



# Machinist's Mate - Nuclear - Submarine - Engineering Laboratory Technician (ELT) (MMN-SS-ELT)



# **Career Roadmap**

## **Fireman Recruit to Master Chief Roadmap**

The educational roadmap below will assist Sailors in the Machinist's Mate - Nuclear - Submarine - Engineering Laboratory Technician (ELT) community through the process of pursuing professional development and advanced education using various military and civilian resources e.g. PQS program; JST/SMART Transcript; NKO (E-Learning); Navy College; etc. Successful leadership is the key to military readiness and will always require a high degree of technical skill, professional knowledge, and intellectual development.

## **What is a Career Roadmap for Machinist's Mate - Nuclear - Submarine - Engineering Laboratory Technician (ELT)?**

Machinist's Mate - Nuclear - Submarine - Engineering Laboratory Technician (ELT) roadmaps are just what the name implies - a roadmap through the Enlisted Learning and Development Continuum from Fireman Recruit through Master Chief. The principal focus is to standardize a program Navy wide by featuring the existing skills necessary to be successful in the Navy. The ultimate goal of a roadmap is to produce a functional and competent Sailor.

## **What is the Enlisted Learning and Development Continuum?**

Enlisted Learning and Development Continuum is the formal title given to the curriculum and process building on the foundation of Sailorization beginning in our Delayed Entry Program through Recruit Training Command and throughout your entire career. The continuum combines skill training, professional education, well-rounded assignments, and voluntary education. As you progress through your career, early-on skill training diminishes while professional military education gradually increases. Experience is the ever-present constant determining the rate at which a Sailor trades skill training for professional development.

## **Do Sailors have to follow the Roadmap?**

Yes. The Machinist's Mate - Nuclear - Submarine - Engineering Laboratory Technician (ELT) roadmap includes the four areas encompassed by the Continuum in Professional Military Education to include; Navy Professional Military Education (NPME), Joint Professional Education (JPME), Leadership and Advanced Education.

Some training and education is mandatory (Recruit Training, Machinists Mate Nuclear - ELT (Submarines) School at Charleston, SC, NKO (E-Learning, etc.)). Some may be directed by your chain of command (Microsoft Excel and PowerPoint courses), and the remainder is voluntary (NKO, E-Learning, college courses, etc.). Sailors are advised to seek out mentors, including your Command Master Chief, Senior Enlisted Advisor, Leading Chief Petty Officer, Leading Petty Officer and Command Career Counselor, and to make use of your Base Navy College or Education Office vast resources. All are uniquely qualified to help you along the way.



## United States Navy Ethos

We are the United States Navy, our Nation's sea power - ready guardians of peace, victorious in war.

We are professional Sailors and Civilians - a diverse and agile force exemplifying the highest standards of service to our Nation, at home and abroad, at sea and ashore.

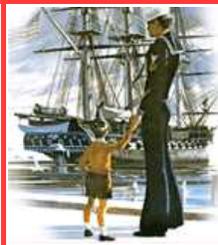
Integrity is the foundation of our conduct; respect for others is fundamental to our character; decisive leadership is crucial to our success.

We are a team, disciplined and well-prepared, committed to mission accomplishment. We do not waver in our dedication and accountability to our Shipmates and families.

We are patriots, forged by the Navy's core values of Honor, Courage and Commitment. In times of war and peace, our actions reflect our proud heritage and tradition.

We defend our Nation and prevail in the face of adversity with strength, determination, and dignity.

We are the United States Navy.



## The Sailor's Creed

I am a United States Sailor.

I will support and defend the Constitution of the United States of America and I will obey the orders of those appointed over me.

I represent the fighting spirit of the Navy and those who have gone before me to defend freedom and democracy around the world.

I proudly serve my country's Navy combat team with Honor, Courage, and Commitment.

I am committed to excellence and the fair treatment of all.



**Machinist's Mate - Nuclear - Submarine - Engineering Laboratory Technician (ELT)  
Petty Officer First Class  
(Journeyman/Master)**

NAME \_\_\_\_\_

**SKILL TRAINING**

(Schools, courses and assignments directly related to occupation)

**REQUIRED SKILL TRAINING**

Course Title	Course Location	CIN/CSE ID	Course Length	Date Completed
None				

**RECOMMENDED SKILL TRAINING**

Course Title	Course Location	CIN/CSE/ACE ID	Course Length	Date Completed
High Pressure Air Compressor (Worthington) Advanced Maintenance	Norfolk, VA / Groton, CT / San Diego, CA / Pearl Harbor, HI	A-652-0107	10 days	
Maxim Steam Evaporator Technician	Norfolk, VA / Groton, CT	A-652-0108	1 week	
3K GPD Electrical Distilling Plant Combined Maintenance	Silverdale, WA / Kings Bay, GA	A-652-0201	1 week	
12K GPD Steam Evaporator Plant Combined Maintenance	Silverdale, WA / Kings Bay, GA	A-652-0202	1 week	
R-114 York 200 Ton Air Conditioning Technician	Silverdale, WA / Kings Bay, GA	A-652-0205	12 days	
R-114 Air Conditioning System York 150 Ton	Norfolk, VA / Groton, CT / San Diego, CA / Pearl Harbor, HI	A-652-0229	12 days	
RIX HPAC/HPAD Combined Maintenance (SSN 21 and 774 Class)	Groton, CT	A-652-0264	12 days	
HFC 134A Air Conditioning Unit (450-TON) Combined Maintenance	Groton, CT / Pearl Harbor, HI	A-652-0289	10 days	
SSN 21 Class R-114 Air Conditioning System Combined Maintenance	Groton, CT	A-652-0315		
EPA Refrigeration Technician Certification	Norfolk, VA / Groton, CT / Kings Bay, GA / Bangor, WA / San Diego, CA / Pearl Harbor, HI / Agana, Guam	A-652-0344	1 day	
Machine Tool Operator	Groton, CT / Kings Bay, GA / Bangor, WA / Pearl Harbor, HI	A-702-0028	3 weeks	
Primary Valve Operator – Advanced Course	Norfolk, VA / Groton, CT / Kings Bay, GA / Bangor, WA / San Diego, CA / Pearl Harbor, HI / Agana, Guam	S-661-0018	4 days	
SSN LPAC/LPAD Combined Maintenance	Groton, CT / Pearl Harbor, HI	A-652-0335	1 week	
Submarine Force Quality Assurance Inspector	Norfolk, VA / Groton, CT / Kings Bay, GA / Bangor, WA / San Diego, CA / Pearl Harbor, HI / Agana, Guam	A-557-0082	2 weeks	
Submarine Officer and Supervisors Quality Maintenance	Norfolk, VA / Groton, CT / Kings Bay, GA / Bangor, WA / San Diego, CA / Pearl Harbor, HI	F-4H-0182	12 days	
Operational Water Chemistry and Radiological Controls	Norfolk, VA / Groton, CT / Kings Bay, GA / Bangor, WA / San Diego, CA / Pearl Harbor, HI / Agana, Guam	L-4H-0027	12 days	
Primary Chemistry Training	Kings Bay, GA / Bangor, WA	L-661-0049	1 day	
Radioactive Spill Team Training	Kings Bay, GA / Bangor, WA	F-701-0034	1 day	
Secondary Chemistry Team Trainer	Kings Bay, GA / Bangor, WA	L-661-0044	1 day	
Shipboard Calibration Program Operator Course	Norfolk, VA / Groton, CT / Kings Bay, GA / Bangor, WA / San Diego, CA / Pearl Harbor, HI / Agana, Guam / Yokosuka, Japan	A-652-0510		

**NAVY ENLISTED CLASSIFICATION CODE (NEC) OPPORTUNITIES**

Course Title	Course Location	CIN/CSE/ACE ID	Course Length	Date Completed
3355 - Nuclear Propulsion Plant Operator Mechanical - Submarine	Charleston, SC / Ballston Spa, NY	A-661-0012	23 weeks	
9502 - Nuclear Operator Qualification/Staff Pickups	Charleston, SC / Ballston Spa, NY	A-661-0107	8 weeks	
3376 - Radiological Control Technician Qualification School	Portsmouth, VA	S-661-1030	16 weeks	
3366 - Submarine Nuclear Propulsion Plant Supervisor – Engineering Laboratory Technician	N/A	N/A		
3366 - Submarine Nuclear Propulsion Plant Supervisor – Engineering Laboratory Technician	N/A	N/A		
3377 - Nuclear Planner	Portsmouth, VA	S-661-1022	5 weeks	

**JOB DESCRIPTION**

Operates and performs organizational level maintenance on mechanical systems for submarine nuclear propulsion plants. Safe operation of nuclear propulsion plants in accordance with sound engineering practices and governing directives. Perform maintenance and operation of auxiliary mechanical components and equipment to ensure the safe operation of the nuclear powered submarine. Supervises radiological controls and water chemistry control functions and associated analyses in addition to operating and performing organizational level maintenance on mechanical systems for submarine nuclear propulsion plants.

**RECOMMENDED BILLET ASSIGNMENTS**

**SEA DUTY** onboard nuclear fast attack submarines (SSN), ballistic missile submarines (SSBN) or guided missile submarines (SSGN). Submarine homeports include Groton CT, Norfolk VA, Kings Bay GA, Bangor WA, San Diego CA, Pearl Harbor HI, and Agana Guam.  
**SHORE DUTY** includes: Prototype, 'A' School or Power School Instructor, FIDE or other general Instructor assignments, Performance Monitoring Team (PMT) or NRMD Maintenance Activity.  
**OTHER:** Joint Assignments, GWOT Support Assignments, Recruiter, RDC, DAPA, SARP, Career Counselor.

**PERSONAL AND PROFESSIONAL DEVELOPMENT (Completed at reporting 30 day Career Development Board)**

Command Address: \_\_\_\_\_ QD Phone Number: \_\_\_\_\_

Division Officer: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Leading Chief Petty Officer: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Leading Petty Officer: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Sponsor/Mentor: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Depart/Division Career Counselor: \_\_\_\_\_ Phone Number: \_\_\_\_\_

ADSD: \_\_\_\_\_ REPORT DATE: \_\_\_\_\_ EAOS: \_\_\_\_\_ PRD: \_\_\_\_\_ SEA / SHORE: \_\_\_\_/\_\_\_\_  
PAYGRADE E6 (3 Years time in service required to be eligible for advancement to E-7)

Date Advanced: \_\_\_\_\_ Eligible Advancement Date: \_\_\_\_\_ Number of times up: \_\_\_\_\_ HYT Date: \_\_\_\_\_

Security Clearance Level: \_\_\_\_\_ Date Last updated: \_\_\_\_\_ Command INDOC complete: \_\_\_\_\_

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**CAREER DEVELOPMENT BOARDS:** Use OPNAVINST 1040.11(ser) & Career Counselor Handbook NAVPERS 15878 (E6) Reason for Convening/Discussion Items: (Upon completion update (CIMS) Career Information Management System)

Reporting (within 30 days for active duty or three drill weekends for SELRES) (Date Conducted): \_\_\_\_\_

6 Month: \_\_\_\_\_ 12 Month: \_\_\_\_\_ 24 Month: \_\_\_\_\_ 36 Month: \_\_\_\_\_ 48 Month: \_\_\_\_\_

60 Month: \_\_\_\_\_ CPO 365: \_\_\_\_\_ Special Program: \_\_\_\_\_ Member Request: \_\_\_\_\_

HYT 24 months (Date): \_\_\_\_\_ HYT 12 months (Date): \_\_\_\_\_ HYT Waiver Date: \_\_\_\_\_ Approve/Disapprove

Career Waypoint 15 months to EAOS: \_\_\_\_\_ Career Waypoint not approved: \_\_\_\_\_ CMS/ID 13 months to PRD: \_\_\_\_\_

Rating Conversion: \_\_\_\_\_ Navy Formal Training Schools Request ("A"/"C" etc): \_\_\_\_\_

Transfer: \_\_\_\_\_ Early Separation: \_\_\_\_\_ Fleet Reserve Retirement Options: \_\_\_\_\_

Physical Fitness Test Failure: \_\_\_\_\_ Career Status Bonus (election message received): \_\_\_\_\_

**Advancement Center: Visit NKO Navy Advancement page located under the Career Management Tab**  
(Items to collect/discuss: Bibliography for Advancement, Enlisted Advancement Exam Strategy Guide, Profile Sheets)

Selection Board Ineligible/Non-Select: \_\_\_\_\_ Standard Score 40 or less/failed: \_\_\_\_\_

**Enlisted to Officer Commissioning Program Application & Administration Manual OPNAVINST 1420.1(series):**

Commissioning Programs Applications: \_\_\_\_\_ (prior to submission, command endorsement): \_\_\_\_\_

Naval Academy \_\_\_\_\_ Naval Academy Preparatory School (NAPS) \_\_\_\_\_ Limited Duty Officer \_\_\_\_\_

Officer Candidate School \_\_\_\_\_ Seaman to Admiral 21 (STA-21) \_\_\_\_\_

Medical Enlisted Commissioning Program (MECP) \_\_\_\_\_ Medical Service Corps In-service Procurement \_\_\_\_\_

**Navy Leader Planning Guide: Log on to NKO and select the Leadership Tab to access this guide.**

## SELECTION BOARD CHECKLIST FOR E6 PROMOTION TO CPO

Step 1 - Review your Official Record to see what documentation, qualifications, etc. may be missing or requiring an update. This should be accomplished every six months after promotion to Second Class. However, it is imperative that this is accomplished six months prior to a selection board. Check the following three major sections to verify your Official Record:

- a. **BUPERS Online:** BUPERS Online (<https://www.bol.navy.mil>) is your main tool to ensure your record is up to date and helps you to be proactive in making the most of your promotion opportunity. You should review your:
  1. **Official Military Personnel File (OMPF):** All active duty and reserve personnel having a BOL account, a CAC (with appropriate certificates) and a CAC-enabled computer can now view their OMPF online by selecting the OMPF option on the BOL main menu page. This is the preferred method of obtaining OMPF information to eliminate the unnecessary time-lags caused by waiting days or weeks to receive a requested CD ROM.
  2. **If Deployed:** Click on "*Request Record on CD*" to order your Official Military Personnel File (OMPF). This must be accomplished four to six months before a board convenes, which will allow time for delivery and updating of your record if required.
  3. Check your **Performance Summary Record (PSR)** and **Enlisted Summary Record (ESR)** on <https://www.bol.navy.mil>, click on the "*ODC, OSR, PSR, ESR*" link.
- b. **Electronic Service Record (ESR) Self-Service ESR:** This can be viewed at (<https://nsips.nmci.navy.mil>) or on the Navy Standard Integrated Personnel System (NSIPS) ESR server onboard ship.
- c. **Electronic Training Jacket (ETJ):** Log-on to Navy Knowledge Online (NKO) and review your entire ETJ making sure that each section is correct. If not, clicking on "*Data Problems*" at the bottom of each page which will guide you on how to make corrections or updates.
- d. **US Navy Awards website:** Log onto (<https://awards.navy.mil/>) to review any awards you may qualify for but were unaware of.

Step 2 - Submit appropriate missing documents to the selection board.

- a. Selection board packages provide candidates the opportunity to submit any documents missing from the sections of their records which are viewed by the selection boards. MILPERSMAN 1070-080 specifies which documents from the enlisted permanent personnel record are provided to the selection board for review. Any documents the member has verified as missing from those sections of their permanent personnel record may be submitted as a selection board package.
- b. For submissions directly to the board and for those circumstances where the eligible candidate cannot get their official record updated and confirmed prior to the selection board convening date:
  1. All correspondence should be on plain white paper for readability; paper clipped (no staples, binders, folders, or tabs) and submitted under cover letter to the president of the board. Candidates must verify the correct subject line and board number (see below) is on their cover letters to ensure their packages appear before the proper board.
  2. Correspondence must include your Full name and SSN, must be affixed and legible on all documents submitted, and must be postmarked not later than that date listed in the associated NAVADMIN and addressed to:

NAVY PERSONNEL COMMAND CUSTOMER SERVICE CENTER  
PRESIDENT  
FY-XX ACTIVE/RESERVE E7 ENLISTED SELECTION BOARD #XXX  
5640 TICONDEROGA LOOP BLDG 768 RM E302  
MILLINGTON TN 38055  
(Active = 360 / SELRES = 335 / FTS = 336)

(Use of special handling mail (certified or registered) is not advised due to significant delays in handling.)

- c. Ensure official record reflects any individual augmentation mission. (awards, evals, NEC, etc).
- d. Check <http://www.npc.navy.mil/Boards/ActiveDutyEnlisted/GeneralInformation.htm> to verify that the selection board has received your correspondence (if sent).

**NOTE: It is highly recommended that if corrections or updates are made, review your OMPF, or if Deployed, re-order your CD-Rom to confirm changes. (NOTE: Please allow 60 days for changes to take effect)**

Step 3 - After reviewing your service record - such as evaluations, awards, qualifications, etc. - start reviewing what you can do to improve yourself, such as:

- a. Request a **Career Development Board (CDB)** through your chain of command.
- b. Take a good, hard look at the type of **Collateral Duties** you are assigned. Review your command collateral duties instruction and talk with your COC and / or appear before the CDB. Take the tough command duties that provide the most involvement in the command as a whole and that have direct sailor support.
- c. Review your current level of education to see how far along you are in earning a **college degree** and pursue **non-resident Navy courses** to expand your level of knowledge. Complete the **Navy e-Learning courses** on **NKO** that are recommended in this document.
- d. Check out **OTHER Learning Opportunities** to add to your service record, such as the CANTRAC Volume I (Training Facilities) and CANTRAC Volume II (Course Descriptions). NKO at Learning > Learning Opportunities

Step 4 - Review qualifications that your rating values or requires for advancement and create a plan to earn these important pieces in the professional growth and advancement puzzle. Read the applicable NAVADMIN for additional dates and information, and review previous selection board precepts.

Step 5 - Prepare for the next CPO Advancement Exam cycle in January for Active Duty & February for Reserves as soon as the Bibliography References are posted six months prior in July. Use the Navy Advancement Center info and website listed above in the advancement section.

Step 6 - CPO365 Phase 1 & 2: See your Chief to obtain the current CPO365 Development Guide (CPODG)

**Phase 1:** Begins September 17 and concludes when the NAVADMIN announcing CPO selection is released. CPO 365 training is not intended to distract or take away from yours or our FCPOs primary duties, but will serve to enhance their ability to lead. It is used to build the foundation in the year round training cycle. Phase 1 sparks the teamwork and initial training to engage the FCPOs on their road to becoming Chief Petty Officers. It is understood that not all FCPOs will promote to CPO. As much as CPO 365 prepares a person to enter the mess, just as importantly - it also helps our FCPOs to be better workcenter supervisors and Leading Petty Officers. For that reason all FCPOs will participate throughout Phase 1&2, regardless of whether they are board-eligible or have participated in previous years.

**Phase 2:** Begins when the NAVADMIN announcing CPO selection is released and is designed as the final training period to prepare Selectees for entry into the Chiefs' Mess. This phase culminates with the Final Test, followed by a pinning ceremony on September 16, or a suitable date.

As determined to be appropriate by the CPO mess, all FCPOs will continue to participate in some form of CPO 365 training throughout Phase 2 - when and where practical. It is agreed that there will be several instances where CPO Selectees and non Selects will conduct separate sessions.

## QUALIFICATIONS AND CERTIFICATIONS

Sea/Shore General Qualifications Watch Standing Qualifications	Report Date	Completion Date (If qualification is not required place N/A in this Block)

Mandatory warfare qualification for enlisted Sailors assigned to designated warfare qualifying commands:

Warfare qualification programs	Report Date	Completion Date (If qualification is not required place N/A in this Block)
Submarines (SS)		

Rate Specific/Department Qualifications (Add)	Report Date	Completion Date (If qualification is not required place N/A in this Block)
<b>Department</b>		
Primary Valve Operator		
Control Point Watch		
Basic Engineering Qualification		
Engineering Watch Supervisor		
Engineering Duty Petty Officer		
<b>In-Rate</b>		
Engineroom Lower Level		
Engineroom Forward <sup>1</sup>		
Shutdown Roving Watch		
Engineroom Middle Level <sup>2</sup>		
Engineroom Upper Level		
Engineroom Supervisor		
Radiological Controls Monitor (Maintenance Facility)		
Radiological Controls Shift Supervisor (Maintenance Facility)		
Leading Engineering Laboratory Technician		
<b>Other</b>		
3M 303 Work Center Supervisor (WCS)		
3M 304 (Division Officer)		
3M 305 Departmental 3M Assistant		
3M 307 3M Coordinator		
QA 303 Steam Plant Cleanliness Inspector/Certifier		
QA 304 Reactor Plant Cleanliness Inspector/Certifier		
QA 305 Quality Assurance Inspector (QAI)		
Master Training Specialist (MTS)		

1 - N/A SSN 774 Class

2 - SSBN 726 Class Only

## CERTIFICATIONS

The following post military occupations are similar to the MMN-Machinists Mate, Nuclear Power Rating. For more information about these occupations, visit NAVY COOL at <https://www.cool.navy.mil/usn/>.

Occupation (Civilian Employer)
Control and Valve Installers and Repairers, Except Mechanical Door
Electronics Engineering Technicians
Engine and Other Machine Assemblers
First-Line Supervisors of Production and Operating Workers
Hazardous Materials Removal Workers
Helpers--Installation, Maintenance, and Repair Workers
Industrial Machinery Mechanics
Maintenance and Repair Workers, General
Maintenance Workers, Machinery
Mobile Heavy Equipment Mechanics, Except Engines
Nuclear Equipment Operation Technicians
Nuclear Monitoring Technicians
Nuclear Power Reactor Operators
Power Plant Operators
Pump Operators, Except Wellhead Pumps
Ship Engineers
Stationary Engineers and Boiler Operators

Occupation (Federal Employer)
0830 - Mechanical Engineering Series
0840 - Nuclear Engineering Series
0871 - Naval Architecture Series
1310 - Physics Series
1320 - Chemistry Series
4749 - Maintenance Mechanic
4850 - Bearing Reconditioning
5306 - Air Conditioning Equipment Mechanic
5350 - Production Machinery Mechanic
5402 - Boiler Plant Operating
5415 - Air Conditioning Equipment Operating
5419 - Stationary-Engine Operating
9945 - Refrigeration Engineer
9958 - Evaporator-Utilityman
9963 - Fireman
9964 - Fireman-Watertender

**Navy COOL:** The following certifications and licenses are applicable to the MMN-Machinists Mate, Nuclear Power rating. *They may require additional education, training or experience.*

Target paygrade	Certifying Agency	Credential Title	Date Completed
E5	American Society for Quality (ASQ)	Certified Quality Technician (CQT)	
E5	Institute of Certified Professional Managers (ICPM)	Certified Manager (CM)	
E6	International Society of Automation (ISA)	Certified Control Systems Technician - Level I (CCST-I)	
E6	International Society of Automation (ISA)	Certified Control Systems Technician - Level II (CCST-II)	
E6	International Society of Automation (ISA)	Certified Control Systems Technician - Level III (CCST-III)	
E4	National Registry of Radiation Protection Technologists	Registered Radiation Protection Technologist (RRPT)	
E6	North American Electric Reliability Corporation (NERC)	System Operator Certification	
E6	Professional Evaluation and Certification Board (PECB)	ISO 9001 Foundation - Quality Certification	
E6	Society for Maintenance and Reliability Professionals (SMRP)	Certified Maintenance and Reliability Technician (CMRT)	

Visit Navy COOL at <https://www.cool.navy.mil/usn/> for additional Credentials that you may qualify to earn; however funding may be limited to your GI Bill.

**UNITED SERVICES MILITARY APPRENTICESHIP PROGRAM (USMAP):**

<b>Rank</b>	<b>Apprenticeship</b>	<b>Date Completed</b>
E1 - E9	Boilerhouse Mechanic	
E1 - E9	Bulk Fuel Specialist (Pumper-Gauger)	
E1 - E9	Computer Operator	
E1 - E9	Diesel Mechanic	
E1 - E9	Electronics Mechanic	
E1 - E9	Electronics Mechanic (Any Industry)	
E1 - E9	Hydroelectric-Machinery Mechanic (Utilities)	
E1 - E9	Maintenance Mechanic (Any Industry)	
E1 - E9	Ordnance Artificer (Government Service)	
E1 - E9	Pipe Coverer And Insulator	
E1 - E9	Power-Plant Operator (Utilities)	
E1 - E9	Pump Repairer (Any Industry)	
E1 - E9	Refrigeration Mechanic	
E1 - E9	Refrigeration Mechanic (Any Industry)	
E1 - E9	Water-Treatment-Plant Operator (Waterworks)	

Visit USMAP <https://usmap.netc.navy.mil/usmapss/static/index.htm> for additional information.

## STAY NAVY

REENLIST / EXTEND: Request Chit/Form: \_\_\_\_\_ Career Waypoints-Reenlistment Approval: \_\_\_\_\_

Selective Training and Reenlistment (STAR): \_\_\_\_\_ Guaranteed Assignment in Detailing (GUARD 2000): \_\_\_\_\_

School as a Reenlistment Incentive: \_\_\_\_\_ Prior Service Reenlistment Eligibility - Reserve (PRISE-R): \_\_\_\_\_

Career Management System/Interactive Detailing (CMS/ID): \_\_\_\_\_

Medical/Dental Screening: \_\_\_\_\_ Command Recommendation (evaluation): \_\_\_\_\_ Bonus: \_\_\_\_\_ Ceremony: \_\_\_\_\_

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### **Career Waypoints-Reenlistment:**

The Command Career Counselor is your local advocate to assist you with the Career Waypoints application process.

- E3-E6 Sailors with less than 14 years of service must submit a Career Waypoint application, regardless of reenlistment intentions. Sailors who do not desire to reenlist will submit an "intends to separate" application. Sailors not eligible for reenlistment will submit a "not eligible" application.
- The Career Waypoints system automatically generates most of the applications needed by Sailors. Applications must be submitted no later than 13 months prior to expiration of active obligated service (EAOS) or as extended (SEAOS). Sailors with less than 24 months of contract time remaining at their projected rotation date (PRD) will submit an application 12 months prior to their PRD. In either case, the Career Waypoints system will automatically generate applications for Sailors 15 months prior to either timeframe. Applications required outside of the established C-Way gates can be submitted as Special Circumstance applications. Examples of when these may be needed include OBLISERVE for special duty, decommissioning or homeport shift.
- The C-Way 3-2-1 Process aligns career decisions with the detailing process. Soft End of Active Obligated Service (SEAOS)/End of Active Obligated Service (EAOS) applications are created by C-Way at the 15 month from SEAOS/EAOS mark and must be submitted by the Command Career Counselor at the 13 month mark. This provides time for the Career Counselor to validate the Sailor's information and to ascertain the Sailors career intentions. The first C-Way review gate occurs from 13 to 10 months from SEAOS/EAOS with career choice options of in-rate, conversion, and Selected Reserve. The second review gate occurs from 9 to 7 months from SEAOS/EAOS with career choice options of conversion and Selected Reserve. From 6 months to 3 months to SEAOS/EAOS the Sailor can only choose Selected Reserve affiliation.
- Monthly reenlistment quotas are limited and must be reserved for our best and brightest Sailors who desire to Stay Navy. Sailors must choose one of the following based on their desires and qualifications:
  - Reenlist-in-Rate,
  - Reenlist-in-rate, Willing to Convert
  - Convert only
  - SELRES option
  - Intend to separate
  - Not eligible

In February 2014, C-Way delivered auto-approval capabilities to provide reenlistment decisions on SEAOS/EAOS applications more quickly for eligible ratings. This changed the monthly processing of reenlistment applications as described below.

- If you are in an "open" rating or a "balanced" rating in an undermanned year group or an E-6, you are eligible for reenlistment, and your application is submitted with correct data it will be auto-approved and returned immediately, and you can reenlist.
- If you are in a "competitive" rating or a balanced rating but not an undermanned year group, then your application will be processed through the monthly Rack and Stack process. Applications submitted in one month are processed in Rack and Stack the following month.
- For Nuclear ratings, all applications are reviewed by enlisted community managers on an ongoing basis throughout the processing month.
- If required data is missing (evaluations, Physical Fitness Assessment (PFA) data, security clearance etc.) the application will be denied with a note to your career counselor regarding what needs to be fixed. It is critical the Command Career Counselor reviews these notes to ensure Sailor's are not disadvantaged in their opportunities for retention.
- Upon completion of the monthly process, Career Waypoints results will be available to command users via the Monthly report section of the Career Waypoints system.
- Additional guidance MILPERSMAN 1440-060, NAVADMIN 149/13, NAVADMIN 150/13, and your Career Counselor

**TRANSFER:**

<u>15 Months</u>	<u>12 Months</u>	<u>9 Months</u>	<u>6 Months</u>	<u>Orders Received</u>
Career Waypoint_____	Career Waypoint_____	Career Waypoint_____	Accept Orders_____	Screening_____
Exception Family Member_____	EFM_____	CMS/ID_____	Reverse Sponsor_____	Obligate_____
CMS/ID_____	CMS/ID_____	SRB_____	Relocation (FFSC) _____	Bonus_____
Continuous Overseas Tours (COT) _____			Medical/Dental_____	
Overseas Tour Extension Incentive Program (OTEIP) _____			SRB_____	

For additional assistance in transfer and relocation, go to the Military HOMEFRONT website:  
<http://www.public.navy.mil/bupers-npc/Pages/default.aspx> and visit your Fleet and Family Support Center on base.

**SEPARATING/RETIRE:**

<u>18 -12 months</u>	<u>6 months</u>	<u>90 days</u>	<u>30 days</u>
Transition GPS _____	MED/DEN _____	Copy of Records_____	Copy of Records _____
Complete DD2648PSD_____	Relocation _____	Microfiche CD_____	PSD_____
Transition Planning_____	Relocation Services (FFSC) _____	Arrange Ceremony_____	MED/DEN _____
	Reserve Affiliation_____	Request Leave / PTDY _____	
	VA/DVA_____		

**PHYSICAL FITNESS:**

Participate in a year-round physical fitness program to meet Navy fitness and BCA standards. Review and verify accuracy of PFA data in PRIMS within 60 days of the PFA cycle. (PRIMS is accessible through your BUPERS Online Account)

Height\_\_\_\_\_ Weight\_\_\_\_\_ If Required (Neck\_\_\_\_\_ Waist\_\_\_\_\_ Hips (Female) \_\_\_\_\_ BCA \_\_\_\_\_)

Last 2 PRT Cycles: Curl-ups\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ Push-ups\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ Run/Swim/Cardio\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ Overall Score\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

List date (if) any PRT/BCA failure(s) over the last 5 years \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ List if any Medical Waiver(s)\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

For more information on Navy Fitness, visit: <http://www.navyfitness.org/>

## PROFESSIONAL MILITARY EDUCATION

(Resident and non-resident coursework designed to enhance a Sailor's general military professional knowledge and abilities)

**EDUCATION: (Prior to considering any pursuit of off duty education or program enrollment VISIT YOUR NAVY COLLEGE OFFICE or call the Virtual Education Center (VEC)!!!)**

Education Plan Completed (Navy College Office/VEC \_\_\_\_\_) Current Education Level \_\_\_\_\_

Degree Goal \_\_\_\_\_

\*\*Various distance learning degree options are available using, Sailor and Marine Online Academic Advisor (SMOLAA)\*\*

Goal: Date: AA/AS \_\_\_\_\_ BA/BS \_\_\_\_\_ Master \_\_\_\_\_  
(Credits to earn a degree - AA/AS: 60 SH/90 QH, BA/BS: 120 SH/180, QH, Master /Doctorate: Variable based on program)

Number of current credits \_\_\_\_\_ American Council on Education (ACE) recommended credits \_\_\_\_\_

SOC DNS Agreement \_\_\_\_\_ Joint Service Transcripts (JST) \_\_\_\_\_ HS Transcripts \_\_\_\_\_ College Transcripts \_\_\_\_\_

Date Degree Obtained: AA/AS \_\_\_\_\_ BA/BS \_\_\_\_\_ Master \_\_\_\_\_ Doctorate \_\_\_\_\_

For entry into JST, send official transcripts to:  
Naval Education and Training Professional Development and Technology Center  
Attn: JST Operation Center N615  
6490 Saufley Field Road  
Pensacola, FL 32509  
Phone: 1-877-838-1659  
Comm: 757-492-4684  
FAX: 757-492-5095  
DSN: 492-4684  
Email: VEC@navy.mil

**VOLUNTARY EDUCATION (Study guides and exam preparations and practice test located on NKO)**

Academic skills \_\_\_\_\_ NCPACE \_\_\_\_\_ CLEP \_\_\_\_\_ DSST \_\_\_\_\_ TA \_\_\_\_\_ MGIB \_\_\_\_\_ Post 9/11 GIB \_\_\_\_\_

**E6 REQUIRED NAVY PME:**

Course Title	Course Location	CIN/CSE ID	Course Length	Date Completed
Chief Petty Officer Selectee Leadership Course	Command Delivered	CPPD-LEAD09-004	30 hours	
ADAMS for Supervisors	Various Locations	S-501-0120	8 hours	
ADAMS for Facilitators	Various Locations	S-501-0110	16 hours	
Ethics Training	Command Delivered			
<b>Required General Military Training Topics For FY 2016 (Standardized Core Training) <sup>1</sup></b>				
Antiterrorism Level I Awareness	NKO/Command Delivered	CENSECFOR-AT-010-1.0		
Combating Trafficking in Persons General Awareness	NKO/Command Delivered	DOD-CTIP-1.0		
Counterintelligence Awareness and Reporting	NKO/Command Delivered	DOD-CIAR-1.0		
Cyber Awareness Challenge V3	NKO/Command Delivered	DOD-IAA-V13.0		
Operations Security (Uncle Sam's OPSEC)	NKO/Command Delivered	NIOC-USOPSEC-2.0		
Privacy and Personally Identifiable Information	NKO/Command Delivered	DOD-PII-2.0		
Records Management	NKO/Command Delivered	DOR-RM-010-1.1		
Sexual Assault Prevention and Response Awareness (SAPR)	Command Delivered	CPPD-GMT-SAPRA-1.0 CC		
Equal Opportunity/Sexual Harassment/Grievance Procedures <sup>2</sup>	Command Delivered	CPPD-GMT-EOSH-1.0		
Suicide Prevention	Command Delivered	CPPD-GMT-SAP-1.0		
<b>Required General Military Training Topics For FY 2016 (Command-Assigned Readiness –Enhancement topics; biennial periodicity) <sup>3</sup></b>				
Alcohol, Drug, and Tobacco Awareness	Command Delivered	CPPD-GMT-ADTA-1.0		
Domestic Violence Prevention and Reporting	NKO/Command Delivered	CPPD-GMT-DV-1.0		
Sexual Health and Responsibility	NKO/Command Delivered	CPPD-GMT-SHR-1.0		
Stress Management	Command Delivered	CPPD-GMT-SM-1.0		

1 - Verify GMT topics on NKO GMT web page.

2 - Course should be delivered in conjunction with SAPR. If not practicable, separate training is still required.

3 - Topics to be delivered once per deployment cycle. If deployment cycle is not applicable or exceeds two years between deployments, then deliver once every two years.

**E6 REQUIRED COMMUNITY PME:**

Course Title	Course Location	CIN/CSE ID	Course Length	Date Completed
None				

**E6 RECOMMENDED NAVY PME:**

Course Title	Course Location	CIN/CSE ID	Course Length	Date Completed
Leadership Core Continuum (LCC)	Command Delivered	CPPD10-LCC (Series)	6 hours	
Military Requirements for Chief Petty Officer (EDITION 1/1/1991)		NAVEDTRA 14144		
Basic Enlisted Professional Military Education (BEPME)	NKO	Military DON/ PME	20 hours	
Block 1 Basic EPME - Introduction	NKO	EPME-BASIC-B1		
Block 2 Basic EPME - Navy History and Heritage	NKO	EPME-BASIC-B2		
Block 3 Basic EPME - The Navy Professional	NKO	EPME-BASIC-B3		
Block 4 Basic EPME - Organization and Guidance	NKO	EPME-BASIC-B4		
Block 5 Basic EPME - Planning	NKO	EPME-BASIC-B5		
Block 6 Basic EPME - Regional Expertise and Cultural Awareness	NKO	EPME-BASIC-B6		
Block 7 Basic EPME - Technology for the Warfighter	NKO	EPME-BASIC-B7		
Block 8 Basic EPME - Conclusion	NKO	EPME-BASIC-B8		
Navy Reserve Fundamentals for Active Duty Course	NKO	NAVRESFOR-NRF-3.0	10 hours	
Nutrition	NKO	NMHCI2107V2.1	1 hour	
Culture	NKO or College Course	Foreign Language and Culture	45 hours	
Communication	College Course		45 hours	
English 101	College Course		45 hours	
English Reading	College Course		45 hours	
English Writing	College Course		45 hours	
Geography	College Course		45 hours	
History	College Course		45 hours	
Humanities	College Course		45 hours	
Language and Literature Study Guides	College Course		45 hours	
Math	College Course		45 hours	
Physical Sciences	College Course		45 hours	
Social Sciences	College Course		45 hours	
Speech	College Course		45 hours	
<b>Recommended General Military Training Topics For FY 2016 (Delivery determined by command discretion) <sup>1</sup></b>				
Energy Policy	Command Delivered	OPNAV-GMTE-1.0		
Hazing Policy and Prevention	Command Delivered	CPPD-GMT-HPP-1.0		
Operational Risk Management	NKO/Command Delivered	CPPD-GMT-ORM-1.0		
Personal Financial Management	Command Delivered	CPPD-GMT-PFM16-1.0		
Physical Readiness	NKO/Command Delivered	CPPD-GMT-PRT-2.0		

<sup>1</sup> - Verify GMT topics on NKO GMT web page.

**E6 RECOMMENDED COMMUNITY PME:**

Course Title	Course Location	CIN/CSE ID	Course Length	Date Completed
Safety Practices	NKO	NIDA-93951101		
SS Drydock Safety	SOBT	DODUSNSLCSOBT_ 93035	1 hour	
SS Line Handling	SOBT	IMI-GT-03195	3 hours	
SS Collisions Presentation	SOBT	DODUSNSLCSOBT_ 06030	20 hours	
SS Grounding Presentations	SOBT	DODUSNSLCSOBT_ 06033	13 hours	
General Admin Naval Messages	NKO	002GN01		
Hazardous Materials Safety Procedures	NKO	CNE-EPOC-WBS-02.12.01-02-00001		
AC and R Display Controllers	NKO	CNE-EPOC-WBS-03.01		
Centrifugal Air Conditioning Systems	NKO	CNE-EPOC-WBS-03.04.03-06-00001		
Lube Oil Systems Operations	NKO	CNE-EPOC-WBS-03.31-00001		
Heat Exchangers	NKO	CNE-EPOC-WBS-03.43-00001		
Packing, Gaskets, and Seals	NKO	CNET11445		
Rotary Pumps	NKO	CNET11449		
Variable-Stroke Pumps	NKO	CNET11451		
Reciprocating Pumps	NKO	CNET11453		
Nonpositive-Displacement Pumps	NKO	CNET11455		
Naval Reverse Osmosis Desalination Plant (RODP) Theory	NKO	NAVSEA-RODPT-1.0		
Reverse Osmosis – 6.8K GPD Reverse Osmosis Desalination Unit	NKO	NAVSEA-RODU-1.0		
High Pressure Air Compressor (HPAC)	NKO	NSWCCD-SSES-HPAC-1.0		

## NAVY PROFESSIONAL READING PROGRAM (PRP)

The purpose of the Reading Program is to facilitate the professional and personal development of all Sailors. For additional information on changes, refer to NAVADMIN 309/12 or visit <http://navyreading.dodlive.mil/> or <http://navy.lib.overdrive.com/> or <https://www.nko.navy.mil>

### ESSENTIAL READING

WARFIGHTING FIRST	Completed
1812: The Navy's War by <i>George C. Daughan</i>	
Cybersecurity and Cyberwar: What Everyone Needs to Know by <i>P.W. Singer</i>	
SEAL of Honor by <i>Gary Williams</i>	
Leading with the Heart by <i>Mike Krzyzewski, Donald T. Phillips, and Grant Hill</i>	
The Twilight War by <i>David Crist</i>	
Wake of the Wahoo by <i>Forest J. Sterling</i>	
OPERATE FORWARD	Completed
The Crisis of Islam by <i>Bernard Lewis</i>	
Execute Against Japan by <i>LT Joel Holwitt, USN</i>	
Monsoon by <i>Robert Kaplan</i>	
Neptune's Inferno by <i>James D. Hornfischer</i>	
Red Star Over the Pacific by <i>Toshi Yoshihara and James Holmes</i>	
Fallout by <i>Catherine Collins and Douglas Frantz</i>	
BE READY	Completed
A Sailor's History of the U.S. Navy by <i>Thomas Cutler</i>	
In the Shadow of Greatness by <i>Joshua Welle, John Ennis, Katherine Kranz and Graham Plaster</i>	
Navigating the Seven Seas by <i>Melvin G. Williams, Sr. and Melvin G. Williams, Jr.</i>	
The Trident: The Forging and Reforging of a Navy SEAL Leader by <i>Jason Redman and John Bruning</i>	
Turn the Ship Around by <i>David Marquet</i>	
Wired for War by <i>P.W. Singer</i>	

Twenty-four additional books are categorized as "recommended reading," and are available as electronic books (e-books). Many can be downloaded at no cost through the Navy general library program site on Navy Knowledge On-line (NKO).

The entire list, with book summaries and additional information is available at <http://navyreading.dodlive.mil/>

The CNO-PRP has been streamlined to make our Navy's reading program more interactive, affordable, and wherever possible, electronically accessible. To that end: a number of the titles will be available for free at the NKO portal at <https://www.nko.navy.mil>.

- Click on the reference tab, then e-library audio and e-books tab.
- In order to download books, an "overdrive" account is required. On the top right, click on the overdrive window and follow the prompts.
- Then, not only are the PRP books available, but also hundreds of other items.

Note: Security restrictions preclude downloading via Navy owned computers, so downloading them to personally-owned devices will be required.

### E6 RECOMMENDED COMMUNITY READING

Title	Completed
Field Guide to Understanding Human Error by <i>Sidney Dekker</i>	
Integrity by <i>Stephen Carter</i>	
DOE Fundamentals Handbook, Electrical Science, Volume 3 of 4 <i>DOE-HDBK-1011/3-92</i>	
DOE Fundamentals Handbook, Electrical Science, Volume 4 of 4 <i>DOE-HDBK-1011/4-92</i>	
DOE Fundamentals Handbook, Instrumentation and Control, Volume 1 of 2 <i>DOE-HDBK-1013/1-92</i>	
DOE Fundamentals Handbook, Instrumentation and Control, Volume 2 of 2 <i>DOE-HDBK-1013/2-92</i>	
DOE Fundamentals Handbook, Nuclear Physics and Reactor Theory, Volume 1 of 2 <i>DOE-HDBK-1019/1-93</i>	



**ALL PAYGRADES  
VOLUNTARY EDUCATION**



**Note:** Prior to considering any pursuit of off duty education or program enrollment visit your Navy College Office or call the Virtual Education Center (VEC).

**You must complete the Tuition Assistance Workshop before your first course will be approved.**

**E1- E6: The workshop is available at your Navy College Office  
E-7 and above: The Workshop is available at your Navy College Office  
or  
Complete the online course at the Navy College Website**

**How do I get started?**

You already have. All your training up to this point is part of your Machinist's Mate - Nuclear - Submarine - Engineering Laboratory Technician (ELT) Roadmap. Now that you have made the first steps you will need to sit down and formulate a plan. This plan will work best if you start out discussing your options with your Leading Chief Petty Officer, Leading Petty Officer, Mentor, or Career Counselor. They will help you understand all of the basics. Then your next stop is your Navy College Office. The counselors there will be able to help you formalize your plan and make sure that it makes sense for both you and the Navy. To aid you in your conversation with these professionals, here are a few questions that you may want to ask.

What credits do you have? What non-college courses have you taken? Where do you want to go? What field of study, or what kind of degree? What program will help me get there, Traditional or Online, What are my next steps: Transfer credits, Take exams, Have experience evaluated, Then lastly sign up for new courses?

**RECOMMENDED OCCUPATIONAL-RELATED ASSOCIATE'S DEGREE FOR MMN-SS-ELT**

<b>Recommended Associates' degrees for the Fireman</b>
Nuclear Power Technology
Power Plant Technology
Industrial Management Technology
Quality Control and Safety
General and Liberal Studies
Management

**RECOMMENDED OCCUPATIONAL-RELATED BACCALAUREATE/MASTERS DEGREE FOR MMN-SS-ELT**

<b>Recommended Bachelors/Masters degrees for the Fireman</b>
Nuclear Power Technology
Power Plant Technology
Industrial Management Technology
Quality Control and Safety
General and Liberal Studies
Management

## **GENERAL INFORMATION ON VOLUNTARY EDUCATION**

### **The Navy College Program & Web Page:**

The Navy College Program (NCP) provides opportunities to Sailors to earn college degrees by providing academic credit for Navy training, work experience, and off-duty education. The NCP mission is to enable Sailors to obtain a college degree while on active duty. In support of the four R's- Recruiting, Readiness, Retention, and Respect, the NCP signifies Navy's commitment to education by improving enlistment appeal, demonstrating Navy service and achieving a college degree are compatible, helping Sailors apply themselves to new situations and challenges and better preparing them for advancement, building up Sailors' self-image, and producing higher quality Sailors. More information is available online at: <https://www.navycollege.navy.mil>

### **Navy College Program Distance Learning Program (NCPDLP)**

The Navy College Program (NCP) has developed partnerships with colleges and universities to offer rating relevant degrees via distance learning to Sailors everywhere. These new education partnerships provide associates and bachelors degree programs relevant to each rating, and make maximum use of military professional training and experience to fulfill degree requirements. The program also provides opportunities to take courses through distance learning so that Sailors anywhere will be able to pursue a degree. Courses are offered in a variety of formats, such as CD-ROM, videotape, paper, or over the Internet. Contact your Navy College Office or the Navy College Center about degree programs available from your partnership schools.

### **Servicemembers Opportunity College Degree Network System (SOC DNS):**

The SOC DNS consists of accredited colleges offering specific associate's and bachelor's degrees (while limiting academic residency) to Sailors, Marines, Soldiers and members of the Coast Guard worldwide. Colleges taking part in each curriculum area guarantee acceptance of one another's courses as identified by SOC DNS Course Category Codes. The "home" college (the SOC DNS college from which the student wishes to graduate) issues an official Student Agreement to all eligible students after the completion of the sixth semester hour and a complete evaluation of the servicemember's prior learning, including courses from other colleges and universities, military training and occupational experience, nationally-recognized tests, and other non-traditional credit. The SOC DNS Student Agreement is a contract-for-degree that protects the eligible student from changes to his or her degree program. It is a comprehensive long-range degree plan that lists all of the course requirements, but does not require that all courses be taken with that college. More information is available online at: <http://www.soc.aascu.org/socdns/>

### **Tuition Assistance (TA):**

TA provides funds for eligible active-duty personnel to attend approved educational institutions on an off-duty basis to earn a high school diploma, vocational/technical certificate, or college degree. TA pays for tuition and fees directly associated with the course of instruction. TA will pay for the following amounts per fiscal year: 16 semester hours, not-to-exceed \$250/credit or 24 quarter hours, not-to-exceed \$166.67/credit or 240 clock hours (CH), not-to-exceed \$16.67/CH or a combination of semester and quarter hours.

### **Joint Service Transcripts (JST)**

JSTs are official military transcripts which are used by colleges to validate your actual credited training. Every Sailor has a transcript already and access to it is free. More information is available online at: <https://jst.doded.mil/>

### **The American Council on Education (ACE)**

ACE has reviewed every course listed in the OCCUPATIONAL Roadmap and determined what type of collegiate level credit is recommended. The ACE identifier, listed with each course, is a source to validate the information and to check for changes as they occur. Updates can be found at <http://www.militaryguides.acenet.edu>.

### **Vocational Certificates**

Vocational Certificates are available from most community colleges. Most of your military training can be counted toward their degree programs, but they will still require residency credits and approximately 40-75 credit hours. These certificates can be as valuable as the apprenticeship program in the civilian work force.

### **College credits by Testing CLEP, DSST**

Testing can replace the requirement to attend most of the college courses listed in the Occupational Roadmap. Base Education Centers offer CLEP and DSST exams for active duty military at no cost. They also offer a comprehensive list of "credit-by-exam" tests. Additionally, many of the tests have study guides available. These tests are available at the base education center or through the base library system.

DANTES (DSST) [http://www.dantes.doded.mil/DANTES WEB/EXAMINATIONS/DSST.htm](http://www.dantes.doded.mil/DANTES_WEB/EXAMINATIONS/DSST.htm)

CLEP Exams <http://www.collegeboard.com/student/testing/clep/about.html>

## SAMPLE DEGREE PLAN

### Thomas Edison State College, ASAST – Nuclear Engineering Technology (Total 60 Semester Hours Minimum)

Subject Area/Category	Credits
I. General Education Requirements	30
A. English Composition	6
B. Humanities	6
C. Social Sciences	6
D. Natural Sciences and Mathematics	12
Intermediate and pre-calculus mathematics or above*	(6)
General physics or general chemistry	(6)
II. Area of Study: Nuclear Engineering Technology	21
A. Nuclear Physics	3
B. Thermodynamics or Heat Transfer	3
C. Fluid Mechanics	3
D. Reactors	6
▪ Introduction to Nuclear Engineering Technology	
▪ Reactor Engineering	
▪ Reactor Systems or Reactor Operations	
▪ Reactor Theory and Design	
E. Radiation Safety	3
▪ Radiation Protection	
▪ Health Physics	
▪ Nuclear Reactor Safety	
▪ Radiological, Reactor and Environmental Safety	
F. Nuclear Engineering Technology Electives	3
▪ Radiation Biology	
▪ Radiochemistry	
▪ Nuclear Power Plant Instrumentation	
▪ Nuclear Power Generation	
▪ Radiation Effects	
▪ Nuclear Reactor Materials	
▪ Radiation and Reactor Systems	
▪ Courses listed in sections A, B, C, D and E	
III. Free Electives	9
A. Computer Requirement	3
B. Free Electives	6
Total	60 credits

\*Some areas of study require mathematics at the level of pre-calculus algebra and calculus.

**Note 1:** Courses listed in Area of Study are offered as a guide. Other courses may also be considered appropriate for this option.

**Note 2:** Corollary Requirements:

- 6 credits of Precalculus Algebra or above
- One full year of General Physics
- 3 credits of Computer Programming

Students may check the appropriateness of other courses by contacting the Advisement Center.

## SAMPLE DEGREE PLAN

Bachelor of Science in Nuclear Engineering Technology

### **Excelsior College**

(120 credit hours)

<u>Subject Area/Category</u>	<u>Credits</u>
Arts and Sciences Component:	60
Communications (must include 3-credit written English):	9
Ethics:	3
Social Sciences/History:	6
Humanities and Social Sciences/History Electives:	6
Mathematics and Natural Sciences:	24
Math- at least 12 credits at a level of	
College Algebra and above including	
Calculus I and Calculus II	
Natural Science--must include	
Chemistry with Lab,	
Physics I with at least one lab	
Physics II with at least one lab,	
Atomic Physics	
Nuclear physics and thermodynamics	
Arts and Science Electives:	12
Nuclear Engineering Component:	48
Core Requirements	
Electrical Theory	
Computer Applications	
Materials	
Nuclear Materials	
Health Physics/ Radiation Protection	
Plant Systems Overview	
Reactor Core Fundamentals	
Fluids	
Heat Transfer	
Integrated Technology Assessment	
Nuclear Engineering Technology Electives	16
Free Elective Component:	16
Information Literacy (Required)	1

## **REFERENCES**

### **Navy Enlisted Learning and Development Programs:**

- Learning and Development Roadmap for Enlisted Sailors, OPNAVINST 1500.77(series)
- Navy Enlisted Retention and Career Development Program, OPNAVINST 1040.11(series)
- Career Counselor Handbook, NAVPERS 15878K
- Command Sponsor and Indoctrination Programs OPNAVINST 1740.3(series) (Sponsor assigned within 10 days of orders received / Indoctrination completed as soon as possible and practicable but NLT 90 days)
- Command Sponsorship of Dependents at Overseas Duty Stations MILPERSMAN 1300-150 to 1300-210
- Guaranteed Assignment Retention Detailing Program (GUARD 2000), MILPERSMAN 1306-1002/1004
- Navy Enlisted Warfare Qualification Programs OPNAVINST 1414.9 (series)
- Master Training Specialists (MTS) Program NETCINST 1500.2(series)
- Command Master Chief Program OPNAVINST 1306.2 (series)

### **Reenlistments and Extensions:**

- Agreement of Enlisted Naval Reservist, and Fleet Reservists Inductees to Remain on Active Duty MILPERSMAN 1160-060
- Extension of Enlistments MILPERSMAN 1160-040
- Overseas Tour Extension Incentives Program (OTEIP) MILPERSMAN 1306-300
- Consecutive Overseas Tours (COT) Leave Travel Entitlement Policy MILPERSMAN 1050-410
- Perform to Serve (PTS) MILPERSMAN 1440-060
- Reenlistment Ceremony MILPERSMAN 1160-020
- Leave of Military Personnel MILPERSMAN 1050-040
- Required Counseling Upon Enlistment and Reenlistment MILPERSMAN 1160-031
- Selective Reenlistment Bonus (Use Latest SRB NAVADMIN)
- Selective Training and Reenlistment (STAR) Program MILPERSMAN 1160-100
- Assignment to School as a Reenlistment Incentive MILPERSMAN 1306-1006

### **Fleet Reserve and Retirements:**

- Casualties and Survivor Benefits (SBP) MILPERSMAN 1770-010 to 1770-280 OPNAVINST 1750.5(Series)
- Disability Retirement MILPERSMAN 1850-010 to 1850-040
- Fleet Reserve and Retirement MILPERSMAN 1800-010 to 1800-070
- Privately Owned Vehicle (POV) Shipment Entitlement Policy and Household Goods (HHG) Shipment and Storage Entitlement Policy MILPERSMAN 4050-010 to 4050-020
- Permissive Temporary Duty (PTDY) Authorization for Job/House Hunting MILPERSMAN 1320-220
- Transition Assistance Management Program (TAMP) OPNAVINST 1900.2(series) (Initiate a DD-2648-1 NLT 90 Days Prior to Separation and attend workshop 12 months prior to separation/Fleet Reserve/Retirement date)

### **Enlisted Administrative Separations:**

- Separation by Reason of Alcohol Rehabilitation Failure MILPERSMAN 1910-152
- Separation by Reason of Misconduct -Drug Abuse MILPERSMAN 1910-146
- Separation by Reason of Convenience of the Government -Early release to further education MILPERSMAN 1910-108
- Administrative Separation (ADSEP) Policy and General Information MILPERSMAN 1910-010 to 1910-812
- Fraudulent Enlistment MILPERSMAN 1910-134
- High Year Tenure (HYT) MILPERSMAN 1160-120
- Misconduct (various reasons) MILPERSMAN 1910-138/140/142
- Department of the Navy (DON) Policy on Parenthood and Pregnancy SECNAVINST 1000.10(series) & MILPERSMAN 1910-124
- Separation by Reason of Convenience of the Government -Personality Disorder MILPERSMAN 1910-122
- Separation by Reason of Physical Fitness Assessment (PA) Failure MILPERSMAN 1910-170
- Separation by Reason of Misconduct - Commission of a Serious Offense MILPERSMAN 1910-142
- Separation by Reason of Unsatisfactory Performance MILPERSMAN 1910-156

### **Advancement & Service Schools:**

- Advancement Manual for Enlisted Personnel of the U.S. Navy and U.S. Navy Reserve BUPERSINST 1430.16(series)
- Accelerated Advancement of Recruit Training Class "A" School Graduates, and Ceremonial Guard MILPERSMAN 1430-010
- Enlisted to Officer Commissioning Program Application & Administration Manual OPNAVINST 1420.1(series)
- Service Schools MILPERSMAN 1306-600/602/604/608
- Class "A" School & Rating Entry Requirements MILPERSMAN 1306-618
- Retesting with Armed Forces Classification Test (AFCT) version of the Armed Services Vocational Aptitude Battery (ASVAB) MILPERSMAN 1236-010
- Professional Apprenticeship Tracks Program (PACT) NAVADMIN 318/07

### **Education:**

- Joint Chiefs Professional Military Education (PME) Manual 1805.01
- Voluntary Education (VOLED) for Navy Sailors OPNAVINST 1560.9(series)
- Navy Voluntary Education Program NETCINST 1560.3(series)
- Navy Credentialing Programs OPNAVINST 1540.56
- Administration of the United Services Military Apprenticeship Programs (USMAP) OPNAVINST 1560.10(series)

### **Other Quick References:**

- Awards Manual (SECNAVINST 1650.1(Series))
- Change in Rating MILPERSMAN 1440-010 to 1440-040
- Department of the Navy Correspondence Manual (SECNAV M-5216.5)
- Navy Alcohol and Drug Abuse Prevention and Control OPNAVINST 5350.4(series)
- Exchange of Duty (SWAPS) MILPERSMAN 1306-700
- First-Term Personnel Assignment Policy MILPERSMAN 1306-126
- Individual Augmentation (IA) Policy and Procedures OPNAVINST 1001.24(series)
- Military Couple and Single Parent Assignment Policy MILPERSMAN 1300-1000
- Military Pay MILPERSMAN 7220-010 to 7220-410
- Navy Performance Evaluation System BUPERSINST 1610.10 (Series)
- Overseas Extensions MILPERSMAN 1300-310
- Physical Readiness Program OPNAVINST 6110.1(series) / MILPERSMAN 6100-6199
- Reassignment for Humanitarian Reasons (HUMS) MILPERSMAN 1300-500
- Standardization Policy and Procedures for the Active Duty for Special Work (ADSW) Program OPNAVINST 1001.20(series)
- Operational Risk Management OPNAVINST 3500.39C
- Personnel Qualification Standards (PQS) Catalog NAVEDTRA 43100-6M