



Machinist's Mate - Nuclear - Submarine (MMN-SS)

January 2021





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.

CAREER ROADMAP

Fireman Recruit to Master Chief Roadmap

The educational roadmap below will assist Sailors in the Machinist's Mate - Nuclear - Submarine community through the process of pursuing professional development and advanced education using various military and civilian resources e.g. PQS program; JST Joint Service Transcript; E-Learning; Navy College Network; 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?

Machinist's Mate - Nuclear - Submarine 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?

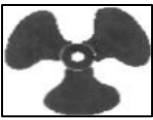
Enlisted Learning and Development Continuum is the formal title given to the curriculum and process building on the foundation of Sailorization beginning in our Delayed Entry Program through Recruit Training Command and throughout your entire career. The continuum combines skill training, professional 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?

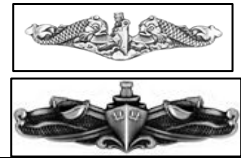
Yes. The Machinist's Mate - Nuclear - Submarine roadmap includes the four areas encompassed by the Continuum in Professional Military Education to include; Navy Professional Military Education (NPME), Joint Professional Military Education (JPME), Leadership and Advanced Education.

Some training and education is mandatory (Recruit Training, Machinists Mate Nuclear (Submarines) School at Charleston, SC, E-Learning, etc.). Some may be directed by your chain of command (Microsoft Excel and PowerPoint courses), and the remainder is voluntary (MNP, 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 Navy College Virtual Education Center (VEC) or OCONUS Education Office's vast resources. All are uniquely qualified to help you along the way.

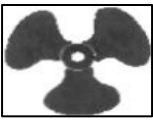
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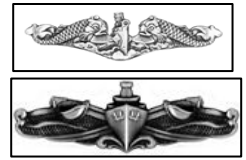
MMN CAREER PATH (SS AND SW)



Machinist's Mates (Nuclear) are involved in the supervision, operation, maintenance and administration of naval nuclear propulsion plants and associated equipment. They have a thorough understanding of reactor, electrical and mechanical theory involved in the operation of the nuclear reactor, steam plant, propulsion plant and auxiliary equipment. Some (ELTs, LETS) possess a detailed knowledge of reactor and steam plant chemistry and radiological controls. They operate and perform maintenance on reactor and propulsion mechanical systems, steam systems and supporting equipment and systems.					
YEARS OF SERVICE	CAREER MILESTONES	AVERAGE TIME TO PROMOTE	COMMISSIONING OR OTHER SPECIAL PROGRAMS	SEA/SHORE FLOW	TYPICAL CAREER PATH DEVELOPMENT
26-30	MMNCM	19 Yrs	CSEL	36	4th Shore Tour Billet: CSEL/Plant Master Chief/ Staff Inst./Maint. Sup. Duty: NPTU/NFAS/NPS/IMA/Staff. Qualification: NEC N15S/N16S/N25S/N26S, N31Z/N32Z
24-25	MMNCM	19 Yrs	CSEL	40	4th Sea Tour Billet: CSEL/Dep. LCPO/EDMC/RDMC. Duty: SSN/SSBN/SSGN {N15S/N16S}/CVN {N25S/N26S}. Qualification: NEC N15S/N16S/N25S/N26S, N31Z/N32Z
21-23	MMNCM	19 Yrs	CSEL	36	3rd Shore Tour Billet: Instr./Maint. Sup./Staff/Recruiter. Duty: NPTU/NFAS/NPS/IMA/Staff/Recruiting. Qualification: NEC N15S/N16S/N25S/N26S, N31Z/N32Z
18-20	MMNCM MMNCS	19 Yrs 15 Yr	CSEL	40	3rd Sea Tour Billet: Dep. LCPO/EDMC/Div. LCPO. Duty: SSN/SSBN/SSGN {N15S/N16S}/CVN {N25S/N26S}. Qualification: NEC N15S/N16S/N25S/N26S, N31Z/N32Z
14-17	MMNCS	15 Yrs	LDO, CSEL	36	2nd Shore Tour Billet: Instr./Ship and Component Main Tech./ Staff/Recruiter. Duty: NPTU/NFAS/NPS/IMA/Staff/Recruiting. Qualification: NEC N15S/N16S/N25S/N26S, N32Z
10-13	MMNC	11 Yrs	LDO	40	2nd Sea Tour Billet: Division LPO/Asst. LPO/Division LCPO. Duty: SSN/SSBN/SSGN {N15S/N16S}/CVN {N25S/N26S}. Qualification: NEC N15S/N16S/N25S/N26S, N32Z
7-9	MMN1	6 Yrs	STA-21(N), LDO	36	1st Shore Tour Billet: Instr./Maint Tech/Recruiter. Duty: NPTU/NFAS/NPS/IMA/Recruiting/RDC. Qualification: NEC N15S/N16S/N25S/N26S
3-6	MMN1 MMN2	6 Yrs 3 Yrs	STA-21(N)	48	1st Sea Tour Billet: Steam/Reactor Plant Operator/Maint. Tech. Duty: SSN/SSBN/SSGN {N15O/N16O}/CVN {N25O/N26O}. Qualification: Senior in Rate/Warfare Qual/ Supervisor NEC N15S/N16S/N25S/N26S
1-2	MMN3 Accession Training	14 wks "A" School Completion	STA-21(N)	N/A	Recruit/Apprenticeship Training (up to 82 weeks) Duty: RTC/NFAS/NPS/NPTU. (Some will have 24-month Junior Staff Instructor tour at NPTU). Qualification: NEC N91T



MMN CAREER PATH (SS AND SW)



Notes:

1. MMNs are rarely detailed outside the nuclear community.
2. The nuclear community values sustained, superior performance at sea in a leadership role (Leading Petty Officer (LPO), Leading First, etc.) and on shore duty (training, maintenance, recruiting, Recruit Division Commander, etc.).
3. Variety of experience and success in various positions are beneficial to our future leadership positions. Those assigned to Forward Deployed Naval Forces (FDNF) and Courier Positions are specially screened.

Candidates for advancement from E6 to E7 are:

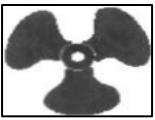
- a. FULLY QUALIFIED if:
 - 1) They possess a supervisor NEC (N15S/N16S for submarines, N25S/N26S for surface) AND
 - 2) Previously or currently qualified Engineering Watch Supervisor or Propulsion Plant Watch Supervisor.
 - 3) N16S have obtained the Leading Engineering Laboratory Technician (LELT) qualification.
- b. BEST QUALIFIED if they meet the FULLY QUALIFIED standard AND:
 - 1) Served as LPO, Assistant LPO, Leading First, LELT, or Engineering Department Training Assistant for 12 or more months OR
 - 2) Have a history of sustained superior performance defined as a majority of their Individual Trait Averages ABOVE Reporting Senior Cumulative Average.
- c. NOT ELIGIBLE: Per BUPERSINST 1430.16, members participating in a commissioning program (STA-21 Nuclear/Core) are not eligible for advancement to CPO. Per reference BUPERSINST 1430.16, members who have a special category NEC (N59X for submarines or N89X for surface) are also not eligible for selection to CPO
- d. AMPLIFYING INFORMATION: Few may qualify as Training Engineering Officer of the Watch (T-EOOW) at a Nuclear Power Training Unit (NPTU), which is normally stood by an Officer. T-EOOW requires significant leadership ability and in-depth understanding of reactor plant operations. Only the best complete this qualification.

Candidates for advancement from E7 to E8 are:

- a. FULLY QUALIFIED if:
 - 1) They meet the FULLY QUALIFIED and BEST QUALIFIED standards for advancement from E6 to E7.
 - 2) NEC N15S/N16S have obtained the Engineering Department Master Chief (EDMC) qualification (NEC N3ZZ).
- b. BEST QUALIFIED if they meet the FULLY QUALIFIED standard AND
 - 1) NEC N15S/N16S are serving or served as LELT or Leading Chief Petty Officer (LCPO) on a submarine OR Leading Crew Chief (LCC) at an NPTU.
 - 2) NEC N25S/N26S are serving or served as Reactor Auxiliary, Reactor Laboratory, Reactor Mechanical, Reactor Propulsion, or Reactor Networks CPO or LCPO on an aircraft carrier OR LCC at an NPTU.
- c. NOT ELIGIBLE: Per BUPERSINST 1430.16, members who have a special category NEC (N59X for submarines or N89X for surface) are not eligible for selection to SCPO
- d. AMPLIFYING INFORMATION:
 - 1) For N15S/N16S, few may qualify as Chief of the Watch (COW), Diving Officer of the Watch (DOOW), or Pilot (Virginia Class), but these non-nuclear qualifications are not a prerequisite for advancement.
 - 2) For N25S/N26S, few may qualify as Propulsion Plant Watch Officer (PPWO), which is normally stood by an Officer. PPWO requires significant leadership ability and in-depth understanding of reactor plant operations. Only the best complete this qualification.
 - 3) Few may qualify as T-EOOW at NPTU, which is normally stood by an Officer. T-EOOW requires significant leadership ability and in-depth understanding of reactor plant operations. Only the best complete this qualification.

Candidates for advancement from E8 to E9 are:

- a. FULLY QUALIFIED if:
 - 1) They meet the FULLY QUALIFIED and BEST QUALIFIED standards for advancement from E7 to E8.
 - 2) NEC N15S/N16S are serving or served as EDMC.
 - 3) NEC N25S/N26S have obtained the Reactor Department Master Chief (RDMC) qualification (NEC N31Z).
- b. BEST QUALIFIED if they meet the FULLY QUALIFIED standard AND
 - 1) NEC N25S/N26S are serving or served as Divisional LCPO or Reactor Training Division Officer on an aircraft carrier OR Staff Training Group LCPO or LCC at NPTU.
- c. NOT ELIGIBLE: Per BUPERSINST 1430.16, members who have a special category NEC (N59X for submarines or N89X for surface) are not eligible for selection to MCPO
- d. AMPLIFYING INFORMATION:
 - 1) For N15S/N16S, few may qualify as COW, DOOW, or Pilot, but these non-nuclear qualifications are not a prerequisite for advancement.



MMN CAREER PATH (SS AND SW)



- 2) For N25S/N26S, few may qualify as PPWO, which is normally stood by an Officer. PPWO requires significant leadership ability and in-depth understanding of reactor plant operations. Only the best complete this qualification.
- 3) Few may qualify as T-EOOW at NPTU, which is normally stood by an officer. T-EOOW requires significant leadership ability and in-depth understanding of reactor plant operations. Only the best complete this qualification.



Machinist's Mate - Nuclear - Submarine Senior Chief Petty Officer (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
Engineering Department Master Chief (EDMC) Training (N32Z) ¹	Norfolk, VA	A-661-0029	1 week	
Senior Enlisted Academy (SEA) (8SEA) ¹	Newport, RI	P-920-1300	6 weeks 3 weeks Distance Learning, 3 week In Residence	

¹ - Reserve opportunities may exist, contact Reserve Forces Code N7 for authorization.

RECOMMENDED SKILL TRAINING

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

NAVY ENLISTED CLASSIFICATION CODE (NEC) OPPORTUNITIES

Course Title	Course Location	CIN/CSE/ACE ID	Course Length	Date Completed
N15S - Submarine Nuclear Propulsion Plant Supervisor – Mechanical ¹	N/A	N/A		
N77Z - Nuclear Planner ¹	Portsmouth, VA	S-661-1022	5 weeks	
N76Z - Radiological Control Technician Qualification School ¹	Portsmouth, VA	S-661-1030	16 weeks	
N32Z - Engineering Department Master Chief (EDMC) Training ¹	Norfolk, VA	A-661-0029	1 week	
8CSC - Command Senior Chief (CMDCS) ¹	Newport, RI	A-570-4500	12 days	

¹ - Reserve opportunities may exist, contact Reserve Forces Code N7 for authorization.

JOB DESCRIPTION

Supervise the operation and maintenance of submarine nuclear propulsion plants. Supervise the safe operation of nuclear propulsion plants in accordance with sound engineering practices and governing directives. Senior enlisted nuclear trained person onboard a submarine. Perform duties of the Engineering Department Master Chief (EDMC) in charge of all nuclear trained enlisted personnel onboard the submarine. In order to advance to Master Chief Petty Officer, must be serving or successfully served as an EDMC.

RECOMMENDED BILLET ASSIGNMENTS

SEA DUTY: Engineering Department Master Chief 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, Power School, FIDE or other general Instructor assignments; NRMD Maintenance Activity or Submarine Squadron Support Staff

OTHER: Joint Assignments, GWOT Support Assignments, Detailer, Recruiter, RDC, DAPA, SARP, Career Counselor.

PERSONAL AND PROFESSIONAL DEVELOPMENT
(Completed at reporting 60 day Career Development Board)

Command Address:		QD Phone Number:	
Mobilization UIC:			
Naval Reserve Activity:			
Division Officer:		Phone Number:	
Command Master Chief:		Phone Number:	
Leading Chief Petty Officer:		Phone Number:	
Sponsor/Mentor:		Phone Number:	
Depart/Division Career Counselor:		Phone Number:	
Date of Initial Entry to Military Service (DIEMS):		Date of Initial Entry Reserve Forces (DIERF):	
Pay Entry Base Date (PEBD):			
ADSD:	Report Date:	EAOS/EOS:	PRD: SEA / SHORE: /
PAYGRADE E8 (3 Years time in service required to be eligible for advancement to E9)			
Date Advanced:	Eligible Advancement Date:	Number of times up:	
HYT Date:	Security Clearance Level:	Date Last updated:	
Command INDOC complete:			

CAREER DEVELOPMENT BOARDS:

Use OPNAVINST 1040.11(ser) & Career Counselor Handbook NAVPERS 15878

(E8) Reason for Convening/Discussion Items: (Upon completion update (CIMS) Career Information Management System)

Reporting (within 60 days for active duty or four drill weekends for SELRES) (Date Conducted):

24 Month: 48 Month: 60 Month:

Family Care Plan: Mil to Mil:

Sailor 360: Special Program: Member Request:

HYT 24 months (Date): HYT Waiver Date: Approve Disapprove

Transfer: Separation: Fleet Reserve Retirement Options:

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

Overseas Tour Extension Incentives Program (OTEIP):

Advancement Center: Visit MNP Advancement & Promotion page located under the Career & Life Events Tab
(Items to collect/discuss: Bibliography for Advancement, Enlisted Advancement Exam Strategy Guide, Profile Sheets)

Advancement:

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

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

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

Officer Candidate School: Limited Duty Officer: Chief Warrant Officer:

SELECTION BOARD CHECKLIST FOR SCPO PROMOTION TO MCPO

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 in to My Navy Portal (MNP) 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 in to (<https://awards.navy.mil/>) to review any awards you may qualify for but were unaware of. Note that this website is only available from a CAC enabled, NMCI machine.
- e. **Physical Readiness Information Management System (PRIMS):** To log in to PRIMs, first log in to BUPERS Online at <https://www.bol.navy.mil>. Then look half way down the page for the PRIMs login at <https://www.bol.navy.mil/bam/>.
- f. **EOSH:** The Federal Agency Employee Occupational Safety and Health (EOSH) Toolkit is available at https://www.osha.gov/dep/fap/eosh_toolkit.html. It provides a one-stop-shop website that includes "just in time" information about maintaining a safe and healthful workplace.

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 emailed encrypted to the address provided in the associated NAVADMIN or postmarked not later than the date listed in the associated NAVADMIN addressed to:

NAVY PERSONNEL COMMAND CUSTOMER SERVICE CENTER
PRESIDENT
FY-XX ACTIVE/RESERVE E9 ENLISTED SELECTION BOARD #XXX
5640 TICONDEROGA LOOP BLDG 768 RM E302
MILLINGTON TN 38055
(Active = 210 / SELRES = 205 / FTS = 206)

(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 <https://www.public.navy.mil/bupers-npc/boards/activedutyenlisted/Pages/GeneralInformation.aspx> 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 **MNP** that are recommended in this document. Check Navy COOL (<https://www.cool.navy.mil/usn>) for any related credentials for which you may be qualified.
- 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) at <https://main.prod.cetars.training.navy.mil/cetars/main.html>.

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.

QUALIFICATIONS

Sea/Shore General Qualifications Watch Standing Qualifications	Report Date	Completion Date <small>(N/A if not required)</small>

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

Warfare qualification programs	Report Date	Completion Date <small>(N/A if not required)</small>
Submarines (SS)		

Rate Specific/Department Qualifications (Add)	Report Date	Completion Date <small>(N/A if not required)</small>
Department		
Primary Valve Operator		
Basic Engineering Qualification		
In-Rate		
Engineroom Supervisor		
Engineering Watch Supervisor		
Engineering Duty Petty Officer		
Other		
3M 307 3M Coordinator		
QA 305 Quality Assurance Inspector (QAI)		
QA 306 Fleet Maintenance Activity Planner		
Master Training Specialist (MTS)		
Engineering Department Master Chief (EDMC)		
Diving Officer of the Watch (DOOW)		
Pilot/Co-Pilot (VA Class)		
Chief of the Boat		

Notes on Qualifications:

CREDENTIALING

Navy Credentialing Opportunities On-Line (Navy COOL): Navy COOL assists Sailors (active & reserve) by funding the certification & licensing exams that map their Navy education, training, experience, and competencies to industry/civilian-recognized credentials and occupational equivalents. Sailors may obtain funding for credential examinations, renewals, maintenance fees, and other mandatory examination administrative fees.

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

For more information about these credentials, visit NAVY COOL at <https://www.cool.navy.mil/usn/>.

Target Paygrade	Certifying Agency	Credential Title	Date Completed
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)	
E6	National Registry of Radiation Protection Technologists	Registered Radiation Protection Technologist (RRPT)	
	North American Electric Reliability Corporation (NERC)	Balancing and Interchange Certification (BI)	
	North American Electric Reliability Corporation (NERC)	Balancing, Interchange, and Transmission Operator Certification (BT)	
	North American Electric Reliability Corporation (NERC)	Reliability Operator Certification (RC)	
	North American Electric Reliability Corporation (NERC)	Transmission Operator Certification (TO)	
E6	Society for Maintenance and Reliability Professionals (SMRP)	Certified Maintenance and Reliability Technician (CMRT)	
	Transportation Security Administration (TSA)	Transportation Worker Identification Credential (TWIC)	
	United States Coast Guard (USCG)	STCW III/1 - OICEW or DDE 750 kW/1000 HP or More	

Out of Rate Certifications and Licensure

Academic Degrees – You are now eligible for credentials towards an earned academic degree.

Cross-Rated Sailors – If you have cross-rated, you now are eligible for credentials related to your prior rating.

Off-Duty or Command-Sponsored Training – You are now eligible for credentials for documented training that fully prepares you for a credential.

Navy Reservists – You may now be eligible for funding of credentials related to your civilian occupation.

Prior Other-Service Enlisted Occupation - If you are Navy enlisted (Active or Reserve), you may now be eligible for funding for credentials related to prior other-Service (Army, Air Force, Marine Corps, Coast Guard) enlisted occupation.

Collateral Duty/Out of Rate Assignments - Credentials are also available in these collateral duties/out of rate assignments in which you are serving in or have served in.

Credentials Earned & Maintained Prior to Joining the Navy - If you are Navy enlisted (Active or Reserve), you may now be eligible for funding for credentials that were earned, and maintained, prior to your enlistment in the Navy. The certification or license must have relevance to the needs of the Navy, and must appear on Navy COOL, although it does not need to show the Navy Bucks icon to be funded.

* See the *Additional Funding Opportunities* section on any rating page on Navy COOL for further details.

Leader Credentialing: The following certifications and licenses are applicable to enlisted Leaders (E4 and above). *They may require additional education, training or experience.*

Certifying Agency	Credential Title	Date Completed
American Society for Quality (ASQ)	Certified Manager of Quality/Organizational Excellence (CMQ/OE)	
American Society for Quality (ASQ)	Certified Quality Engineer (CQE)	
American Society for Quality (ASQ)	Certified Reliability Engineer (CRE)	
American Society for Quality (ASQ)	Master Black Belt Certification (MBB)	
American Society for Quality (ASQ)	Quality Auditor Certification (CQA)	
American Society for Quality (ASQ)	Six Sigma Black Belt (CSSBB)	
Computing Technology Industry Association (CompTIA)	CompTIA Project+	
Institute of Certified Professional Managers (ICPM)	Certified Manager (CM)	
Institute of Management Consultants (IMC)	Certified Management Consultant - Basic	
International Association for Six Sigma Certification (IASSC)	Certified Lean Six Sigma Black Belt (ICBB)	
International Association for Six Sigma Certification (IASSC)	Certified Lean Six Sigma Green Belt (ICGB)	
International Association for Six Sigma Certification (IASSC)	Certified Lean Six Sigma Yellow Belt (ICYB)	
Project Management Institute (PMI)	Certified Associate in Project Management (CAPM)	
Project Management Institute (PMI)	PMI Agile Certified Practitioner (PMI-ACP)	
Project Management Institute (PMI)	PMI Professional in Business Analysis (PMI-PBA)	
Project Management Institute (PMI)	PMI Scheduling Professional (PMI-SP)	
Project Management Institute (PMI)	Portfolio Management Professional (PfMP)	
Project Management Institute (PMI)	Program Management Professional (PgMP)	
Project Management Institute (PMI)	Project Management Professional (PMP)	
Resilience-Building Leader Program	Resilience-Building Leadership Professional (RBLP)	

United Services Military Apprenticeship Program (USMAP): USMAP is available to most active duty occupations and is certified by the U.S. Department of Labor. This is the largest apprenticeship program operating in the U.S. and is recognized by all 50 states. Completion of one of these programs would qualify you as a journeyman, which could mean a significantly higher starting salary in the civilian work force. Most programs require 5-8 years to complete but are transferable if you decide to leave the service prior to completion. USMAP opportunities also exist for SELRES with orders over 12 months.

The following USMAP apprenticeships are applicable to the MMN-Machinists Mate, Nuclear Power rating.

For more information about these apprenticeships, visit USMAP at <https://usmap.netc.navy.mil/>.

Rank	Apprenticeship	Date Completed
E1 - E9	Computer Operator	
	Counselor (Professional & Kindred)	
E1 - E9	Hydroelectric-Machinery Mechanic (Utilities)	
	Industrial Maintenance Mechanic	
	Power-Plant Operator	
	Water-Treatment-Plant Operator	

POST MILITARY OCCUPATIONS

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
Electrical and Electronic Engineering Technologists and 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 Monitoring Technicians
Nuclear Power Reactor Operators
Nuclear Technicians
Power Distributors and Dispatchers
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

STAY NAVY

AC to AC and FTS to FTS - Continue Navy career on Active Duty.

REENLIST / EXTEND: Request Chit/Form:

MyNavy Assignments (MNA): Medical/Dental Screening:

Command Recommendation (evaluation): Bonus: Ceremony:

RC to AC/FTS

MILPERSMAN 1306-1505 states: E7 and above personnel who seek opportunities for component change outside of the established C-WAY-TRANS module application process must contact BUPERS-32 (Enlisted Community Managers) directly.

RC to RC - Continue your Navy career as a Reservist.

Submit reenlistment request utilizing NAVRES 1160/1 Drilling Reservist Reenlistment Worksheet.

REENLIST / EXTEND: Request Chit/Form:

MyNavy Assignments (MNA):

Medical/Dental Screening:

Command Recommendation (evaluation): Bonus: Ceremony:

AC/FTS to CIP

The Career Intermission Program allows Officers and Enlisted Sailors to transfer out of the active component (AC/FTS) and into the Individual Ready Reserve for a period of one to three years to pursue personal or professional obligations outside the Navy, while providing a means for their seamless return to active duty.

For additional information, go to: <https://www.public.navy.mil/bupers-npc/career/reservepersonnelmgmt/IRR/Pages/CIP.aspx>.

AC/FTS to Secretary of the Navy Tours with Industry

This program provides a venue for exceptional Sailors to experience innovative business practices. Navy fellows are fully immersed in company practices and will be actively engaged in projects and company operations. Past fellows were assigned to companies including VMware, Qualcomm, Apple, Incorporation, Boeing, Tesla, Oak Ridge National Laboratory, GE Digital, Amazon, FedEx, Northrup Grumman, Space X, LinkedIn and USAA.

For additional information go to: <https://www.public.navy.mil/bupers-npc/career/talentmanagement/Pages/SNTWI.aspx>.

AC/FTS TRANSFER:

<u>15 Months</u>	<u>12 Months</u>	<u>9 Months</u>	<u>6 Months</u>	<u>Orders Received</u>
MNA <input type="text"/>	MNA <input type="text"/>	MNA <input type="text"/>	Accept Orders <input type="text"/>	Screening <input type="text"/>
Exception Family Member <input type="text"/>	Exception Family Member <input type="text"/>	Eval <input type="text"/>	Reverse Sponsor <input type="text"/>	Obligate <input type="text"/>
Mil to Mil <input type="text"/>			Relocation (FFSC) <input type="text"/>	Bonus <input type="text"/>
Family Care Plan <input type="text"/>			Medical/Dental <input type="text"/>	
Continuous Overseas Tours (COT) <input type="text"/>				
Overseas Tour Extension Incentive Program (OTEIP) <input type="text"/>				

SELRES TRANSFER:

<u>12 Months</u>	<u>9 Months</u>	<u>6 Months</u>	<u>3 Months</u>	<u>Orders Received</u>
MNA [redacted] <i>(verify account access)</i>	MNA [redacted] <i>(extend in current field)</i>	MNA [redacted] <i>(apply for billets)</i>	MNA [redacted] <i>(apply for billets)</i>	Sign Eval [redacted]
Family Care Plan [redacted]		Start Eval [redacted]		
Mil to Mil [redacted]		Reverse Sponsor [redacted]		
		Incentives/EOS opportunities [redacted]		

For additional assistance in transfer and relocation, go to the Military OneSource website: <https://www.militaryonesource.mil/> 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>
TAP* [redacted]	MED/DEN [redacted]	Copy of Records [redacted]	Copy of Records [redacted]
Complete DD 2648 [redacted]	Relocation [redacted]	Official Record CD [redacted]	PSD [redacted]
Transition Planning [redacted]	Relocation Services (FFSC) [redacted]	Arrange Ceremony [redacted]	MED/DEN [redacted]
Annual Statement of Service History (ASOSH) [redacted] <i>Reserve Only</i>	Reserve Affiliation [redacted]	Request Leave / PTDY [redacted]	DD 214* [redacted]
	VA/DVA [redacted]		

**Upon demobilization, SELRES will need Transition Assistance Program (TAP) and DD-214; DD-214 is not required for Reserve Retirements.*

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 [redacted] Weight [redacted] If Required (AC [redacted] BCA [redacted])

Last 2 PRT Cycles: Forearm Plank [redacted] / [redacted] Push-ups [redacted] / [redacted] Run/Swim/Cardio [redacted] / [redacted]

Overall Score [redacted] / [redacted]

List date (if) any PRT/BCA failure(s) over the last 5 years [redacted] / [redacted]

List if any Medical Waiver(s) [redacted] / [redacted]

For more information on Navy Fitness, visit: https://www.public.navy.mil/bupers-npc/support/21st_Century_Sailor/physical/Pages/default2.aspx

PROFESSIONAL MILITARY EDUCATION (SCPO)

(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 call the Navy College Virtual Education Center (NCVEC) 877-838-1659 or Visit your overseas Navy College Office.)

Education Plan Completed (Navy College Office/NCVEC)

Current Education Level

Degree Goal

** Various degree options are available in the Advanced Education section. **

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

Joint Service Transcripts (JST)

HS Transcripts College Transcripts

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

For entry into JST, have your College/University send official transcripts to:
Naval Education and Training Command N644
JST Operation Center
6490 Saufley Field Road
Pensacola, FL 32509
Email: JST@DODED.mil

VOLUNTARY EDUCATION: Links to study guides, exam preparations, and practice tests are located on the DANTES website <https://www.dantes.doded.mil/>

NCPACE CLEP DSST TA

MGIB MGIB-SR Post 9/11 GIB AEV

SCPO REQUIRED NAVY PME:

Course Title	Course Location	CIN/CSE ID	Course Length	Date Completed
Senior Enlisted Academy ⁴	Newport RI	P-920-1300	3 weeks (DL) / 3 weeks (F2F)	
Ethics Training	Command Delivered			
Required General Military Training Topics For FY 2021 (Delivery determined by command discretion) ¹				
Sexual Assault Prevention and Response Awareness (SAPR) ³	Command Delivered	CPPD-GMT-SAPRA-1.0		
Cyber Awareness Challenge	MNP	DOD-IAA-V16.0		
Counterintelligence Awareness and Reporting	Command Delivered/ MNP	DOD-CIAR-1.0		
Records Management	Command Delivered/MNP	DOR-RM-010-1.2		
Privacy Act	Command Delivered			
Suicide Prevention ³	Command Delivered	CPPD-GMT-SAP-1.0		
Antiterrorism Level I ²	Command Delivered/ MNP	CENSECFOR-AT-010-1.0		

1 - Verify GMT topics on the My Navy Portal (MNP) GMT webpage

2 - Personnel with less than 3 years of time-in-service must also complete Antiterrorism Level 1 training. For personnel with greater than 3 years of time-in-service, Antiterrorism Level 1 periodicity is now a triennial requirement and will be mandated for all hands in FY-22.

3 - The recommended method of delivery for SAPR and Suicide Prevention annual training is via face-to-face, small group facilitated discussions.

4 - NAVADMIN 266/14 As of FY 2017, all newly selected AC and SELRES SCPOs will be required to complete SEA to be eligible for advancement.

SCPO REQUIRED COMMUNITY PME:

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

SCPO RECOMMENDED NAVY PME:

Course Title	Course Location	CIN/CSE ID	Course Length	Date Completed
ADAMS for Leaders	Various	S-501-0130	8 hrs	
Primary Enlisted Professional Military Education (PEPME)	Navy e-Learning	Military DON/ PME	60 hrs	
Block 1 Primary EPME - Introduction	Navy e-Learning	NWC-PPME-SENL-B1		
Block 2 Primary EPME - The Culture of the Navy	Navy e-Learning	NWC-PPME-SENL-B2		
Block 3 Primary EPME - Governance of the Navy	Navy e-Learning	NWC-PPME-SENL-B3		
Block 4 Primary EPME - How the Navy Thinks About War	Navy e-Learning	NWC-PPME-SENL-B4		
Block 5 Primary EPME - How the Navy Plans its Operations	Navy e-Learning	NWC-PPME-SENL-B5		
Block 6 Primary EPME - Technology in the Maritime Domain	Navy e-Learning	NWC-PPME-SENL-B6		
Block 7 Primary EPME - PME Conclusion	Navy e-Learning	NWC-PPME-SENL-B7		
Joint Professional Military Education (JPME)	Navy e-Learning	JKDDC-SNCO-2	60 hrs	
Demonstrating Ethical Leadership	Navy e-Learning	NCSC-ILC-01-0004		
Culture	Navy e-Learning	Foreign Language and Culture	45 hrs	
CMDCM/COB Leadership Course (Must have FLTCM or FORCM recommendation)	Navy e-Learning/Classroom (Newport, RI)	CPPD/NETC CMDCM-9580 COB-9579		
Navy Reserve Fundamentals for Active Duty Course	Navy e-Learning	NAVRESFOR-NRF-2.0 / US DoN	10 hrs	
Recommended General Military Training Topics For FY 2021 (Delivery determined by command discretion) ¹				
Alcohol, Drug, and Tobacco Awareness	Command Delivered	CPPD-GMT-ADTA-1.0		
Combating Trafficking of Persons General Awareness	Command Delivered/ MNP	DOD-CTIP-3.0		
Domestic Violence Prevention and Reporting	Command Delivered	CPPD-GMT-DV-1.1		
Electromagnetic Maneuver Warfare	Command Delivered/ MNP	NAVIFOR-FEWC-EMW-01.01		
Energy Policy	Command Delivered	OPNAV-GMTE-1.0		
Equal Opportunity, Harassment, and Resolution Options	Command Delivered	CPPD-GMT-EOSH-1.0		
Hazing Policy and Prevention	Command Delivered	CPPD-GMT-HPP-1.0		
Operational Risk Management (ORM)	Command Delivered	CPPD-GMT-ORMTC-1.0		
Operations Security	Command Delivered/ MNP	NOST-USOPSEC-3.0		
Personal Financial Management	Command Delivered	CPPD-GMT-PFM-1.0		
Sexual Health and Responsibility	Command Delivered	CPPD-GMT-SHR-1.0		
Stress Management	Command Delivered	CPPD-GMT-SM-1.0		
Traumatic Brain Injury	Command Delivered			
Privacy Act	Command Delivered	DON-PRIV-2.0		
Antiterrorism Level 1 ²	Command Delivered/ MNP	CENSECFOR-AT-010-1.0		
Tactical Combat Casualty Care All Service Member/Tier 1	Command Delivered	B-300-2010		
Financial Management ³	Command Delivered			

1 - Verify GMT topics on MyNavy Portal GMT webpage

2 - Personnel with less than 3 years of time-in-service must also complete Antiterrorism Level 1 training. For personnel with greater than 3 years of time-in-service, Antiterrorism Level 1 periodicity is now a triennial requirement and will be mandated for all hands in FY-22.

3 - Does not have a mandatory periodicity but is required at career touch points per CNO WASHINGTON DC/191539ZJUL16.

SCPO RECOMMENDED COMMUNITY PME:

Course Title	Course Location	CIN/CSE ID	Course Length	Date Completed
SS Collisions Presentation	SOBT	DODUSNSLCSOBT_06030	20 hours	
SS Grounding Presentations	SOBT	DODUSNSLCSOBT_06033	13 hours	
General Admin Naval Messages	MNP	002GN01		

NAVY PROFESSIONAL READING PROGRAM (PRP)

The purpose of the Chief of Naval Operations Professional Reading Program (CNO PRP), maintained by CNO PRP program managers at the U.S. Naval War College, is to facilitate the professional and personal development of all Sailors. For additional information on the CNO PRP visit <https://www.navy.mil/CNO-Reading-Program/>

ESSENTIAL READING

Naval Power (First 5 offerings)	Completed
Visit https://www.navy.mil/CNO-Reading-Program/Naval-Power for complete list.	
Sea Power by <i>Admiral James Stavridis</i>	
Toward a New Maritime Strategy by <i>Peter D. Haynes</i>	
The Rules Of The Game by <i>Andrew Gordon</i>	
Sea Power by <i>Geoffrey Till</i>	
Red Star Over The Pacific by <i>Toshi Yoshihara and James R. Holmes</i>	
High Velocity Outcomes (First 5 offerings)	Completed
Visit https://www.navy.mil/CNO-Reading-Program/HVO for complete list.	
Democracy by <i>Condoleezza Rice</i>	
A World in Disarray by <i>Richard Haass</i>	
Our Robots, Ourselves by <i>David A. Mindell</i>	
On Writing Well by <i>William Zinsser</i>	
The Innovator's Dilemma by <i>Clayton M. Christensen</i>	
Navy Team (First 5 offerings)	Completed
Visit https://www.navy.mil/CNO-Reading-Program/Navy-Team for complete list.	
The Accidental Admiral by <i>James Stavridis</i>	
Team of Teams by <i>Stanley McChrystal</i>	
Navigating the Seven Seas by <i>Melvin G. Williams, Sr. and Melvin G. Williams, Jr.</i>	
Leadership on the Line by <i>Ronald A Heifetz and Marty Linsky</i>	
A Vietnam Experience by <i>James Stockdale</i>	
Partnerships (First 5 offerings)	Completed
Visit https://www.navy.mil/CNO-Reading-Program/Partner-Network for complete list.	
Partnerships for the Americas by <i>James Stavridis</i>	
The Accidental Superpower by <i>Peter Zeihan</i>	
Asia's Cauldron by <i>Robert D. Kaplan</i>	
World Order by <i>Henry Kissinger</i>	
At Ease by <i>Dwight Eisenhower</i>	

Reading, discussing, and understanding the ideas found in the CNO PRP will not only improve our critical thinking skills, but will also help us become better Sailors, citizens, and most importantly, leaders. This list is not intended to limit professional reading or learning in any way, but merely to provide easy access to a few of the many titles that will benefit our service.

The Chief of Naval Operations' tenets and Lines of Effort: Strengthening Naval Power at and from the Sea; Achieving High Velocity Learning at Every Level; Strengthening Our Navy Team for the Future; and Expanding and Strengthening our Network of Partners. These LOEs have themes common to all Sailors - Integrity, Accountability, Initiative, and Toughness.

The books are organized by the Lines of Effort, but there are several other categories as well. A Design for Maintaining Maritime Superiority is included in addition to a section of books - Fundamentals for the Naval Professional - that contains canonical books about warfighting, diplomacy, and strategy. Many books on both lists are available as e-books through the Navy General Library Program.

The entire list of over 140 book summaries and additional information is available at <https://www.navy.mil/CNO-Reading-Program/A-Z-List>

SCPO RECOMMENDED COMMUNITY READING

Title	Completed
Good to Great: Why Some Companies Make the Leap...and Others Don't <i>by Jim Collins</i>	
Mistakes Were Made (But Not By Me) <i>by Carol Tarvis and Elliot Aronson</i>	
Think Like a Freak <i>by Steven Levitt and Stephen Dubner</i>	
Columbia Accident Investigation Board <i>by CAIB</i>	
High Velocity Edge <i>by Steven J Spear</i>	
Marine Corps Leadership: Lessons For Business, Work and Life <i>by Perry Hurtt</i>	
The Five Dysfunctions of a Team <i>by Patrick Lencioni</i>	
The Goal: A Process of On-Going Improvements <i>by Eliyahu M Goldratt, Jeff Cox</i>	
The Signal and The Noise <i>by Nate Silver</i>	



ALL PAYGRADES VOLUNTARY EDUCATION



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

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

Complete the online courses at the Navy College Website: <http://www.navycollege.navy.mil/>

How do I get started?

You already have. All your training up to this point is part of your Machinist's Mate - Nuclear - Submarine 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 step is to contact the Navy College Virtual Education Center or visit your Overseas Navy College Office. Then your counselors 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, or sign up for new courses?

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

Recommended Associates' degrees for the Fireman
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

Recommended Bachelors/Masters degrees for the Fireman
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>

Tuition Assistance (TA):

NAVADMIN 114/19 limit changes as of 1 October 2019: 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. TA will pay for the following amount per career: 120 semester hours, or 180-quarter hours or 1800 clock hours or a combination of semester, quarter and clock hours. TA will pay the following amounts per fiscal year: 12 semester hours, not to exceed \$250/credit for semester hours or 18-quarter hours not-to-exceed \$166.67/credit for quarter hours or, 180 clock hours not-to-exceed \$16.67/clock hours or a combination of semester, quarter and clock hours.

- More information is available online at: <https://www.navycollege.navy.mil>

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.acenet.edu/news-room/Pages/Military-Guide-Online.aspx>.

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. For specific testing locations visit the DANTES website.

- Navy College Program: <https://www.navycollege.navy.mil/information-for-sailors/pre-college-testing-and-college-credit.htm>
- DANTES: <http://www.dantes.doded.mil/examinations/earn-college-credit/earn-college-credit.html>

College Entrance Exams Testing ACT, SAT

The ACT and SAT are both standardized tests that help colleges evaluate candidates. Many colleges require that students submit test results as part of the admission application process. Since Sailors are considered transfer students, these tests are not generally required for admission. However, some Sailors must take the tests to enter specific military programs.

- Navy College Program (ACT SAT): <http://www.navycollege.navy.mil/information-for-sailors/college-entrance-exams.htm>
- DANTES (ACT SAT): <http://www.dantes.doded.mil/examinations/college-admissions/act.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 15878L
- 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
- 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
- Career WayPoints - Reenlistment MILPERSMAN 1160-140
- 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
- Reserve Enlisted Incentives RESPERSMAN 1100-020 and current ALNAVRESFOR Message
- Reenlistments and Extensions for Sailors in a Drilling Status RESPERSMAN 1160-010
- Satisfactory Participation in the Navy Reserve RESPERSMAN 1001-010

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 Program (TAP) OPNAVINST 1900.2(series) (Initiate a DD-2648E-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
- Prior Service Reenlistment Eligibility – Reserve (PRISE-R) MILPERSMAN 1133-061

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
- Standardized Policy and Procedures for the Active Duty for Operational Support (ADOS) Programs OPNAVINST 1001.20 (series)
- Operational Risk Management OPNAVINST 3500.39C
- Personnel Qualification Standards (PQS) Catalog NAVEDTRA 43100-6M
- Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards NAVPERS 18068F Volume 1 & 2