensure the classroom is clean at the end of each day
- Course ends at noon on Friday of week 2 or 5 respectively – no early departures will be approved

Expectations

- Core Values (Honor, Courage, Commitment)
  - Respect each other, staff and guests
  - Support your Course Directors (CD), class leader and each other
- Ethical behavior
  - Zero tolerance for cheating
- Be respectful to presenters
  - No multi-tasking on computers during presentations
- Practice Operational Risk Management (ORM)
  - TRiPS, High risk athletic endeavors
  - Responsible use of alcohol
- Sexual harassment/assault
  - Zero tolerance
  - Practice bystander intervention
  - EDO School POC is CD1
- Take care of yourself (and your family)

Summary

- Welcome to the EDO community and your school!
- Be as excited to be here as we are to have you here
- Expectations are high but achievable
- Always act in a highly professional and ethical manner
- Take the non-attribution policy seriously
- Build your networks
- Take advantage of the mentoring and counseling opportunities – 15+ in 5 weeks