

**FY2015-2017 CORE SKILLS REQUIREMENTS**  
**NAVAL MECHANICAL ENGINEERING**  
**Subspecialty code 5600P**  
**Curriculum 570**

Billet subspecialty coding is to be based on the minimum education/training/experience level required for optimum performance. Mechanical Engineering/5600P subspecialty coding is justified when, in addition to the general criteria stated in NAVPERS 15839 series (Manual of Navy Officer Manpower and Personnel Classification) Part B, the following specific criteria are satisfied:

1. Subspecialty Coding Restriction

a. Billets assigned to: DPJ SUP/SUB MAINT & MODERNIZATION PROJ OFF, MGR DPJ FE/APM FOR SUB FLEET SUPPORT, INST ENG/INST MECHANICAL ENGR

2. Applicable Officer Designators

- a. 1000 - 1000 / 1001 - 1019 / 1021 - 1049 / 1050 - 1050 / 1051 - 1099
- b. 1100 - 1109 / 1110 - 1119 / 1120 - 1129 / 1130 - 1139 / 1140 - 1159 / 1160 - 1169 / 1170 - 1179 / 1180 - 1189 / 1190 - 1199
- c. 1200 - 1209 / 1200 - 1299 / 1300 - 1399 / 1400 - 1499 / 1510 - 1519 / 1800 - 1809 / 1810 - 1829

3. Applicable Billet Designator

- a. 5600P (Masters Level)
- b. 5600N (Engineers Degree)
- c. 5600D (Doctorate Level)

4. The Engineering and Technology (Naval Mechanical) subspecialty code (5600) will provide a command with an officer possessing an engineering background in Mechanical Engineering, with a concentration in Naval Mechanical Engineering-Energy. Specific capabilities/requirements generally include:

a. The ability to identify, formulate, and solve engineering and/or technical problems, including competence in research, design, development, procurement, operation and or maintenance in scientific and/or technical engineering fields. This would include the ability to prepare technical and/or operational briefings, project plans, and reports.

b. The ability to understand the impact of engineering and/or technical solutions in a global context, and interact with personnel from industry, laboratories, academic institutions and/or other services regarding system design, maintenance, and operation.

c. The ability to use techniques, skills, and modern engineering tools for engineering practice, including the ability to analyze and interpret data, and develop policy and procedures through the entire spectrum of operation for platform systems.

d. The ability to apply knowledge acquired in academic disciplines specifically to the design, procurement and maintenance of ships, boats and craft.

#### 5. Significant Experience Criteria

a. Naval Mechanical Engineering - 5600 S-coded billets are authorized when two of the following conditions are met:

(1) The duties required detailed knowledge of, or experience in specific Naval Mechanical Engineering systems, processes, design, acquisition, management or leadership.

(2) Appropriate training on specific systems, processes, design, acquisition, management is available and accessible to qualified officers prior to assignment of billets.

b. Naval Mechanical Engineering - 5600 S-coded officers are authorized when:

(1) The Officer has filled one B, H, S, R, P, Q coded billet for more than 18 months and has no Subspecialty Code in this field.

(2) FITREP justifies that s/he has accomplished the task(s) indicated above for more than 18 continuous months.

c. Mechanical Engineering - 5600 R-coded billets are authorized when, in addition to the requirement for S-coded billets, the billet must be filled by officers having filled a previous 5600-coded billet. A requirement for familiarity or experience in the specific duties, as though service in a previous billet, should characterize these billets.

#### 6. Baccalaureate Criteria

a. Naval Mechanical Engineering - 5600 E-coded billet and officer codes are not authorized.

#### 7. Elective Level Criteria

a. Naval Mechanical Engineering - 5600 H-coded billets are authorized for:

(1) Billets requiring expertise in Mechanical Engineering where a masters level of knowledge is desirable but not essential for optimum performance.

#### 8. Functional Education Criteria

a. Mechanical Engineering - 5600 G-coded officers are authorized when:

(1) An Officer has not completed all required ESR's (not completed a Thesis at NPS).

(2) An Officer attends a Civilian Institution and completes two thirds or greater of the ESRs as determined by the Subject Matter Expert.

b. Mechanical Engineering - 5600 F-coded officers are justified when:

(1) An Officer has an G code and completes a tour in a masters degree billet or higher.

#### 9. Masters Criteria for Naval Mechanical Engineering

a. Naval Mechanical Engineering - 5600 P-coded billets are authorized when the billet requires all of the following:

(1) Primary duties requiring the CSRs and ESRs.

b. Naval Mechanical Engineering - 5600 P-coded officers are authorized when:

(1) The Officer completes Naval Mechanical Engineering master's degree at NPS. The officer will receive the F Subspecialty Code if a thesis is not completed. Utilization and obligations are still required.

(2) The officer completes a master's degree at an accredited institution of higher learning that satisfies all 5300 ESRs.

c. Naval Mechanical Engineering - 5600 Q-coded billets are authorized when the billet requires:

(1) All requirements of the P code and detailed knowledge of, or experience in, specific engineering systems, processes, design, acquisition, management or leadership.

d. Naval Mechanical Engineering - 5600 Q-coded officers are authorized when:

(1) They complete Naval Mechanical Engineering 5600 ESRs, either at NPS or another accredited institution, and have done at least 18 months in a master's degree coded billet or higher.

(2) Must have a P-code prior to a Q-coded tour.

(3) F coded officers cannot obtain Q codes. They will be authorized G codes.

#### 10. Post-Masters

a. Naval Mechanical Engineering - 5600 N-coded billets are authorized when the billet requires all of the following:

(1) Primary duties requiring the CSRs, ESRs and an Mechanical Engineering degree.

b. Naval Mechanical Engineering - 5300 N-coded officers are a authorized when:

(1) They complete Naval Mechanical Engineering 5600 ESRs, either at NPS or another accredited institution as well as earn a Mechanical Engineering degree.

#### 11. Doctorate Criteria

a. Naval Mechanical Engineering - 5600 D-coded billets and are authorized when the billet requires:

(1) Primary duties requiring the CSRs, ESRs and a Doctorate Degree in Naval Mechanical Engineering.

b. Naval Mechanical Engineering - 5600 D-coded officers are authorized when:

(1) They complete Naval Mechanical Engineering Doctorate Degree at NPS or another accredited institution.

12. The Engineering and Technology (Naval Mechanical) subspecialty code (5600) will provide a command with an officer possessing an engineering background in Mechanical Engineering, with a concentration in one or more of the traditional Mechanical Engineering disciplines; i.e., thermodynamics/heat transfer, fluid mechanics and hydrodynamics, structural mechanics, control systems/dynamics, and materials science. Specific capabilities/requirements generally include:

The ability to identify, formulate, and solve engineering and/or technical problems, including competence in research, design, development, procurement, operation and or maintenance in scientific and/or technical engineering fields. This would include the ability to prepare technical and/or operational briefings, project plans, and reports.

The ability to understand the impact of engineering and/or technical solutions in a global context, and interact with personnel from industry, laboratories, academic institutions and/or other services regarding system design, maintenance, and operation.

The ability to use techniques, skills, and modern engineering tools for engineering practice, including the ability to analyze and interpret data, and develop policy and procedures through the entire spectrum of operation for platform systems.

The ability to apply knowledge acquired in academic disciplines specifically to the design, procurement and maintenance of ships, boats and craft.

This subspecialty code can be earned through successful completion of an experience tour in an engineering or scientific billet or graduate level education. Education will be in the discipline of Mechanical Engineering from a regionally accredited source and must meet most of the applicable ESRs. NPS would evaluate civilian institutions for consideration for approval of P (Masters level), N (Engineer`s degree) or D (Doctorate level) coding. If experience is coupled with a degree, then a Q or C code would apply, respectively.

13. Sponsor and Subject Matter Expert

Sponsor: Bryant Fuller, RDML, Chief Engineer

Subject Matter Expert: Robert Klocek, robert.klocek@navy.mil

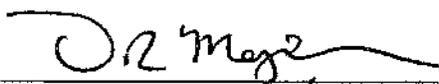
Approved:

  
\_\_\_\_\_

RDML Bryant Fuller, Chief Engineer,  
Naval Sea Systems Command (SEA05)

4/12/16

Date

  
\_\_\_\_\_

Director, OPNAV N12

4 APR 1 2016

Date