

2018-2020 CORE SKILL REQUIREMENTS

Space Systems Engineering

Subspecialty 5500

Curriculum 591

1. Billet subspecialty coding is to be based on the minimum education/training/experience level required for optimum performance. 5500 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:

2. Description of CSR Competencies. The listed CSRs are a set of quantifiable skills, traits and experiences that a subspecialist must possess to perform acceptably in a coded billet for the 5500.

a. CSR 1: Space Acquisition and Development. Formulate the following for the development and employment of national security space systems within the construct of end-to-end, system-of-systems integration of products and services supporting operational missions: operational and derived technical requirements, system-level architectures, operational concepts, conceptual spacecraft designs, system integration and test plans, and incremental capabilities of cyber and platform resiliency.

b. CSR 2: Spacecraft Design. To support operational missions: demonstrate technical knowledge in orbital mechanics and the design of spacecraft and their payloads to include the harsh space environment, resiliency, and serviceability. This knowledge will encompass spacecraft subsystems and their ground support segment subsystems to include: communications, command and data handling, attitude determination, guidance, navigation and control, structures, propulsion, thermal control and electrical power.

c. CSR 3: Space Systems Engineering. Demonstrate leadership of end-to-end, system-of-systems, engineering efforts to direct design, development, acquisition, integration and testing of spacecraft and associated ground support systems throughout their life-cycles including launch and on-orbit operations.

d. CSR 4: Space Liaison. Develop in collaboration with other services, agencies, and industry the policy and procedures necessary for requirements development and analysis of the: design, acquisition and operational employment of space systems, ground support segments, and end-to-end, system-of-systems integration of products and services to support operational missions.

e. CSR 5: Decision Analysis. Perform technical evaluation of space systems design and performance with the purpose of providing recommendations to senior decision-makers regarding space systems engineering, performance and mission assurance. These evaluations and recommendations shall include system of systems and end-to-end considerations to ensure cost and schedule efficiencies while maximizing performance.

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2. Applicable Officer Designator(s):

- a. 1000 - 1000 / 1001 - 1019 / 1021 - 1049 / 1050 - 1050 / 1051 - 1099 / 1100 - 1109 / 1110 - 1119 / 1120 - 1129 / 1130 - 1139 / 1140 - 1159 / 1160 - 1169 / 1170 - 1179 / 1180 - 1189 / 1190 - 1199 / 1200 - 1209 / 1200 - 1299 / 1300 - 1399 / 1400 - 1499 / 1510 - 1519 / 1600 - 1609 / 1610 - 1629 / 1630 - 1649 / 1800 - 1899

3. Applicable Billet Designator:

- a. 1000 - 1000 / 1001 - 1019 / 1021 - 1049 / 1050 - 1050 / 1051 - 1099 / 1100 - 1109 / 1110 - 1119 / 1120 - 1129 / 1130 - 1139 / 1140 - 1159 / 1160 - 1169 / 1170 - 1179 / 1180 - 1189 / 1190 - 1199 / 1200 - 1209 / 1200 - 1299 / 1300 - 1399 / 1400 - 1499 / 1510 - 1519 / 1600 - 1609 / 1610 - 1629 / 1630 - 1649 / 1800 - 1899

4. Educational and Significant Experience Criteria. Coded billets are authorized when the functions of the billet include the CSR competencies listed above (in paragraph 1). For additional clarification regarding definition of suffixes, refer to the NAVPERS 15839I, Vol 1.

Note: 'Proven' requires at least 18-month experience tour in subspecialty coded billet or billet using the CSR of a related subspecialty.

a. Subspecialty Code Suffixes Authorized.

Subspecialty Code Suffixes Authorized				
Billet	Officer	Suffix	Definition	Notes
		C	Proven Doctor of Philosophy	
X	X	D	Doctor of Philosophy	
		F	Proven Master's Degree that does not meet all ESRs	
		G	Master's Degree that does not meet all ESRs	
		H	Master's Degree desired, not required	
		L	Certificate degree at the Master's level	
		M	Proven Post Master's Degree graduate education	
		N	Post Master's Degree graduate education	
X	X	P	Master's Degree in approved Navy subspecialty	
X	X	Q	Proven Master's Degree	
	X	R	Proven Significant Experience	
		S	Significant Experience obtained through OJT	

5. Major Area Sponsor and Subject Matter Experts:

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- a. Major Area Sponsor: RADM Christian Becker, Commander, Space and Naval Warfare Systems Command.
- b. Subject Matter Expert: RDML Ronald Fritzemeier, Chief Engineer, SPAWAR.
- c. Action Officer SME: CAPT Joseph Kan, SoS/Space Military Advisor, SPAWAR.

APPROVED:  2902718
Major Area Sponsor [DATE]

APPROVED:  31 JAN 2019
Director, OPNAV N12 [DATE]